

**A SUSTAINABLE FARM MANAGEMENT MODEL FOR LAND REFORM IN MPUMALANGA,
SOUTH AFRICA.**

By

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10 November 2019

DECLARATION

I declare that the thesis hereby submitted by me for the PhD degree in Sustainable Agriculture at the University of the Free State is my own independent work and has not previously been submitted by me at another university/institution.

.....
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.....
Date

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DEDICATION

This thesis is dedicated to my Uncle

William Phuti Manamela

Who passed away on 28 July 2019, few months before I complete my PhD study.

My greatest motivator and example in life

ABSTRACT

The overall objective of the study was two-folded, firstly to develop inclusive sustainable and appropriate farm management model for land reform farming enterprises and secondly, to contribute considerably to rural development and the improvement of livelihood of rural people and land reform beneficiaries in Mpumalanga Province.

In order to reach its objectives, the study started by reviewing literature on land reform. This was followed by a socio-economic-analysis to identify the main agricultural social and economic opportunities and factors inhibiting sustainable development in the province as well as performance and sustainability of commercial cooperatives and sole proprietorships citrus farms, the elements of success and failure in the CPA's, state owned and small subsistence family farms and assessment of elements that promotes true sustainable citrus farming in Mpumalanga Province.

Participants were sampled from five major categories of sampling frameworks and these included communal farmers defined as land reform beneficiaries (commonly known as CPAs) who acquired their farms through land redistribution programmes and households farmers defined as land reform beneficiaries, households that has acquired their farms without any support from state led approaches such as land reform programmes (sole proprietorships), private commercial cooperates which are producing citrus and state institutions which owns and manages citrus enterprises.

However, only 190 farmers were eventually selected through stratification to participate in the study based on their willingness to take part. The breakdown of farmers who participated in the study, according to all three citrus regions in Mpumalanga Province, were 134 communal farmers (CPAs), 10 household farmers benefited from land reform, 20 private households famers, 20 private commercial cooperates and 06 state owned enterprises.

The results showed that the business models promoted as part of both cooperatives and sole proprietors have succeeded in producing sustainable enterprises or distributing benefits to the shareholders. From Mpumalanga's perspectives, the assessment of performance and sustainability of cooperatives and sole proprietorships appears to be largely positive. Enough material progress has been made in any of the cases outlined here to conclude that this type of farming enterprises are performing well or are delivering sustainable benefits to the shareholders over time.

Despite a discouraging period; including land reform and unfavourable conditions for production as a result of climate change, it is clear that some fundamental progress have been made in the design and implementation of these enterprises. On the cooperative side, a detailed business plan, management model are adhered to and the managers that are employed has farming skills and knowledge and cooperatives are able to deal with increased protectionisms.

On the sole proprietor's side, little firm commitments as comparing to cooperatives have been made regarding investment on employing managers with farming skills and knowledge, tackling the ever increasing international protectionisms and putting in place a detailed business plan.

The main strengths of CPAs farms were: (i) the availability of a well-established export infrastructure (78%); (ii) access to export infrastructure facilities (76%); (iii) sufficient technology within the farm's pack-houses (63%); and (iv) meeting of accreditation standards such as Good Agricultural Practice (GAP) certification (63%). Land reform households' farms were faced by many weaknesses and threats than strengths. Although, the main strength for state owned farms were: (i) the availability of a well-established export infrastructure (67%); (ii) access by farmers to export infrastructure facilities (67%); (iii) sufficient technology within the farm's pack-houses, good quality of the produce, and meeting of accreditation standards such as GLOBAL GAP certification (50%).

All the farms under the study were failing due to high costs of farming inputs. At least 100% households' land reform farms, 100% of commercial cooperatives, 100% of sole proprietors, 94% of CPAs, and 67% of the state owned farms were not sustainable as a result of inability to graduate from emergent to a commercial level. Moreover, the majority of CPAs (83%) and household farms (60%) were not equipped with the farming skills and farming knowledge. In terms of communication with stakeholders, majority of CPAs (73%), land reform households farms (90%) and state owned farms (67%) had a poor communication with key project sponsors.

Land reforms households were faced with many challenges than CPAs and State owned farms combined. About 80% of the farms had no access to export infrastructure, while 90% of these farms produces citrus of a poor quality as compared to their counterparts. Only 10% had access to pack-house with modern technology and meets the accreditations standards.

A significant percentage (46%) of the CPAs has access to new export markets. Furthermore, majority (59%) of the CPAs product is in high demand. The main threat facing farmers across all the three categories was cost and availability of water for irrigation. For example, households (100%), CPAs (99%), and state owned farms (83%). Of the CPA's and land reform households' farms respondents, 60% of CPAs and 100% of land reform households' farms were confronted with competition from new entrants. In addition, 84% of CPAs, as well as 100% of household farms were choking with high protectionisms from external or international markets.

On the whole, this study revealed, the need to have a comprehensive business plan with more emphasis on certain areas, such as operational/product plan, organization and staffing plan as well as risk planning to ensure true sustainable citrus farming. It revealed the need to improve education more particularly by acquiring at least secondary or tertiary education and farm management hierarchy must include youth.

This study indicated areas of management, more particularly the principal activities of every farm management tasks that managers has to adhere, such as control, coordination and organizational/implementation. The study also raised land tenure or

right to use land systems that need urgent attention. Title of communal land must be transferred to farmers, either as groups or individually.

Those who are appointed to manage farming enterprises must have both technical knowledge and practical experience. Technical skills may include product management (be it a crop or livestock) to a level where it appeals to the market. The farmers must be exposed to these skills at a very young age. Farm managers should at least have more than eight in farming.

Managers must be more capable of making most of the new opportunities by employing good technics in exploiting those opportunities and be able to handle new threats that would have been brought by changes in climate, technology, the economic climate, new legislation protecting the consumer.

The conclusion is that the cooperatives and sole proprietors are sustainable and the chances of ensuring that CPAs, land reform farms and state owned farms are sustainable were most favourable for farmers who has responsive farm management model; would develop model that would properly influence the whole farm business planning to ensure sustainability of farms and shy away from the tendency of compiling business plans for government to release funds, but to represent the roadmap for the future. And those in executive positions would participate in the drafting of business plan; listing of farming risks with possible risk management strategies and recruitment of skilled and knowledgeable managers.

Finally is recommended that the farming business must be treated as a commercial business in order to maximize outputs through effective agricultural practices that *maximize income*.

Keywords: Sustainable, management model, land reform, performance, citrus farms, commercial cooperatives, sole proprietors, CPAs, land reform households, state owned farms

ACRONYMS AND ABBREVIATIONS

AgriSeta	Agricultural Sector Education and Training Authority
AET	Agricultural Education and Training
ANC	African National Congress
CGA	Citrus Growers Association
CPA	Communal Property Association
DAFF	Department of Agriculture, Forestry and Fisheries.
DLA	Department of Land Affairs
DRDLR	Department of Rural Development and Land Reform
FAO	Food and Agricultural Organization
IFAD	International Fund for Agricultural Development
LRAD	Land Redistribution for Agricultural Development
MTPA	Mpumalanga Tourism and Parks Agency
MDED	Mpumalanga Department of Economic Development
NDP	National Development Plan
RECAP	Recapitalization and Development Programme
SASSA	South African Social Security Agency
SBSA	Standard Bank Agribusiness South Africa
StatsSA	Statistics South Africa
SWOT	Strengths, Weaknesses, Opportunities and Threats

LIST OF FIGURES

Figure 4. 1: Population cohort of Mpumalanga, 2016.....	75
Figure 4. 2: Comparison of population increase in South Africa, 2012-2016.....	75
Figure 4. 3: Mpumalanga's population by population group (2001-2011).....	76
Figure 4. 4: Mpumalanga's population by district (2001-2011).....	76
Figure 4. 5: Unemployment rate for South Africa by province, 2015-2016.....	77
Figure 4. 6: Employment by industry in Mpumalanga, 2015.....	78
Figure 4. 7: Population living in poverty by local municipal area in Mpumalanga,..... 2014	80
Figure 4. 8: Average annual household income by province, 2001-2011.....	81
Figure 4. 9: Highest educational attainment amongst persons aged 20 years older by district municipality	82
Figure 4.10: Comparison of HIV prevalence rate among females aged 15-49 in South Africa & Mpumalanga (1990-2012).....	84
Figure 4.11: HIV prevalence rate by district among females aged 15-49, 2007-2012	85
Figure 4.12: Provincial shares of national social assistance grant number, 2009-2015	87
Figure 4. 13: Land use applications.....	90
Figure 4. 14: Land claims- Ehlanzeni District	92
Figure 4. 15: Land claims- Gert Sibande District	93
Figure 4. 16: Land claims- Nkangala District.....	94
Figure 4. 17: Total surface water used per sector within the Mpumalanga province	96
Figure 5 1: Farm structure of sole proprietors	115
Figure 5 2: Preference on business and succession plan	121
Figure 6 1: Farmers age and gender.....	135
Figure 6 2: Number of years in farming	140
Figure 6 3: Elements contribute to current failure.....	145
Figure 7 1: New opportunities	168
Figure 7 2: New threats in citrus farming.....	169
Figure 8. 1: Flowchart of a proposed farm management model	181

LIST OF TABLES

Table 3. 1: CPAs proportional allocation stratified sampling	65
Table 3. 2: Independent Corporates farmers' proportional stratified sampling	66
Table 3. 3: Sole proprietorship farmers' proportional stratified sampling.....	67
Table 4 1: Population in South Africa by province, 2001, 2011 & 2016.....	74
Table 4 2: Share of population living in poverty in South Africa & provinces, 2004 2014	79
Table 4 3: Share of population in Mpumalanga's districts, 2004-2014	80
Table 4.4: Comparison of selected health indicators between South Africa and Mpumalanga Province (2012-2013).....	83
Table 4 5: Population in Mpumalanga suffering from HIV and AIDS as diagnosed by a medical practitioner or nurse (2011-2014)	85
Table 4 6: Distribution of various types of social assistance grants in Mpumalanga, 2009-2015.....	87
Table 4 7: Estimated provincial migration streams 2011–2016	88
Table 4 8: Mpumalanga road lengths and conditions.....	98
Table 4 9: Eskom's power stations in MP.....	100
Table 4 10: Typology of approaches to small-scale agriculture.....	103
Table 4 11: Net Farm profit for Small-scale farmers in RSA.....	105
Table 5 1: Farming cooperative composition.....	113
Table 5 2: Particular operator's characteristics	117
Table 5 3: Analysis of human resources management and supporting systems	119
Table 5 4: Analysis of SWOT factors enhancing performance and sustainability...	123
Table 6 1: Farm manager's age and educational level.....	137
Table 6 2: Previous engagement in farming by gender.....	139
Table 6 3: Land ownership and usage by gender	143
Table 6 4: Strength and weaknesses in the functional areas of farming enterprises	146
Table 6 5: Promising opportunities and threats	150
Table 7 1: Categories of elements promoting true sustainability	160
Table 7 2: Elements of a business plan.....	161
Table 7 3: Manager's level of literacy.....	162
Table 7 4: Farm management tasks.....	164
Table 7 5: Rights to use land for farming.....	165
Table 7 6: Operational and technical knowledge.....	167
Table 8 1: Principal activities of implementing farm management model for land reform	182

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENTS	ii
DEDICATION	iii
ABSTRACT	iv
ACRONYMS AND ABBREVIATIONS	viii
LIST OF FIGURES	ix
LIST OF TABLES	x
CHAPTER 1: INTRODUCTION	1
1.1. Summary of the study	1
1.2. Context of the research	3
1.3. Research problem and aims	4
1.3.1. Aims and objectives	6
1.4. Structure of thesis	7
CHAPTER 2: LITERATURE REVIEW	8
2.1. Introduction	8
2.1.1. Brief background on land reform in Republic of South Africa (RSA)	8
2.2. Agricultural support institution in RSA	10
2.3. South Africa’s agricultural development agenda	11
2.4. International land reform experience	12
2.4.1. Brazil’s brief background	12
2.4.2. Land use and business planning	13
2.4.3. Financing land reform projects	14
2.5. Mozambique’s brief background	15
2.5.1. Post-acquisition actors	16
2.5.2. Role of traditional authorities	18
2.6. Zimbabwe’s brief background	19
2.6.1. The approaches to settlement support	20
2.6.1. Institutional arrangements	21
2.7. Support services for agricultural enterprises in the Republic of South Africa (RSA)	23
2.7.1. Extension services	24
2.7.2. Training, mentorship and management	29
2.7.3. Infrastructure	33
2.7.4. Access to credit	34

2.7.5. Access to markets	35
2.8. What are land reform farming enterprises?	37
2.9. Nature of land reform enterprises in South Africa	39
2.10. Factors affecting sustainability of land reform enterprises	41
2.11. Planning within farming enterprises	43
2.11.1. General production planning literature	43
2.11.2. Production planning in land reform enterprises	44
2.12. What is farm management?	46
2.13. What is a sustainable farming enterprise?	48
2.14. Types of farm management models in land reform	49
2.14.1. Family/household or sole proprietorship.....	50
2.14.2. Collective or group farming	51
2.14.3. Joint farming or strategic partnership	55
2.14.4 Lease agreement/contractual farming.....	58
2.15. Conclusion.....	59
CHAPTER 3: RESEARCH METHODOLOGY	62
3.1. Introduction	62
3.2. Methodology.....	62
3.3. Research design	64
3.4. Population of citrus farmers in RSA.....	64
3.5. Sampling framework.....	65
3.5.1. Sampling CPAs	65
3.5.2. Sampling family's farmers benefited from land reform	66
3.5.3. Sampling independent commercial farming corporates and families	66
3.5.4. Sampling and state owned farming enterprises	67
3.6. Data collection.....	67
3.6.1. Questionnaire.....	67
3.6.2. Focus group discussion.....	69
3.7. Data analysis	70
3.7.1. Quantitative analysis	70
3.7.2. Qualitative analysis	70
3.8. Ethical considerations	71
3.8.1. The principle of beneficence	71
3.8.2. The principle of respect for human dignity.....	71
3.8.3. The principle of justice.....	71
3.9. Informed consent	72

CHAPTER 4: SOCIO-ECONOMIC AND STATUS OF SMALL HOLDER FARMERS IN MPUMALANGA PROVINCE	73
4.1. Introduction	73
4.2. Socio-economic demographics	73
4.2.1. Population profile and age distribution	73
4.2.2. Unemployment	76
4.2.2.1. Unemployed by gender and age	77
4.2.3. Poverty	78
4.2.4. Income	81
4.2.5. Education and literacy	81
4.2.6. Health and health care	82
4.2.7. Prevalence of HIV/AIDS	84
4.2.8. Social Security	86
4.2.9. Migration	88
4.2.10. Life expectancy	88
4.3. Economic structure and performance of agricultural sector in Mpumalanga Province	89
4.3.1. Resource analysis and infrastructure as prerequisites for a sustainable economic growth and development in the Mpumalanga Province	89
4.3.2. Land	90
4.3.2.1. Land utilization	90
4.3.2.2. Water	94
4.3.3. Transport Infrastructure	96
4.3.3.1. Rail	96
4.3.3.3. Roads	97
4.3.4. Electricity infrastructure and electricity supply in the agricultural sector	99
4.3.5. Economic performance of the agricultural sector of the Mpumalanga Province 100	
4.4. Status of the small holding farmers in Mpumalanga Province	101
4.4.1. Small-Scale farming: a misunderstood phenomenon	101
4.4.1.1. Definition	101
4.4.1.2. Perception of success and failures by small-scale farmers	104
4.5. Conclusion	106
 CHAPTER 5: PERFORMANCE AND SUSTAINABILITY OF COMMERCIAL COOPERATIVES AND SOLE PROPRIETORSHIPS CITRUS FARMS IN MPUMALANGA PROVINCE, SOUTH AFRICA	 109
Abstract	109

5.1. Introduction	109
5.2. Methodology and materials.....	112
5.2.1. Data collection.....	112
5.3. Results and discussion	113
5.3.1. Cooperative and sole proprietorship farm composition	113
5.3.1.1. <i>Cooperatives</i>	113
5.3.1.2. <i>Sole proprietorship farms</i>	115
5.3.2. Closer analysis of farm's performance and sustainability.....	116
5.3.2.1. <i>Characteristics enhancing performance and sustainability</i>	116
5.3.3. Farm management model	118
5.3.3.1. <i>Analysis of human resource management model and enterprise</i>	118
5.3.4. Farm business and succession planning.....	120
5.3.5. Internal and external issues affecting performance and sustainability	122
5.3.5.1. <i>Identifying strengths, weaknesses, opportunities and threats (SWOT)</i>	122
5.4. Agricultural extension implications for the citrus farmers in South Africa	125
5.5. Conclusion.....	126
References	128

CHAPTER 6: THE ELEMENTS OF SUCCESS AND FAILURE IN THE CPA'S, STATE OWNED AND SMALL SUBSISTENCE FAMILY FARMS130

Abstract	130
6.1. Introduction	130
6.2. Methodology and materials.....	132
6.2.1. Data collection.....	132
6.3. Theoretical background.....	133
6.3.1. The definition of success and failure	133
6.4. Results and discussion	133
6.4.1. Farm structure by managers' characteristics.....	133
6.4.1.1. <i>Age and gender of land reform household, CPAs and state owned farm managers</i>	134
6.4.1.2. <i>Farming entities managers</i>	134
6.4.1.3. <i>Educational level and gender of land reform household farms, CPAs and state farm managers</i>	137
6.4.2. Farming operations	138
6.4.2.1. <i>Prior engagement in farming by gender</i>	138
6.4.2.2. <i>Number of years in farming</i>	139
6.4.2.3. <i>Land ownership and rights</i>	142

6.4.2.4. Land ownership and type of tenure	142
6.4.2.5. The farm size.....	143
6.4.2.6. Land under production by gender.....	144
6.4.3. Key elements contributing to success and current failures	145
6.4.3.1. Factors contributing to current failures	145
6.4.4. Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for CPAs, land reform households, and state owned farms.....	146
6.4.4.1. Strengths and weaknesses analysis	146
6.4.4.2. Farmers' strengths	146
6.4.4.3. Farmers' weaknesses	148
6.4.4.4. Opportunities and threats analysis	149
6.4.4.5. Promising opportunities.....	150
6.4.4.6. Threats.....	151
6.5. Conclusion.....	152
References	153

CHAPTER 7: ASSESSMENT OF ELEMENTS THAT PROMOTES TRUE SUSTAINABLE CITRUS FARMING IN MPUMALANGA..... 156

Abstract	156
7.1. Introduction	157
7.2. Methodology.....	158
7.2.1. Data collection tools and unit of analysis.....	159
7.3. Results and discussions	159
7.3.1. The sustainability rate of the citrus farms.....	159
7.3.2. Comprehensive business planning	161
7.3.2. Farmer manager's level of education	162
7.3.3. Principal activities in farm management tasks.....	163
7.3.4. The right to use land	165
7.3.5. Managers integrity and sense of responsibility.....	167
7.3.6. Making the most from the new opportunities.....	167
7.3.7. The 'New' threats handling.....	168
7.4. Conclusion.....	169
7.5. Recommendation.....	170
References	171

CHAPTER 8: A PROPOSED FARM MANAGEMENT MODEL FOR A SUSTAINABLE LAND REFORM IN MPUMALANGA 173

Abstract	173
-----------------------	------------

8.1.	Introduction	174
8.2.	Research methodology.....	175
8.2.1.	Data collection techniques	176
8.3.	The role of a farm management model.....	176
8.4.	Current land reform farm management model's efforts	177
8.5.	Vibrant, equitable and sustainable land reform farms.....	179
8.6.	A sustainable farm management model for land reform farms	180
8.7.	Conclusions.....	185
	References	186
 CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS		188
9.1	Introduction	188
9.2.	Conclusions.....	188
9.2.1	Farm management structure.....	188
9.2.2	Whole farming business planning	190
9.2.3	Findings pertaining to Strengths, weaknesses, opportunities and threats (SWOT).....	191
9.2.3.1.	<i>CPAs, land reform households and state owned farms.....</i>	<i>191</i>
9.2.3.2.	<i>Commercial cooperatives and sole proprietorships citrus farms</i>	<i>192</i>
9.3.	Recommendations	195
 CHAPTER 10: REFERENCES		199
 Appendices		200
Appendix A: Research Guides for CPAs		200
Appendix B: Research Guides for Land Reform Households.....		200
Appendix C: Research Guides for Commercial Cooperatives		200
Appendix D: Research Guides for Sole Proprietor Families		200
Appendix E: Research Guides for CPAs State Owned Farms.....		200

CHAPTER 1: INTRODUCTION

1.1. Summary of the study

The agricultural sector is confronted by appeals for a paradigm shift regarding farm management models especially within land reform, as part of broader debate about growing concerns of a significant bearing on food security for rural people and agriculture's contribution to Gross Domestic Products (GDP). Today however, experts tell that effective farm management models aiming to sustain farming projects, uplift rural economy, and create employment for the poor are necessary.

This concern is also captured by the Land Bank, and echoed by numerous experts in the agricultural and development sphere. For example, Edward Lahiff, a researcher at Programme for Land and Agrarian Studies (PLAS), School of Government in the University of Western Cape, found that "study of business models in land reform" shows that the main cause of failure of majority of land reform projects is lack of effective project management of the entire settlement planning and implementation process, which is clearly not being played by state agents today (Lahiff, 2007:17).

Members of the Agricultural Economic Research and Innovative Services (AERIS) of the Land Bank institute, who are researcher Makhura, Mda, Marais and Jacobs (2011:25), pointed out the wide spread concern among emerging farmers and land reform beneficiaries. The researchers were concerned on the fact that beneficiaries fail to manage their products (be it a crop or livestock) to a level where it appeals to the market and do not have financial skills to track and manage costs and incomes to determine the financial success of the enterprises, because they lack technical and financial management skills.

In the same sustainable agricultural vein, Jacobs (2003:13) and Tilley (2007), land reform and agricultural researchers both with the Institute for Poverty, Land and Agrarian Studies, found that in Mpumalanga province, most of beneficiaries groups secured access to good agricultural enterprises, but these enterprises were later found not to be sustainable and no improvement for beneficiaries living conditions. A new

effective model for farming land reform enterprises has been given a substantial attention in these arguments.

The cases covered in this study pertain to farming enterprises acquired through land reform programme, a programme mandated to contribute to economic development, both by giving households the opportunity to engage in productive land use and by increasing employment opportunities. Most of the land reform enterprises have been unsustainable. As a result, they collapse or close down.

The question is why these enterprises experience such failures, and whether there are any options to help them perform better. The study attempts to answer these questions by developing inclusive, sustainable and appropriate farm management model to contribute considerably to rural development and the improvement of livelihood of rural people and land reform beneficiaries, eradicate poverty, and reduce level of unemployment in rural areas.

This study was based on the case studies of land reform and privately owned citrus farms in Mpumalanga Province. In these sites, large areas of high-value irrigated citrus farms have been transferred to relatively poor communities, while some farms are on the process of being transferred to these communities. Certain farms are owned by state through its enterprises, while some are owned privately by commercial farmers.

In trying to maintain the productivity of commercial farming enterprises, maximise long-term benefits for their members and share dividends equally, these communities have opted for a collective use and management of land by beneficiaries themselves, with minimal involvement of outsiders, most of which take the form of Communal Property Association (CPA) model. Though, the state provides certain start-up grants, and the beneficiaries are expected to provide technical and managerial know-how and organise additional capital from commercial lenders.

To measure the prevalence of these problems, the study used three methods of data analysis: SPSS, focus-group discussions and face-to-face interviews with beneficiaries and farmers with primary emphasis on the first two methods. SPSS programme was used to perform data entry and analysis and create tables and

graphs. SPSS was preferred due to its capability of handling large amount of data and ability to perform all of the analyses covered in the text and much more. The group discussions involved 06 groups of expert informants from the land reform projects and private farmers in selected regions. Content analysis was used to elicit information during group discussions and reporting. This involved identifying issues, then grouping these issues into similar categories and summarising their prevalence.

These have provided insight into the successes and failures of land reform enterprises. It has helped in identifying factors such as key success reasons as to “why do certain farmers prosper more than others who farm in the same region under similar circumstances, why some farmers survive difficult times while their neighbours are ruined by similar situation, established the reasons why some farmers are productive as compared to other farmers facing similar challenges and lastly to develop farm management model for successful land reform farming enterprises”.

1.2. Context of the research

The broad context of land reform in the White Paper of South African Land Policy and National Development plan (NDP) is to rebalance the highly racially-skewed access to land that was a consequence of violent dispossession and apartheid. At the same time, it seeks to create sustainable rural livelihoods through agriculture, employment creation and any equitable forms of growth. (DLA, 1997; NDP, 2012; Greenberg, 2013).

In South Africa today, land reform especially the restitution programme, have assisted majority of the poor rural communities to gain access to land for agricultural purposes. Many of land reform beneficiaries are using the land for farming purposes. However, this is an essential part of balancing access to agricultural resources and facilitating sustainable land-based livelihoods strategies. In contrary, the transferred projects have been unsustainable due to current farm management model practiced within land reform.

As a result, a prevailing thrust in early thinking on farm management approach post transferring land in the Department of Land Affairs (that has since changed its name

to Department of Rural Development and Land Reform (DRDLR) was regarded as Communal Property Association (CPA) arrangement and Trust. This model has fallen short of its expectations of creating sustainable rural livelihoods through agriculture and job creations. This shows that government has been unsuccessful in developing a clear, effective and coherent farm management model that will ensure sustainability of transferred projects as well as rural livelihoods through land reform.

1.3. Research problem and aims

The problem investigated in the study is the sustainability of land reform agricultural enterprises under existing types of farm management model that was designed to sustain these projects and at the same time alleviate poverty. In South Africa, like any other developing country, agriculture still constitutes the primary source of income, status and food security for millions of people (Prosterman and Hanstad, 2003) and (Ravallion and Chen, 2003).

However, agricultural sector in South Africa has undergone significant restructuring. For instance, in the early 1990s, agricultural markets deregulations were adjusted and liberalized, the state support was reduced (Makhura *et al*, 2011: v). These broader processes affected agricultural sector.

The gradual decline of agricultural output in certain areas has been visible with the introduction of land reform programme in the 25 years since the end of apartheid, following the first democratic elections. After ANC has taken political power from the National Party (NP), and subsequently introduced land reform to rebalance the highly racially-skewed access to land that was a consequence of violent dispossession and apartheid (Greenberg, 2013: 1). New programmes such as Settlement and Land Acquisition Grant (SLAG) (which was later replaced by Land Redistribution for Agricultural Development (LRAD) were basically designed to get individuals and groups of former dispossessed people onto the land.

The restitution mainly focuses on returning people to the land they had been forced off in the past. In most cases, restitution involves large numbers of people. Although,

laws and policies very clearly defined land owning and managing institutions being; CPAs and Trusts. These were seldom detailed or defined institutional arrangements for production purposes. Support to create business plans is often provided (through outsourcing to private consultants who had no stake in the outcome), but these are based on a commercial model of farming and the expectation is that beneficiaries would work and manage the farms collectively and distribute the proceeds fairly amongst themselves (Greenberg, 2013: 9).

However, collective working and management of land reform projects has been criticized by many in the sustainable development and agriculture literature, especially in regard to sustainability and contributions to poverty alleviation (Tilley, 2007; Binswanger-Mkhize, 2014; Business Enterprises, 2014). For instances, experts stated that the majority of collective workmanship and management through CPAs and Trusts formed through land reform are faced with sustainability problems and most of them are non-existent, whilst others are debt-ridden, with their beneficiaries owing substantial amounts of money to the financial institutions (Mmbengwa, 2009: 8).

In the same sustainable agricultural vein, Jacobs (2003:13) and Tilley (2007), land reform and agricultural researchers pointed out the wide spread concern among South Africans that most of beneficiaries group secured access to good agricultural land in Mpumalanga had no sustainable improvement in their living conditions. Similarly, Goldblatt, a researcher at World Wide Fund for Nature in South Africa (WWF-SA) and Jacobs, found that “land reform programme” has doubtless returned people to the land they had been forced off in the past (Golblatt undated; Jacobs, 2003;2). This has reduced social tensions in certain areas, but progress has been slow and farming projects have shown a 90% failure rate, reducing agricultural output (Golblatt, undated).

These and other problems are not empirically investigated and mitigated through systematic scientific interventions. Very little attention is given to these very important issues but instead more attention is given to the quantity of land transferred or to be transferred. Today a key challenge is to develop and sustainable and effective farm management model of emerging agriculture to determine how to better support sustainable land reform initiatives.

Prosterman and Hanstad, (2003:8) warned that the neglect of land reform issues may lead to a potential economic crisis. The same reactions were reiterated by Groenewald, (2004:674). In Southern African Development Communities (SADC), particular lessons may be drawn from the current economic and social collapse in Zimbabwe.

1.3.1. Aims and objectives

The aim of the study was to develop inclusive, sustainable and appropriate farm management model for land reform farming enterprises in order to contribute considerably to rural development and the improvement of livelihood of rural people and land reform beneficiaries, eradicate poverty, and reduce level of unemployment in rural areas through development of sustainable citrus enterprise.

Other objectives are:

- To generate data for the guidance and support of land reform farming enterprises and agricultural policy making
- To develop sustainable farm management model for a successful land reform farming enterprises to be used by state, public agencies etc. as a basis for structuring land reform or broader agricultural sector.
- To find key success reasons as to why do certain farmers prosper more than others who farm in the same region under similar circumstances.
- To find out why some farmers survive difficult times while their neighbours are ruined by similar situation.
- To establish the reasons why some farmers are productive as compared to other farmers facing similar challenges.

- Scan and analysis the levels of literacy, experience in farming and involvement of youth and women.
- To evaluate land reform farmers' socio economic factors
- To review literature on farm management models and farm/business for sustainability of land reform projects in the province

1.4. Structure of thesis

The study starts in Chapter 1 with an introduction and background. The research problem and aims, of the study will be outlined in this chapter.

Chapter 2 is literature review. While Chapter 3 outlines the research methodologies employed during the study.

Socio-economic and the current status of small-scale farmers in Mpumalanga Province are in Chapter 4. While the performance and sustainability of citrus farming commercial cooperatives and commercial family farms are depicted in Chapter 5.

Chapter 6 deals with the elements of success and failure of CPA's, commercial state farms and small subsistence-orientated family farms. Chapter 7 assess the factors that promote true sustainable citrus farming in Mpumalanga.

A proposed sustainable farm management model for sustainable citrus farming in Mpumalanga Province is outlined in Chapter 8. Summary and conclusion of the study are presented in Chapter 9 and Chapter 10 illustrates list of references.

CHAPTER 2: LITERATURE REVIEW

2.1. Introduction

In spite of agreement on the overarching goal of land reform and rural development, there is no concurrence on how to manage and use land reform projects neither is there any consensus on how to measure it. These differences in perceptions precipitate a plethora of divergent schools of thought which further complicate the process through which the outcome of sustainability of land reform projects can be achieved in the Mpumalanga Province, because theories influence national policies and practices. A government that believes in sustaining land reform farming enterprises is likely to support development of management-based sustainable model. This chapter presents lessons from experiences in South Africa, Brazil, Zimbabwe and Mozambique.

While comparative studies can provide valuable insights about the way in which land reform has been dealt with in other countries. There is a risk in learning from one country and apply it to another without taking adequate account of specific context which enabled such reforms to be realised (DLA, 2007).

2.1.1. Brief background on land reform in Republic of South Africa (RSA)

The current process of land reform in South Africa began in early 1990s during the transition to democracy, but really got underway after the election led by ANC government in 1994. From 1994, South Africa has embarked on ambitious land reform programme designed to deal with racial imbalances in land ownership and secure land rights of the historically disadvantaged people. These aims found expression in the interim Constitution (Constitution of the Republic of South Africa Act, 200 of 1993, as amended), which provided for the establishment of the Commission on Restitution of Land Rights (replacing the Commission on Land Allocation) and for historical land claims to be heard by a court of law (Lahiff and Scoones, 2000:28-29).

South Africa's land distribution is considered highly unequal as compared to Brazil's and Colombia's (Tilley, 2007:10). The policies that neglected the land rights of the

non-white population have systematically exacerbated these inequalities. The Native Lands Act of 1913 prohibited the establishment of new farming operations, sharecropping, or cash rentals by blacks outside of the reserves, which made up only 7.7% of the country's area. Inside the reserves an artificial form of "traditional" tenure with maximum holding sizes and restrictions on land transactions was imposed. Later, policies of "black spot removal" transferred the large majority of black farmers who had legitimately owned land outside the reserves into the homelands where tenure restrictions, high population density, and lack of capital and market access made commercial agriculture virtually impossible.

However, the Native Lands Act was revoked in 1993; the historic task of a comprehensive reversal of these policies and their consequences was left to the government that came into power after the elections of 1994. In trying to do so, this government had to struggle not only with the extremely unequal land distribution (the average amount held per person was 1.3 hectares by blacks compared to 1,570 hectares by whites) but also the lack of any local government structure, widespread absence of administrative capacity, a highly indebted large farm sector, and fear that redistribution would wreak havoc with agricultural productivity and jeopardize national food security. The government decided to adopt a land reform policy that would redress the injustices of apartheid, foster national reconciliation and stability, underpin economic growth, improve household welfare, and alleviate poverty (DLA, 1997). The three facets of this policy are as follows:

- (a) *Restitution*: Policy have been put in place to compensate (in cash or kind) individuals who had been victims of forced removals after the 19th June 1913. All Restitution cases are dealt with through the Land Claims Court and Commission, established in 1994 to which claims had to be submitted within a specified time period (initially end of December 1998, which now extended to end of July 2019). Hopes to be able to complete the legal process in a speedy manner have been disappointed. As expected, the inability of the vast majority of the population to furnish written evidence has made this option feasible for only a small part of the population.

(b) *Redistribution*: Redistribution aims to complement the market by providing land for productive and residential purposes to a large number of rural blacks who were dispossessed during apartheid and who are interested in obtaining land. It aims to do so by providing a one-time Settlement/Land Acquisition Grant of R15, 000. 00 the amount of which was equivalent to the National Housing Subsidy available in urban areas to qualifying beneficiaries, defined as anyone with a monthly salary below R 1,500.

The choice of negotiated land reform rather than expropriation (which, as in Colombia, can still be used as an instrument of last resort) was based on the need to maintain public confidence in the land market, and more generally to affirm the government's respect for individual property rights. It also reflects the recognition that in other countries expropriation has failed to provide rapid access to land for a large number of people and instead fallen into lengthy political management and rent-seeking. The number of potential land reform beneficiaries is considerable; estimates indicate that there are about 200,000 labour tenants and 1 million farm workers, and as many as 7-8 million blacks in the reserves (not all of which would, of course, be interested in land reform).

(c) *Land tenure reform*: It seeks to improve tenure security of all South Africans by recognizing individual as well as communal ownership rights to land, giving people the right to make decisions about their own tenure system, adjudicating disputes, reforming tenancy laws, and attempting to end discrimination against women in land allocation and holding. It is intended to create the administrative infrastructure that will provide previously disadvantaged groups with access to land under a wide array of arrangements that are in line with agro-ecological endowments and community characteristics. It is hoped that this will provide the regulatory environment for a land rental market by transferring land to more productive users, redressing the inefficiencies of the apartheid system.

2.2. Agricultural support institution in RSA

The key agricultural support institutions within the land reform sector in South Africa are set out below: Government (National, Provincial and Local), Land Bank,

commercial Banks, private institutions (Vumelana), NDA as well as Non-government organisation (NGOs and CBOs).

2.3. South Africa's agricultural development agenda

In the early 1990s, Agriculture and Land Affairs were separate ministries. But in 1996 the two ministries were combined into single ministry ostensibly because of the need to ensure coordination between the pre- and post-settlement support issues plaguing land reform. However, later in the late 2000s, the two ministries were again separated into two functions, which brought together agriculture, fisheries and forestry. During 2009, the Ministry of Rural Development and Land Reform was formed.

In moving forward, the department of agriculture and agencies like NDA and Land Bank were given prominent role of providing post-transfer support. Provincial Department of Agriculture became involved in the farmer support activities. NDA and department of agriculture restructured directorates to deliver better services to land reform beneficiaries. Farmer settlement support for new entrants was established in NDA (Jacobs, 2003; 5).

The main aim of statutory and non-statutory institutions in land reform and agriculture in South Africa *inter alia*; positioning rural development through agriculture to improve national food security; improve agricultural economic output in a profitable and sustainable manner through qualitative and quantitative improvement of South Africa's agricultural productivity, improve agricultural trade and regulatory environment

If the aforesaid goals are achieved, land reform farming enterprises can contribute vitally to rural economic growth and development and thus increase rural employment both on- and off-farm. The key strategies identified are:

- Provide a support to new and existing producers
- Access to markets
- Access to resources

2.4. International land reform experience

The countries with sufficiently long history of land reform has been selected to provide insights and learning for South Africa. As a result, experiences from Brazil, Zimbabwe and Mozambique have been considered. A brief background to each country's land reform process is provided and the nature of support given to land reform farming beneficiaries.

2.4.1. Brazil's brief background

Alongside South Africa, Brazil has one of the most unbalanced distributions of land in the world. Family farms averaging 18 ha are farmed by 84% of the population; these farmers represent only 24% of the total agricultural land in the country (Lowder *et al*, 2014). FAO (2013) reports that, average farm sizes decreased from the year 1950 to 2000. This attributed in the migration of millions of rural poor to the slums and fringes of urban centres. However, on the other extreme, farms in average of 309 ha (non-family farms) make up only 16% of all farms but take up to 76% of the total agricultural land.

Under the Brazilian Constitution, the state reserves the right to expropriate agriculturally viable property which remains unused. Moreover, key rural worker organization such as *Movimento dos Trabalhadores Rurais Sem Terra* (MST), founded in 1985, also invades the unused land and force the State to expropriate it in terms of the 'social function clause of the Constitution. Landless peasants had also occupied an unproductive parcel of land, petitioned the Brazilian government for land rights, and operated the settlement as a collective enterprise (Tilley, 2007).

Between 1995 and 1998 as indicated by Schwartzman (2000 as cited in (Kenfield, undated), the Brazilian government settled more landless families on expropriated land than it had in the previous 30 years, an effort that would not have been possible without the continual, large scale public pressure applied by the MST strategy of land occupations. Wolford (Wolford 2001:311, as quoted in Kenfield undated), argues that, the figures indicate that over half of the settlements in Brazil received land as a direct result of social pressure. This suggests that the mobilization of the rural and urban poor in the pursuit of land reform is a fundamental determinant of success.

These process did not only quicken the pace of land reform in Brazil, but, it has also allowed the rural poor to articulate and implement their vision of rural life on the land once they have acquired it, and to demand and access the necessary support during the post-acquisition phase. Likewise, post-acquisition support that is directed to agricultural production is viewed not simply in terms of creating economic efficiency and potential in the global marketplace, but in terms of the production of healthy food for poor, rural Brazilians.

Aspects such as food security and sovereignty and how these relate to individual sovereignty and social justice, local economies and the protection local environment define how the MST decides on its agricultural production systems (Kenfield, undated). This approach to agrarian reform as defined by (DLA, 2007), brings with it a particular approach to the nature, scope and content to support programmes associated with land reform.

The MST used existing government policies of 1964 when the government of the day realized that large landholdings contributed to rural poverty, decreased productivity and hindered development, and it established the 1964 Land Statute, which gave the Brazilian government the legal right to expropriate large landholdings deemed unproductive. This statute was strengthened when the Brazilian Constitution was rewritten in 1988, in which clause 186 states that land has a social function. Private property, including land, will only be recognized if it contributes to the wellbeing of Brazilian society, including both owners and workers. Drawing on this constitutional clause, the MST organizes and implements occupations of unproductive lands in order to force the government to purchase the land from landowners for redistribution to the landless poor (Kenfield, undated).

2.4.2. Land use and business planning

Before a land may be transferred to land reform beneficiaries, Tilley (2007) advised that there must be proper development plans in place. In practice, this does not happen. This is confirmed in a study that external actors who assist with the preliminary planning and post-acquisition support, have instead focused on land

purchase negotiations and the immediate post-land transfer activities, such as resettlement, since beneficiaries were moving onto new land which did not have previous settlements. Brazil's market-based approach requires that development plans be drafted before land is purchased. However, empirical evidence suggests that the method of elaborating project plans before land is purchased has not been enforced (Tilley, 2007).

It is, therefore, vital that extension service providers and who assist with preliminary project planning provides pre and post-acquisition support to make projects sustainable. Tilley (2003) find that extension services providers have instead focused on land purchase negotiations. Government extension services continue to be used and are expected to be crucial in the future since the grant money has proved to be insufficient. Most of purchased farms are of marginal quality, irrigation facilities are absent or impossible to install, there is no electricity, and the farm are generally far from roads and markets.

2.4.3. Financing land reform projects

The financing of land reform projects is based on a loan-grant package of support to beneficiaries. A fixed amount of money is allocated to each beneficiary who will then uses the money to buy farm and pay for post-transfer development. The money that will be used on the purchase of farm is taken as a loan and has to be paid back. The remainder as taken as a grant and is not paid back. The practice is that peasant buyers will do their best to buy farms at the lowest possible price in order to remain with a bigger portion of money for post-transfer developments. However, these impacts on the quality of the farms which beneficiaries are able to acquire and the extent to which they are able to address their own post transfer needs (Buainain, Da Silveira, Souza, & Magalhaes, 2000).

Government is expected to fund the initial phases of the programme. However, it has been shown that in the long run and for more widespread implementation, the projects rely on commercial, rural and land banks as well as mortgage institutions to actually finance these projects. The scheme is premise on the principle of co-sharing of risks by beneficiaries.

Buainain *et al* (2000) highlighted that majority of beneficiaries are averse of using their farms title deeds to secure loans from commercial banks despite the growing need for additional funds. The empirical evidence suggests that beneficiaries look more to State funded support in order to augment the grant loan package. On the other hand, commercial banks do not view beneficiaries as creditworthy because of their less than attractive farm conditions. As a result, an investment from the private sector has not been forthcoming and that post-transfer support needs have not adequately been met (Buainain *et al*, 2000).

2.5. Mozambique's brief background

Mozambique land rights have undergone a remarkable and instant change in the last decades. The initial corrections to the socialist approach to land management and the recognition of individual land use rights came in 1987 with the revision of existing land law regulation. In the early 1990s, it became clear that the national legal and regulatory framework governing land use rights did not provide secure tenure rights to either smallholders or larger commercial interest. In the same time, the amended constitution forced the State to recognise rights acquired through inheritance occupation. The new Land Policy was adopted in 1995 followed by the new Land Law in 1997 (Tilley, 2007).

By the early 1990, the government of Mozambique initiated a land policy review which led to a new National Land Policy in September 1995. The policy then led to a new Land Law in 1997, and implementing regulations in 1998. The main aim of this Land Law was to achieve a balance between safeguarding the interest of communities and facilitating investor's access to land. The legislation sought, among other things, to halt speculative land grabs that were leading to increased landless amongst the poor. The Land Law established a right to use land which inheritable and subject to certain restrictions. This right is known as *Direito de Uso e Aproveitamento dos Terras* abbreviated as (DUAT). While DUAT does not confer full ownership, it is a secure, renewable, and long term user right that covers a period of up to 60 years (Hanlon, 1997).

The basic provision under the Land Law (Hanlon, 1997) state that the land is the property of the State and cannot be sold or otherwise subdivided, mortgage, or encumbered. Formal title documents showing the right to use land can be issued not just for individuals and companies, but also to communities and groups and communities or individual occupying land for more than ten years acquire permanent rights to use land. Joint ventures between commercial enterprises and family farmers are allowed, but they require consultative process with existing right holder. Subsequent to legislation, the role of traditional authorities in the prevention and resolution of conflicts was secured. The policy maintains the concept that all land belongs to State (Hanlon, 1997).

Hanlon (1997) outlined that the 1995 Land Policy was built upon a set of principles that highlighted the need for greater protection of existing rights to land and the establishment of an environment within which the rural poor could increase the benefits from the most common form of natural capital available to them (being land). The policy was prepared in such a way that it will have a positive impact on the livelihoods of the rural poor.

The policy was also introduced to develop rural areas and growth of local communities and to promote investment in rural areas through the involvement of private bodies. Importantly, Hanlon (1997) has shown that the policy underlined the importance of developing a legal framework for land rights that would be sufficiently flexible to accommodate different models and scenarios in respect to rights and landholding in the family sector.

2.5.1. Post-acquisition actors

Central government bodies that are involved to varying degree include Ministry of Agriculture and Fisheries; Ministry of Planning and Finance; Ministry of Environmental Action Coordination; Ministry of State Administration; Ministry of Industry, Commerce and Tourism; Ministry of Mineral Resource and Energy; Ministry of Public Works and Housing; Ministry of Culture, Youth and Sport; the Institute for Rural Development; and the Land Commission (Lahiff & Scoones, 2000; 19).

Government of Mozambique received external support on land matters from a range of external agencies. The FAO funded a Technical Co-operation Programme projects to support the Land Commission until the end of 1996. Technical Co-operation Programme assisted with the drafting of National Land Policy as well as helping in the establishment of the programme approach for Land Commission activities in which donor resource are managed within a single budget framework supporting a national programme with a single set of priorities and objectives (Lahiff & Scoones, 2000).

Between 1991 and 2000 USAID funded a project and worked together with Ministry of Agriculture, the Inter-Ministerial Land Commission and the Land Studies Unit at the Eduardo Mondlane University. The project addressed land and natural resource tenure issues through applied research and policy dialogue with the government and civil society. The state farm divestiture, land access for refugees in the post-war apartheid, land conflict and resolution, land law reform and institutional building at national, provincial and local levels were also addressed through this project (Lahiff & Scoones, 2000).

The World Bank has had two major projects in such as Rural Rehabilitation Project at the Institute for Rural Development as well as the Rural Services Rehabilitation and Development Project at the Ministry of Agriculture and Fisheries and the National Directorate for Cartography and Cadastre. Ford Foundation, Swedish International Development Agency, Norwegian Refugee Council and the Government of the Netherlands also provided support to Mozambique land reform (Lahiff & Scoones, 2000).

The Inter Ministerial Land Commission was also responsible for managing and administering land reform and associated settlement support strategies. However, the institution collapsed into Ministry of Agriculture and Rural Development. At a district level, the structure and composition of the agricultural directorates vary widely. The directorates are generally characterised by a very low level of human, physical and financial resources.

Very few districts have specific representatives from the provincial land services, which tend to be concentrated in the provincial capitals. For regulatory activities, the

provincial offices depend upon the participation of generalist technicians based in the district. Representatives of the district administrative authorities also play a role in land adjudication process. Land consultations have to include a representative of the district administrator, although in many cases this role will be allocated to the district directorate of agriculture. At sub-district level there is even less specialist capacity and this is usually restricted to extension workers (Tilley, 2007:36-37).

2.5.2. Role of traditional authorities

Since coming to power, FRELIMO has conceded popular demands to strengthen the rights of women by stressing quality of men and women on land titles. The government attempted to remove various references to 'customary law' on the ground that traditional practices discriminate against women (Tilley, 2000).

Various rural interests have used 'customary institution' and customary practices to justify local control of resources and to resist encroachment by state officials and/or private business interest. On the government side, reference to local authorities and customary rules around land are usually seen in terms of return to 'tribalism' or meaning unrestricted power for traditional leaders and are seen as undemocratic, backward and inhibiting production (Lahiff & Scoones, 2000).

Myers (1994: 607 as cited in DLA, 2007) argues that such arguments are not new. Shortly after independence, FRELIMO took position that customary institutions, authorities and rules are backwards and represent feudalistic society, and launched a campaign against them. This campaign had a dramatic effect on social relations in many rural communities, promoting conflict and divisions within them. Renamo has consistently opposed the aspects of the Land Law because it continues state ownership of land and gives insufficient powers to traditional authorities.

Tilley (2007:37) argues that these perceptions do not match reality. "In practice, the power and legitimacy of the traditional authorities seem to have been largely maintained. The end of the war and the consequent return of displaced populations in the early 1990s proved this continuing durability of traditional institutions of land allocation and adjudication: the re-establishment of legitimate and widely accepted

land-holding patterns (between groups and individuals that had remained in the countryside, those that had returned and those arriving to new areas) occurred within the framework of the customary rules of the rural populations.

The process occurred largely without conflict and required little intervention from formal authorities. Since the peace accord, the traditional authorities in an area may be used by local people as a forum for resolving disputes. In many areas access to land can be through kinship networks or neighbours rather than through the chieftaincies. Outsiders who come to a new area in search of land would traditionally be expected to ask permission from the local traditional authorities, but in some cases this may just consist of informing them after the fact in order for the boundaries to be confirmed. The traditional authorities are often used by NGOs as dispensers of aid and by companies as agents and generally have high stocks of social capital and influence”.

2.6. Zimbabwe’s brief background

Moyo (1989:27) highlighted that the seriousness of the issue of land reform is undisputable in a country where before 1980 a maximum number of 5,700 white farmers owned half the productive area and black peasants were demoted to mostly inferior land in the drier, drought-ridden parts of the country. According to Moyo (1989), the now ruling party, Zimbabwean African National Union Patriotic Front (ZANU-PF) of Robert Mugabe, sought to reduce the area under large-scale commercial farming to 5 million hectares while increasing the area under resettlement to 8.3 million hectares.

As a result, the number of commercial farmers has now declined to an estimated 4,500 (counting black labourers and their dependants, the number of people residing in the commercial farm areas is some 1.5 million). The former African reserves or Tribal Trust Lands, now called communal areas, are inhabited by around 800,000 households or perhaps 5 million people.

The foundations for this division of land were laid in the earlier part of the century. The means for doing so were expropriation, the legal segregation of the market in land

(through the Land Apportionment Act of 1930) and the gradual and often forced removal of black 'squatters' from the 'white' areas. The position of white farmers was further bolstered by price discrimination against black peasants in the produce markets and various interventionist measures by the state (Moyo, 1989:27).

By 1996, as observed by Chitsike (2003), 'Model A' family resettlement transferred 3 million hectares of land to 66 000 households, 'Model B' transferred 165 000 ha of land to 4 200 settler households, 'Model C' transferred 17 000 ha to 800 households, and 'Model D' provided 250 000 ha of grazing land to 20 000 households. However, by the year 2000, a wave of land invasion and occupations started. The already confused and contested land reform policy was surpassed by these events.

The legal framework regulating the land acquisition of land collapsed, and international aid was ended. By the end of December 2000, a total of 2 540 farms with total land surface of 5.88 million ha had been identified and gazetted for compulsory acquisition (Tilley, 2007). By December 2002, 310 000 families were resettled under the A1 villagisation scheme and other new 50 000 farmers in the A2 commercial farming scheme. The resettlement process has been described by others as 'chaotic' with little attention given to implementation or support services such as training, inputs and access to basic services.

2.6.1. The approaches to settlement support

Rehabilitation programme encompasses in Phase I land reform policy identified landless people from the communal areas and abandoned farmland that required infrastructural and productivity revival. Additionally, the programme also pursued to extend productive agriculture and employment opportunity to the small-scale or subsistence farming sector and the destitute, as well as provide some infrastructure for social and economic development. When Phase I of the programme was introduced, land availability was abundant and planning for large numbers of beneficiaries was facilitated.

During this phase of the settlement programme, there were significant highlights of the provision of planning and support services and investment in infrastructure, particularly

with regard to Model A family farming resettlement schemes. Beneficiaries on the small farms were provided with start-up tillage services and inputs for 0.5ha of crops for each family. Infrastructure development (UNDP, 2002) included boreholes, schools, clinics, staff houses; cattle dip tanks, toilets and roads.

However, there were also problems associated with the willing buyer, willing seller approach. According to UNDP (2002), the way the programme was implemented meant that, inevitably, settlement scattered. It was therefore difficult to generate economies of scale in the development of both settlement areas and infrastructure.

Chitsike (2003) even stated that there were capacity problems as government officers lacked capacity to provide the nature and scale of assistance required by beneficiaries and extension services were spread too thinly. UNDP (2002) argued that the provision of extension advice was a statistically significant explanation for the success of farmers in a Phase I settlement in Mashonaland Central. Additional problems that beneficiaries were facing were related to security of rights transferred to the new owners of redistributed land. The beneficiaries were provided with written permits to occupy and use the land by government. The state settlement officer's overseen occupancy and utilization of the land rather than by established local authorities.

Phase II of the land reform programme openly recognised the role of commercial agriculture and those in crowded marginal and degraded lands and the rural poor in favour of redistributing land to capable small and large scale farmers. Phase II also contained a shift in the land tenure policy towards 99 year leases (Chitsike, 2003). Although, the scarcity of land for redistribution, lack of government resources to purchase land and subsequently service and support new owners and an escalating demand for redistribution land by communal land households and other prospective beneficiaries were highlighted as some of tensions besting Phase II. UNDP (2002) has shown that only 145 000 ha of land was transferred to 4 697 families under Phase II.

2.6.1. Institutional arrangements

The mandate of The Department of Rural Development was to implement Phase I and II of the land reform programme, as a results, it established development and

resettlement teams. The development teams were responsible for the delivery of physical infrastructure and related services. Resettlement officers, as project managers, interacted directly with beneficiaries during the process of the selection of the beneficiaries, settler mobilization for communal services, general scheme development, and acquiring services from other agencies (Gonese *et al*, undated).

Likewise, Gonese and friends outlined that, the project management role previously played by resettlement officers has been withdrawn, and it to be filled by district administrators, extension workers or district development fund technicians. The absent of resettlement officers deprives the beneficiaries of the decisive enforcement function that enabled a resident officer to resolve interpersonal conflicts and other practical problems that the extension worker or the distantly based district administrator may not be able to tackle. These commentators even warned that, the absent of this officers have led to the loss of records, information or data about the affairs of and developments at the beneficiaries' projects.

As a results of the absent of resettlement managers, beneficiaries were obliged to play the role of projects administrators, constituting management structures that attends to beneficiaries needs. This development has been argued that it may help to locally democratise decision making, but may also led to conflict-ridden if not managed or guided properly. Such structures tend to be project specific and able to address projects needs and problems and may, where is needed, require assistance in linking up with relevant external services or resources.

Local community structures ranged from management committees that undertake administrative functions to social groupings acting to promote or safeguard particular farmer interests. While differs in terms of unique interests or irregular circumstances, such management structures play a vital role in stimulating beneficiary participation in project administration, developmental planning and general local resource management as they provide a crucial means of interaction between projects, government and external non-governmental stakeholders (Tilley, 2007).

The government introduced a fast-track programme that aimed to accelerated land acquisition and maximise emplacement without immediate provision of physical

infrastructure. Physical development was to follow later to complement the immediate access to, and use of the land. The fast-track programme focused more on the allocation or distribution of the land and less on the infrastructure and supportive framework and services that could facilitate or complement effective agricultural productivity and consolidate community development (Gonese *et al*, undated).

2.7. Support services for agricultural enterprises in the Republic of South Africa (RSA)

Transferring a project to the beneficiaries must not be the end of the road in itself. The project must be sustainable, generate wealth, create employment and fight poverty. This can be done if the project is productive. Support services are essential tool for the productivity of the project. For example, majority of land reform projects around South Africa has failed as a result of inadequate support for emerging farmers (Makhura *et al*, 2011). Makhura *et al* (2011:9), even states that, “in regard to land reform projects”, these support services are not well coordinated, especially between national, provincial and district organs. After the projects are handed over to the beneficiaries, not one of these entities is willing to provide support services to the project.

Jacobs (2003) advised that land reform projects showing willingness and viability must have easy access to these essential farming tools. For instances, these projects need to be assisted to have access to established markets controlled by fixed interests. Many land reform projects are seen as subsistence producers, as a result, support they receive is oriented on receiving basic inputs such as seeds, machinery, (in some cases fencing). Some projects are gradually being recognised as having some market potential (Jacobs, 2003). This section will focus on key functional areas of support to land reform farming projects. These areas are:

- Extension services
- Training, mentorship and management
- Infrastructure
- Access to finance and markets

The logic was that provision of these support services will sustain land reform farming enterprises, with the expectation that the performance of the projects in question will be enhanced. In this period, of course 22 years down the line, the government major concerns is still the number of hectares to transfer rather than the number of hectares to keep in production. The priority areas of support services will now be examined.

2.7.1. Extension services

Agricultural extension is generically misunderstood. The poor understanding of extension clearly reveals itself in. The way extension is defined, the way in which the extension services are structured and the extension approaches are used is confusing. For example, some other government departments and private sectors in South Africa are now using the word 'agricultural advisory services' instead of 'agricultural extension services'. Some of the commonly used connotations and definitions of the concept "extension" will be unpacked. The idea is to arrive at a commonly acceptable definition that is easy to understand and use.

(a) Definition

The problem with extension starts with its definition. There are many definitions of extension. In the past few decades there were confusion about what agricultural extension is and what really does this discipline supposed to offer and achieve. The very same questions are still unanswered even today. I find it difficult to identify any other agricultural discipline that is beset by so much confusion and definitions. No wonder why the contributions of extension cannot be appraised. There is a lack of collective agreement on what it is and what it is supposed to achieve and how. So how can it be appraised?

Some see extension as a one-way technology transfer. However, extension as is defined by Christoplos (2010:2); Anderson and Feder (2003), is a system that should enable access of farmers, their organizations and other market actors to knowledge, information and technologies; facilitate their interaction with partners in research, education, agri- business, and other relevant institutions; and assist them to develop their own technical, organizational and management skills and practices.

Christoplos, Sandison and Chipeta (2012) authored a document for Global Forum for Rural and Agricultural Services (GFRAS) about a debate that took place in 2012 on extension evaluation. They came up with a definition of extension as “a system that is consisting of all the different activities that provide the information and services needed and demanded by farmers and other actors in rural settings to assist them in developing their own technical, organizational, and management skills and practices so as to improve their livelihoods and well-being”.

Furthermore, and most importantly, note should be taken on the fact that nobody controls these unruly extension systems. Regulatory and policy structures influence different extension actors in different ways and to different degrees. However, in South Africa, there are currently two professional bodies where agricultural extensionists can register with namely; the South African Council for Natural Scientific Professions (SACNASP) and the South African Society for Agricultural Extension (SASAE) a voluntary body registered with SACNASP.

But, during apartheid era in South Africa, extension services were separated between public and privatised services. Extension was already historically separated between highly support for the commercial sector and low quality support for disadvantaged producers such as Blacks, Indians and Coloured (ARC, 2011 & Koch and Terblanche 2013: 109 -110). It was all about men working for public sector agricultural agencies riding around on motorcycles talking to farmers. The overview of extension services prior and post 1994 are unfolded below.

(b) Overview of Agricultural Extension Services prior 1994

Prior 1994, the extension services for black farmers were developed along their own specific pathways. For example, in 1913, the Union Government promulgated the Native Land Act 1913 (Act 27 of 1913), which reserved land for blacks that had been occupied by them at the time of Union in 1910. In 1936, by way of the Released Areas Act 1936 (Act 18 of 1936), a further 6, 2 million ha of so-called “quota land” was added to the 9, 2 million ha of already “scheduled land” (Coetzee, 1987 as cited by Koch & Terblanche, 2013: 109).

With regard to the extension support approach to Indians, this has included both the promotion of production and the conservation of resources. Fellow farmers observed the improved production and quality of produce, the improvements increasing the credibility of extension work and its growing sphere of influence. The relevant decision makers of the day decided to concentrate their extension effort on a relatively small number of larger growers.

It was expected that the extension message would be disseminated among farmers on an equal from these initial points of contact. The priority was also highly given to those farmers who had requested visits with little time to visits not specifically requested. The Coloured People have always maintained a low profile within the extension fraternity. They have been linked to the so-called *Oppermangronde*, the Richtersveld and others. As a result, the historical literature on extension support services for Coloured people is unknown (Koch & Terblanche, 2013: 110).

(c) State led extension services

Public extension involves many tasks related to natural resource management, climate change adaptation and food security. Extension related to food production is a public good in that experience has shown that when it is seen as a purely private matter, this may lead to exclusion of smallholders, which in turn may lead to widespread hunger, political instability or destruction of the environment (Christoplos *et al*, 2012).

During the late 1930s, the agricultural co-operatives specializing in sugar cane, wool, and citrus fruit initiated the employ of extensionists based on their commodity. At around 1982, these commodities based organizations managed to deploy a total of 242 graduates and 286 technicians. Farmers from neighbouring states such as Lesotho benefited from this initiative. Due of this initiative, the South African Agricultural Union was ranked in the top position in terms of economic and technical services (Christoplos *et al*, 2012).

However, in the early 1990s, the confidence in the effectiveness of public sector's extension agencies declined leading to the rise of an alternative paradigm. It was

assumed that market-based solutions and privatization of extension provision could become an effective and sustainable base for diversity. Experiments were undertaken by many governments and aid agencies. At the same time, the Control Boards were dissolved.

Subsequent to the declining of public extension agencies and disbandment of Control Boards, private sector investment strengthened its extension services. Today, services for relatively well-off commercial farmers are increasingly dominated by private advisory services, but these investments are rarely serving the rural poor and land reform beneficiaries. In many countries, privatization (often undertaken by the mere withdrawal of funding for public sector agencies) resulted in the majority of farmers losing access to impartial and independent advice altogether. This experience showed that creation of a level playing field for private extension providers is very important, but that this needs to be part of a wider reform process which promotes diversification while recognizing the need for public financial support (Christoplos, 2010; 17).

Public sector extension agencies today provide anything from seed multiplication to distribution of disaster relief. These services are mainly provided by the department of agriculture. However, those who are not within extension discipline criticised these practises and has since advised that extension workers must focus on their main call, which is extension work. Although, Christoplos (2012) has indicated that even if these tasks can be gauged as tasks that have little direct to do with agricultural extension services and can be a serious distraction from core tasks, but they are a fact of life and it is often important that extension agencies provide these services in an effective manner to retain the confidence of their clients and funders.

Moreover, it will be a tragedy if extension agencies are primarily seen by farmers as channels to access free or highly subsidized inputs, especially if these inputs are being distributed as part of political campaigns (as occurs far too often). It is even more pessimistic if extension officers will sometimes task with responsibilities for collecting taxes or loans, or to be expected to enforce regulations. In order to perform core tasks, extension officers must retain the trust of their stakeholders. A combination of policing, politics and advice leads to a disaster (Christoplos, 2012).

(d) Commodity Organization Providing Extension Services

Private goods include one-to-one advice provided to commercial farmers. There are today numerous non-government extension advisory services delivering excellent and quality services to their members and the following are some examples.

TSB Sugar used to mean Transvaal Suiker Beperk (Afrikaans for Transvaal Sugar Limited) is a company providing an extension services to large, medium and small scale sugar cane producers in the Nkomazi region of Mpumalanga Province, South Africa. TSB have established a specific extension division (five extension officers and one manager) to support currently 1300 small scale cane growers. Main extension methods to transfer knowledge are by means of study groups, individual visits to farmers, farmer days and specific training programs presented to farmers. A number of extension officers from the provincial department of agriculture have been seconded to TSB and work in close cooperation with the TSB Extension officers (South African Sugar Association (SASA), 2009).

Grain South Africa (GSA), a commodity organisation, is one of the organisations providing specific extension advisory services through the farmer development program executed by production advisors. The farmer development program is implemented through individual contact with farmers, study groups, demonstration trails, farmer days and specific training courses (Grain South Africa, 2010). While with regard to National Wool Growers Association (NWGA) (2012), the production advisors use study groups, demonstration/monitor farms, farmer days and mass- media to communicate with wool producers and specifically to new farmers to increase productivity and profitability. Special attention is also given to farmers in the communal areas.

Citrus Growers Association (CGA), an association that support citrus growers to be globally competitive, has been rolling out extension services in Mpumalanga and Limpopo from 2005 and since then each and every year end CGA conducts an assessment of the programme to measure its impact to the members (CGA, 2012). CGA has shown that assessments in both provinces were successful and the impact

of the programme will have a great impact especially in business management and operations. CGA have only two extension officers in the country to provide services to emerging citrus growers which is a massive task considering the vast distance between the areas.

2.7.2. Training, mentorship and management

Lack of sound and relevant management skills, training and mentorship are some of the main reasons, among others for a high failure rate in empowerment deals in agriculture (SBSA, 1981:231). This is because the new entrants have had limited or no relevant training and experience in operating a farm business prior to as well as after the deal. Induction can be considered as a general introduction of the farmer to the farming enterprise, the initial training involves farmer's introduction to the specific task or tasks for which farmer must carry out.

Whatever the qualifications, experience and capabilities of the new farmer are, some or other form of initial training in the new farming enterprise is always necessary before the farmer can become a fully-fledged. Each farming enterprise has its own way of doing things and the new farmer must at least be trained in these methods (Van Rensen *et al*, 2013). Jacobs (2003) even states that farmer training is critical for the viability and sustainability of agricultural projects. Training through agricultural colleges, mentorship and management programmes were identified by Jacobs as better methods of facilitating the skills transfer to land reform beneficiaries.

However, majority of previously disadvantaged groups in South Africa, 22 years in democracy still lack access to Agricultural Education and Training (AET). Thus, in order to understand access barriers and historical perspectives to AET in South Africa, it is essential to review literature on AET before 1994 and after 1994. As a result, the literature review on these eras will be presented below respectively.

(a) AET during apartheid era (before 1994)

Before the establishment of the democratic government in 1994, AET was patterned after the provisions of the Bantu Education Act No. 47 of 1953. This legislation

enforced separate curriculum for different racial groups. Consequently, most of the schools under Bantu Education taught Agriculture as a subject combined with other non-scientific ones, such as History, Biology, Geography and Biblical Studies. There was no emphasis on the significance of Mathematics and Science in teaching Agricultural Science (DoA, 2005).

The schools for whites and schools for blacks had different educational syllabus and experiences. The allocation of resources and opportunities were unequal to the various racially and geographically defined sections of the system. Over and above, the differences imposed by varieties of educational curricula based on their colour. Apartheid government supposedly made dramatic reforms in the style and reality of educational policy for Africans through a variety of moves which were captured by changing the title of the Department of Bantu Education to the Department of Education and Training (DoA, 2005).

Seemingly, education offered under Bantu education was specifically modified for the needs of white monopoly rather than the indigenous cultures and the rural context of the Africans. This gave rural communities a disadvantage as compared to their white's counterparts. For example, this education was an appropriate separate education for the development of Africans. If it really meant to consider the role of indigenous knowledge, it should have catered for the need of rural communities.

AET became inaccessible to those from black communities due to its linkage to Bantu Education Act (Didiza, 2005). The educators from black communities were known to have sufficient theory of agricultural science, with limited practical knowledge in agriculture at tertiary level. These absent of well-trained manpower from black communities in agricultural science education and weak institutions has been a major problem for South Africa's black emerging farmers and rural communities at large today. These shows that, in South Africa, before 1994, the education was racially segregated and unresponsive to the needs and aspirations of the majority and their future progress.

(b) AET during democratic era (after 1994)

After 1994, still very few institutions of higher learning have agricultural extension programs. Many have one extension course given as an elective in the faculties of agriculture. Until recently, those who wanted post-graduate training in extension would go to either US or Europe (especially Wageningen and Reading). As a result, most of those that do extension work and wanting to further their studies in extension have no training and access to extension. In South Africa for example, in 1994, the University of Free State introduced Centre for Sustainable Agriculture, Extension and Rural Development (CENSARD) centered within the Faculty of Natural and Agricultural sciences. The focus was to address the extension skills gap and challenges experienced by both national and international communities.

Similarly, in 1995 government introduced the new AET policies, programmes, strategies and governance structures as a plan to develop and revise a new curriculum for the primary and secondary school system to fulfil the required level of performance for the new South Africa and the needs in the 21st century. The AET was also supported by the establishment of National Agricultural Education and Training Forum to provide much accessible, responsive, quality agricultural education and training for agriculture and rural development.

The Agricultural Sector Education and Training Authority (AgriSeta) was incepted (as a public entity) in 1998 as one of the 21 Sector Education and Training Authorities established through the *Skills Development Act* 1998. The motive was to increase the skills of people in each economic sector. AgriSeta is responsible for ensuring that skills delivery take place. Within the limits of its discretionary fund, AgriSeta funded skills programmes (accredited courses), learnerships to artisan programme based on National Qualification Framework (NQF) registered qualifications.

The AgriSeta further provides bursaries for learners, internship opportunities to provide job experience and experimental learning (from Universities of Technology, Further Education and Training (FET) and Agricultural Colleges) to learners who need to complete their qualifications. Likewise, emerging farmers and land reform beneficiaries are also being provided with skills to farm and to develop from emerging and subsistence farmers to commercial level. AgriSeta is today a home to over 40 000

farmers, 5 000 Agri-Business enterprises and a million small scale farmers (AgriSeta, Undated).

Post-apartheid era, many thousands of aspiring farmers in South Africa started to have access to arable land (mostly through land reform programmes) without farming skills needed for farming. Because of these land transactions, the problems of food insecurity for people in the rural areas were raised. Authorities were concerned about land given to people through the state's led redistribution programme without the proper support to use it productively (Makhura *et al*, 2011).

There was no follow-up to make sure that farmers had tools and that the land was properly utilised. Consequently, today several non-governmental organizations, farmer's associations and agricultural bank offered to train and mentors aspiring farmers from across South Africa to curb food insecurity. For instances, Buhle Farmers' Academy (BFA), situated in Mpumalanga Province opened in the early 2000s by the help of private business. The academy provides practical training and support to new and emerging farmers to enable them to establish themselves in viable farming business.

CGA has been rolling out a mentorship programme in Mpumalanga and Limpopo from 2005 and since then each and every year end CGA conducts an assessment of the programme to measure the impact of the programme to the mentees (CGA, 2011). It conducted assessments in both provinces which depicted that the programme impacted successfully and will further have a great impact especially in business management and operations as well as handling of finances and contract in markets. Regarding to land reform citrus farming projects, a lesson can be learnt from CGA mentorship programme. On other hand, Land Bank provides a rebate on loan interest payment to commercial farming debtors who are prepared to mentor new farmers. Another mentorship model promoted by Land Bank proposes paying mentor R1 000.00 per project per month (Jacobs, 2003).

The significant efforts have been made by both state and private sector to address challenges facing AET and remove access barriers. Another effort by state was the establishment of d farmer support services for agricultural projects. Training centres

such as Entrepreneurship and Incubation Centre (FEDIC) were set up within agricultural colleges and commercial farms for on-farm training. Modules were aimed to be tailored to farming needs of the projects and cater for the language of participants preferences (I wonder if this has happened).

Mentorship deals were introduced to develop technical and management skills to land reform beneficiaries. Mentor are likely to be the farmers from neighbouring farms, or the person who previously farmed the very same land in question, or even extension officers who were former employees of the PDoA. But, even though this training and mentorship programmes are being rolled out by state and private sector, one will like to know if this programme has any positive impacts on the beneficiaries or they are just adding numbers.

2.7.3. Infrastructure

In the 1940s and 1950s railway buses in rural areas transported the produce of small commercial farmers on fixed routes (Makhura *et al*, 2011). Subsequent to the withdrawal of this services (post 1994), the smallholder farmers we left with various challenges that impede their growth and ability to effectively contribute to food security relative to the commercial farmers. Majority of smallholder farmers are located in rural areas and mostly in the former homelands where lack of both physical and institutional infrastructure limits their expansion.

Lack of access to land and proper roads, for example, it limit the ability of these farmers to transport inputs, produce and also access information. If infrastructure is very poor, markets for agricultural inputs and outputs are often missing and unreliable for smallholder farmer. This means that the procurement of agricultural resources becomes different and the supply of market services also becomes limited. As a result, lack of assets, information and access to services hinders smallholder participation in potentially lucrative markets.

It was against this context that in 2009, the DRDLR undertook an evaluation of the implementation of Land Reform Programme since its inception. DRDLR identified that most of the land reform projects were not successful and thus distress, or had failed

due to lack of adequate and appropriate post-settlement support. The Department took the conscious decision to conceptualize and implement the Recapitalization and Development Programme (RADP) and Rural Infrastructure Development (RID) programme. The aim of these programmes was to provide human (capacity development), infrastructure development (such as animal handling facilities, abattoirs, roads, bridges and etc.) operational inputs to projects in distress and newly acquired through the land reform programme.

2.7.4. Access to credit

In South Africa, financial support for agriculture was rendered by a range of state and non-statutory institutions during apartheid. These include the Land Bank, Agricultural Credit Board (ACB) and the co-ops which provided their members with credit. Subsequent to the establishment of an active and competitive financial system (that produced realistic market-related interest rates and allowed market forces to determine the flow of funds in the economy), the funding concessions that had been enjoyed by the Land Bank had to be phased out in the 1980s, except in the case of liquid assets issued for providing short-term credit to agricultural cooperatives for the financing of inventories. From this point, the Bank had to raise funds at market-related rates of interest (Makhura *et al*, 2011).

After 1994, Makhura *et al* (2011: 4) indicated that the government decided to shift all farming responsibilities including management of farming risks to land reform beneficiaries. As a result, a grant programme was provided to help emerging farmers to establish and sustain themselves. The Land Bank retained its tax-exempt status and was not required to pay a dividend to the state as its shareholder, it did have to compete on an equal basis with commercial banks for funds required to finance the agricultural sector.

The government in 1998, decided to close down the ACB, which had been providing finance to white small-scale farmers who did not qualify for finance from the commercial banks or Land Bank. It was felt that state departments should not be involved in the direct granting of credit to agriculture. It was argued that this role should be filled by the Land Bank. In the 1990s, the ACB raised its lending rates up to 8

percent. Prior to that, its rates were even lower, as it was noted that these farmers would otherwise find it difficult to establish themselves successfully in agriculture. Due to this economic makeovers, the farming community who would be seeking a financial assistance would be charged at a market-related rates of interest, with no effective pre- or post-settlement support available (Makhura *et al*, 2011).

Elsewhere, the NDA, an agency that have access to public funds and a pool of donor funds, only targets land reform projects where investment in these projects can significantly help the fight against rural poverty. The European Union (EU) and USAID are two of the donors who have provided financial support for agricultural development and land reform projects (Jacobs, 2003). Few of land reform beneficiaries had access to financial services because communities or their legal entities seldom met the conditions set by financial institutions. Citrus Growers Association (CGA) promised to render financial support to emerging citrus farmers and look at government strategic planning in support of the emerging farmers (CGA, 2011).

2.7.5. Access to markets

The sustainability of land reform enterprises is anticipated in the context of the deregulation of the agricultural sector and a severe austerity measures in state support for production and marketing. For instances, The removal of the National Marketing Act in 1996 brought about a fundamental change in the production, marketing and pricing system for agricultural products. This deregulation has liberalized domestic and international trades. Import tariffs were levied, foreign competition affected the domestic producer prices negatively, and the exchange value of the rand became weak and volatile (Makhura *et al*, 2011: 5).

National Marketing Act encouraged systems such as the one-channel fixed-price system, in which cooperatives acted as agents of the commodity boards, meant that farmers had to sell their product in to the cooperatives at a fixed price or sell directly to the market at the price determined by the market. But, in the wake of deregulation in 1997, commodity based organization such as CGA was established as growers were concerned that certain functions previously carried out by Citrus Boards could be discontinued or downsized (CGA, 2011).

In a case of grain sector, subsequent to the abolishment of the Act, there was no organised mechanism to export possible surpluses (which caused a serious problem for maize in 2005) and the domestic price would decline to the export parity level. The deregulation of the grain industry led to the establishment of the South African Futures Exchange (SAFEX), where farmers could hedge their price risks (Makhura *et al*, 2011). These deregulations took commercial farmers some time to adjust production and marketing to a deregulated system, where prices are determined by market forces based on quality. As a result, farmers became price takers not price makers, and as a consequence the small farmers are disadvantaged.

Another factor is that majority of land reform enterprises produces without analysing consumers and business markets such as defining the markets, examining the market changes and market share. Moreover, they don't even prepare effective marketing plan to obtain valuable background for understanding who might buy the product, what their needs are and what influences their buying behaviour. Defining markets will help land reform enterprises to narrow their marketing focus to consumers or businesses that are quantified to be or already are buyers of a particular type of product.

To date, majority of emerging producers who have acquired farming enterprises through land reform sell their produce to informal markets, since assistance for accessing lucrative markets is limited even in projects where there is a strong emphasis on production for commercial purposes. Many land reform enterprises produce for their own consumption rather than for markets.

Yet, some marketing ventures may exist between the small producers in some sectors and established agri-businesses. Some of enterprises sell to local markets. However, Makhura *et al* (2011) observed that these enterprises find it difficult to comply with supermarket standards, to compete with commercial farmers and to produce the desired quality and quantity of products. Transport to markets and other necessary infrastructure is not readily available; where it is available, it is often costly.

Authors such as Anderson and Feder (2003) have echoed the sentiments of linking agricultural support to production and capital, but support should also be connected to

finding markets. The market can be either formal, informal local markets or contract with retail chains or commodity associations as well as processing plants. In other provinces, it is the duty of the extension officers or land reform advisors to disseminate information about markets prices, trends and potential new market destinations,

In the Mpumalanga Province, CGA has assisted most of land reform enterprises to market their produce through international markets. These international markets include Asia, China, India, Indonesia, South Korea, Vietnam, Philippines, United States of America and European Union (EU) (CGA, 2015; 16-18). Many PDoA officials argue that it is not their mandate to assist the communities to obtain access to markets or arrange marketing contracts for projects.

Fresh Produce Marketing System is a similar mechanism for other agricultural products. Johannesburg, Tshwane, Cape Town and Durban are the biggest markets, with market share of around 37 percent, 18 percent, 12 percent and 9 percent respectively. This market system provides the platform for selling and buying fresh produce and tends to give a price signal. However, the involvement of supermarkets in fresh produce has changed farmer's participation somewhat. In South Africa dominant supermarket include Pick n Pay, Shoprite, Checkers, Spar and Woolworths (Makhura *et al*, 2011).

2.8. What are land reform farming enterprises?

In order to understand the land reform farming enterprises, a description of the enterprises in question - in this case in South Africa, will be presented in this section. The section will be devoted to an overall description of the land reform farming enterprises in South Africa.

These enterprises are enterprises transferred from the hands of rural whites and commercial farmers to vulnerable groups, e.g. Black people, women and youth. According to DLA (1997), they are transferred to undone legacy of apartheid's unequal land redistribution and ensure the continued productive use of agricultural land. Furthermore, to provide maximum impact on the eradication of poverty, job creation, and economic growth.

The restitution enterprises are all that are claimed between 1994 and 1998 in terms of the Restitution of Land Rights Act 22 of 1994, and such enterprises are transferred to the rightful beneficiaries. In most cases, they involve communities ousted on or after 19th June 1913 as a result of previous discriminatory laws or practices. Most of restitution beneficiaries are staying at different places. Mostly, these enterprises comprised of subdivided groups of people, frequently with different traditional leaders, who have come from relatively far and different places. They are managed through Communal Property Associations (CPAs). The CPAs are managed by a committee, which is generally elected by the beneficiaries. Through their committees and beneficiaries, CPAs adopts a constitution pre-drafted by the Commission for Land Restitution.

Land Redistribution for Agricultural Development (LRADs) focuses on agricultural development. For instances, smaller groups or individual households of interested beneficiaries acquire enterprises that they have identified for agricultural development through LRAD. LRAD generally involves a small group of people; as a result, no separate management committees are formed.

Land and Agrarian Reform Projects (LARP) were mainly transferred between 2008 and 2010. The transfer process for LARP was less complex. The projects were acquired as part of the following:

- Redistribution of 5 million hectares of white-owned agricultural land to 10 000 new agricultural producers.
- To increase Black entrepreneurs in the agribusiness industry by 10%
- Provide universal access to agricultural support services to the target groups
- Increase agricultural production by 10-15% for the target groups, under the LETSEMA-ILIMA Campaign
- Increase agricultural trade by 10-15% for the target groups.

The projects were mainly transferred to contribute to the overall goals of the Agricultural Sector Plan, namely participation, global competitiveness and

sustainability, and to the White Paper on South African Land Policy. Further, they are managed at business enterprise level. Each project is coherently planned and supported for a five-year incubation period with the objective of achieving sustainability over this period. The support is articulated in individual business plans which are utilized for monitoring progress. Precisely, the enterprise is only transferred to beneficiaries who have the required entrepreneurial and other skills to run such enterprise and have thus received appropriate training and/or passed skills test (DLA, 1997).

The SLAG projects were mainly transferred between 1998 and 2000. The transfer process for SLAG was less complex than that of the restitution for several reasons. Firstly, the SLAG projects often involve only one or even just part of enterprise, which eases the negotiation process. Secondly, several previous owners decided to sell their land jointly and use land reform as an opportunity. Several consultants, linked to the Department of Land Affairs, are employed to organize and process the projects, at administration and community level.

For each SLAG project, groups of beneficiaries gather together in numbers sufficient to cover the price of the land and form trusts. As a result, the beneficiaries usually come from the same community, which is often located relatively close to the project. As is the case with the restitution enterprises, the SLAG projects are managed by a committee, generally elected by the beneficiaries. Because these projects do not concern entire communities but rather groups of people, traditional hierarchies are generally not maintained. The legal land holding entity (trust or CPA) also adopts constitutions pre-drafted by the Department of Land Affairs; as in restitution, they are often implemented without any amendments. Most SLAG project committees are in given their land's title deed.

2.9. Nature of land reform enterprises in South Africa

After decades of land reform, there are some islands of success especially in horticulture, but these exist in a sea of partial or complete failure, and the number of beneficiaries and the land area transferred is disappointingly low (Binswanger-Mkhize, 2014). For instance, Business Enterprises (BE) (2014) find that some beneficiaries are

still active on only 40% of land reform farming enterprises, while the outcome in terms of agricultural production and beneficiary income and livelihoods is poor on a large number of enterprises. BE (2014) even state that land reform farming enterprises in South Africa are confronted with serious criticism, for example, government focus mainly on the number of hectares transferred to beneficiaries and do not tackle structural problems restraining sustainability.

Further, other authorities such as Community Agency for Social Enquiry (CASE) have commented that, there is very limited progress made with any productive land use across all types of land reform. The vast majority of restitution projects, in particular, have not achieved their developmental aims. Of the 128 projects with agricultural developmental aims, 83% have not achieved these developmental aims. Approximately 9% have partially achieved its agricultural developmental aims but are not generating any income.

A further 5% have partially achieved its agricultural developmental aims and are generating income. However, these 5% of projects are not making a profit and are not sustainable yet. Only 2% have achieved its agricultural developmental aims and are generating minimal profits that are reinvested. Thus, only one project (of a total of 128) has attained its agricultural aims and is generating a substantial and sustainable profit (CASE, 2006:21).

The improvement in the livelihood amongst land reform beneficiaries are hard to find. The transferred enterprises generally are failing to deliver significant benefits of any sort to the beneficiaries. The most striking finding is that the majority of beneficiaries across all the land reform projects have received no material benefit whatsoever, in the form of cash income, or access to land. These concerns have also been raised by former Minister of Agriculture and Land Affairs, Thoko Didiza, about the underperformance and even collapsing of redistribution projects in many parts of the country (Didiza, 2005).

These observations show that land reform farming enterprises decades after the first democratic elections are alarming. The land reform policy has also been unstable, with new models, legal and institutional initiatives introduced every few years. In other

words, there remains an enormous gap between the ambitious promise of settlement agreements and the reality on the ground. As a result, factors affecting sustainability of these enterprises are summarised below herein.

2.10. Factors affecting sustainability of land reform enterprises

The results on the nature of South African land reform farming enterprises are pessimistic. These observations are all more problematic since more land will be transferred to new entrants shortly. In order to break these negative spiral traps, there is a need to better understand internal and external factors causing failures to sustain land reform enterprises.

Production and productivity within land reform enterprises can increase through enhanced technical performance arising from extension advisory services, workshop attendance, financial capacity, market access, and research and development. For instance, Jacobs (2003) asserted that extension and other support services are important in achieving enhanced agriculture production and productivity. Extension services play a crucial role by empowering farmers with farming techniques, knowledge and management skills.

Evaluations of the Comprehensive Agricultural Support Programme (CASP) and the Recapitalisation and Agricultural Support Programme (RECAP) by BE at the University of Pretoria (BE, 2014), has revealed that, poor performance has been attributed to factors such as failure to subdivide the acquired farms into small family-operated farms and the associated imposition of group or cooperative farming on the beneficiaries, poor beneficiary participation in project identification, design and implementation, poor selection of beneficiaries with inadequate farming skills as well as poor selection and supervision of strategic partners.

Lahiff (2007) even observed that in enterprises acquired through restitution process, the farming operations had deteriorated due to the beneficiaries' lack of farm management skills and are facing financial problems and need adequate financing for their production activities in order to sustain their projects as farming business. The

stakeholders such as municipality and PDoA do not hold regular meeting with beneficiaries to discuss achievements and challenges of the project

Age of a farmer possesses threat and negative implication to sustainability of agricultural projects because older people are risk averse in the aspects of transformation regarding new technology. These sentiments have been echoed by (Makhura *et al*, 1992). Makhura *et al* (1992) observed that farmers of different ages apply different technologies and inputs with varying degrees of efficiency. Middle aged farmers appear to be more successful than younger and older farmer.

Van Reenen and Marais (2013) indicated that younger, progressive farmer has a lot to gain by tackling a high risk undertaking. On the other hand, the farmer has relatively little to lose in terms of own capital, while the farmer has a long period ahead in which losses can be recovered. However, the older, more established farmer has a great deal to lose and relatively little to gain in relation to what a farmer already owns. Because the farmer has a large number of accumulated assets which the farmer can lose, and the economically productive life in which losses can be recovered, is relatively shorter.

Furthermore, the old farmers, more especially those with low levels of education cannot easily respond to opportunities and improved ways of production better as the young people would do. As a result, the enterprise's production would be low to the fact that old farmers may not easily adopt new ways of production that would enhance productivity and sustain enterprise. As a result, the farm income will remain low (Mokgadi and Oladele, 2013).

Further, Van Reenen *et al* (2013) identified lack of beneficiaries farming skills, experience and technical knowledge in farming as one of the reasons for unsustainability of agricultural enterprises. Farming knowledge is one of the basic ingredients for increased agricultural production and productivity. Knowledge is a critical resource in the operation and management of the agricultural enterprise. It also facilitates the transformation of traditional agriculture to modern agriculture. Van Reenen *et al* (2013) alerted that, a successful farming depends in particular on technical knowledge and general management skills. CGA outlined that lack of

financial support, poor business management and handling of finances and contracts in the markets (CGA, 2011).

CGA (2011) find that teething problems such as social issues and lack of water hampers the sustainability of emerging citrus growing farmers. CGA further recommended that social facilitation should be an answer to the social issues. As a results, CGA advised that its transformation manager is in communication with the Director of National Department of Water regarding water allocation to try assist the farmers as water is a basic need for farming especially citrus (CGA, 2011). On the other hand, lack of incentive for the grower partner in joint farming partnership is the cause. This is usually a consequence of the fact that new grower partner's rights and obligations in the joint operation have not been clearly defined in an agreement (Van Reenen *et al*, 2013).

2.11. Planning within farming enterprises

Success in any farming enterprise is not achieved through luck, but through meaningful and thorough planning. Giles and Stansfield (1990:32) revealed that manager who spends time planning, such manager is trying to anticipate difficulties and mistakes and certainly to learn from them when they occur, so that future events are less stressful and more success. But what is planning? Why is planning important in farming enterprise? This section will explain the range of general farm production planning literature and land reform enterprises production planning.

2.11.1. General production planning literature

SBASA (2013:75) and Van Reenen and Marais (2013), defines planning as a management task that involves purposeful deliberation on the future objectives of a farming enterprise or a section of an enterprise. It is done by involving the means and activities, examining the problems that may be experienced and the formulation of the most suitable plan of action for the effective attainment of the objectives.

Planning involves making choices and decisions, that is, selecting the most profitable and sustainable alternative from all possible actions. The chosen alternative becomes

the plan for that year, the following year or the next five to ten years. This process includes both short and long-term plans. Giles and Stansfield (1990) regard planning as an event that cares more about future events than current ones. It is all about trying either to predict or to arrange what will happen in future rather than now.

2.11.2. Production planning in land reform enterprises

Dalal-Clayton, Dent & Dubois (2003:45) observed that land use planning has remained very much a technocracy and it has always proved difficult to impose these plans. In some instances, there has been a thrust towards decentralisation and participation in land use planning, to close the gap between those drawing up plans, those who will implement them, and those who are the 'subjects' of these plans. (Dalal-Clayton *et al*, 2003: 45).

Giles and Stansfield (1990) notes that there is a common fact to most plans, more often than not, they will not work out exactly as they were planned. The failure of a plan in some sense may or may not matter depending on the particular circumstances. What does matter is that the reasons for failure are understood and the lessons for the future are learned. The authors even advised that a failed plan should teach us more than that one that works out entirely as expected. Furthermore, a plan is certainly not an argument for not planning (Giles & Stansfield, 1990).

In South Africa, particularly at the national level, the planning for land use is limited. Even though agricultural sector is recognised as an important sector of the economy, in terms of its contributions to employment, supplying food for local markets and as an earner of foreign exchange; and the Strategic Plan for Agriculture emphasises growth and competitiveness through support to new entrants. Nevertheless, agricultural policy contains no vision for land reform to change patterns of land use and production or to transform the agricultural sector to play a new and reinvigorated role in economic development (Hall, undated).

In contrast, from the side of land reform policy, the White Paper notes that, smaller sized agricultural units are often farmed more intensively, and are more labour absorbing. There are over a hundred thousand small scale and subsistence farmers

in South Africa who could be assisted by the land redistribution programme to expand their land resource base through purchase or lease. The land reform programme thus offers the potential for more intensive irrigated farming, for contract farming in important sectors of the agricultural economy such as cotton, timber and sugar, and the potential to intensify agricultural production in areas of high agricultural potential. (DLA 1997: 13).

Previously, the DoA used a national system of classifying agronomic regions (particularly distinguishing summer and winter rainfall areas). Now that agriculture is a concurrent competency, planning has been handed over to provincial level, where it is based on spatial development plans and provincial growth and development strategies. While these outline the importance of the agricultural sector, they do not indicate how agricultural land should be used differently in the future.

In 2007, DLA adopted approach such as area-based-planning (ABP) as a new tool of sketching plans for land reform. The ABP approach provides permission for the plans to be drawn up for each district in the country, specifying on projects to be acquired for redistribution. These plans were to be aligned with spatial development plans at municipal level, and will form part of integrated development plans (IDPs). For each district, consultants were supposed to be appointed to develop these plans, including a situational analysis, a vision and strategy, identification of projects, integration and prioritisation of plans, and approval (DLA 2006).

ABP provides the provisions to the evaluation of land and all fixed assets (what is it good for?), but also requires the determination of land use for production (how should it be used?), a somewhat different question that requires consideration not only of physical resources, but of economic objectives. This is far from being a technical exercise; it represents a political choice that is often based on incomplete information about the possible social and economic outcomes of various uses (Hall, undated).

Before ABP was introduced in 2007, project planning had taken place only at project level in land reform projects, guided by business plans developed for each project. Although applicants could prepare a plan themselves, the guidelines for business plans suggest that this option would seldom be feasible. Business plans, developed

by private consultants appointed by the DLA, DoA or lending institutions, have been guided by terms of reference, the requirements of which differ across the provinces, but are generally quite demanding and technical in nature. So, nationally, there is no standard set of questions to which business plans must respond. (DLA, 2006). There is also no clear differentiation in the business planning requirements between different kinds of projects. This means that the planning requirements applicable to projects for land access for household production are usually the same as those involving commercial enterprises.

2.12. What is farm management?

Farmers should know that anyone can achieve prosperity if they so choose. If today you are an emerging or smallholder farmer, you have the ability to sustain your enterprise and teach those you love to manage their enterprises sustainably. Today we are facing global technological changes as great as or even greater than those ever faced before. No one has a crystal ball, but one thing is for certain: Changes lie ahead that are beyond our reality. Who knows what the future brings? But whatever happens, we have two fundamental choices; play it safe or play it smart by preparing, adapting to changes and awakening your own and your enterprise's management genius.

In normal agricultural language and in other references to farm management, the concept under discussion is accorded varied and often conflicting meanings. This lead to confusion among farmers, particularly at a time when increasing demands are being made on their management skills and they are being subjected to calls from many sources to improve their management capabilities by increasing their knowledge of the subject (Van Reenen & Marais, 2013).

SBASA (2013:3) regarded farm management as a science, an art or a profession. In this sense, SBSA conceptualizes science as a process that involves systematized structure of knowledge being; planning, implementation, coordination and control and management resources (information, techniques and principles). A science can therefore be learnt. The same author expressed that art relies on natural talent. A talent for art can therefore be developed. In farm management process, the farm

business plans, organises, coordinates and controls all the production factors of a farm business, namely land, labour and capital to attain certain objectives such as maximum profit, growth, sustainability and an improved standard of living as elucidated by SBASA (2013).

Although, in concurrence with SBASA, Van Reenen and Davel (1989:6) considers, farm management as a plan that should contains elements of a science, an art and a profession. They further outlines that, principles, theories and facts about this, such as planning methods, budgeting methods, control procedures and organisation models can be learnt. Other traits of management that are closely related to the art thereof can be developed. These traits include decision-making, communication, negotiation, leadership qualities, human relations, self-image, own motivation, dynamism and perseverance. By applying the foregoing art and science components of management in the practical situation, farm management can develop into a profession (Van Reenen & Davel, 1989: 6).

The latest literatures have defined farm management as the process that is carried out by farm manager whereby resources and situations are manipulated in trying with less than full information, to achieve his or her goals. It is also viewed as a rational decision making to achieve the objectives of the particular farming enterprise (Van Reenen & Marais, 2013).

Without fully understanding the elements involved in the management process such as skills, knowledge and abilities required to be a success farm manager, nobody will be able to manage a farm business successfully. As a result, farm managers need critical management skills such as managing innovation and change, risk, designing effective organisation, information system and human resources to sustain their farming enterprises. For example, Van Reenen and Marais (2013:1) perceived this views, they observed that some farmers in South Africa tend to prosper more than others who farm in the same region under similar circumstances and survive difficult times while their neighbours are ruined by similar situation, because they possess skills, knowledge and abilities.

2.13. What is a sustainable farming enterprise?

Today in our daily dealings, we hear on virtually a daily basis how important is sustainable enterprises or sustainability of enterprises has become in South Africa. Statements such as sustainable enterprises or sustainability of the enterprises provide core of our economic growth, these enterprises make difference in poverty alleviation, sustainable farming enterprises are the nerve center of the entire agricultural sector are frequently heard. However, exactly what is meant by a sustainable farming enterprise or the sustainability of the farming enterprise. The understanding of this concept can be regarded as the most important aspect for a farmer. This section will now define the concept “sustainable farming enterprise and sustainability of the farming enterprises.

The connotation of the term “sustainable farming enterprises” and “sustainability of the farming enterprises” are subjective and values loaded concepts and hence, there is no consensus to their meaning. The terms are used differently in diverse context. The terms basically mean ‘able to ensure food production security without sacrificing the long term health of the ecosystem and vital resources that makes food production possible’ (Giovannucci, Scherr, Nierenberg, Heberbrand, Shapiro, Milder & Wheeler, 2012:7).

Furthermore, it means maintaining or upholding enterprise’s potential production. Generally speaking, the terms sustainable and sustainability means to a change that is highly favourable. Since what is regarded beneficial is different for different people, especially when considering the variables time, place and cultural milieu, a universally acceptable definition of sustainable and sustainability is highly improbable. Sustainable or sustainability is conceptualised as a vector set of highly favourable farming practices, which does not decrease overtime. Following below is a summary of some views of what sustainability can encompass:

The IFAD (2006) gave the following description of a sustainable project:- “is sustained in the medium or even longer term without continued external assistance, the project net worth is constantly going up, debt is consistently going down, farm enterprise is consistently profitable from year to year, production increases from season to season

and reliance on government support is decreasing”. The above description of how IFAD conceptualises sustainability has informed IFAD Strategic Framework 2007-2010 (IFAD, 2007) to formulate the following description-: “ensuring that the organization is supported through enterprise and the benefits realized are maintained and continue after the end of the project”.

Sustainable farming is the farming approach that is “able to meet the farming needs of present farming generation without compromising the ability of future farming generations to meet their own farming needs”. The farmers are encouraged to ensure intergenerational equity in the sense that the present farming generation does not exhaust so much as to foreclose the option of the future farming generations to enjoy at least the present level of production and wellbeing.

Sustainable land reform projects are projects that have efficient production of safe, high quality agricultural products, in a way that protects and improves the natural environment, the social and economic conditions of farmers, their employees and local communities and safeguards the health and welfare of all farmed species. Furthermore, sustaining land reform projects means ensuring agricultural productivity and maximizing economic development while protecting natural resources from depletion and degradation to the detriment of our future generation (Manenzhe *et al*, 2016: 31)

2.14. Types of farm management models in land reform

According to Van Reenen and Marais (2013), a farm manager should concentrate on formulation of the farm business objectives and making decisions that will also help to achieve those objectives.

Some of the land claim communities find it important and necessary to employ different management models coming with knowledgeable and skilful farm managers to assist them to manage the farms on their behalf. However, it does not seem to be so much helpful. According to Zvomuya (2005), the farm management models coming with independent managers appointed by Communal Property Associations and state

some years after transferring of land and rights the farms were none operational and none productive. Most of the community members blame the community executive representatives for letting their farms to fall into ruins and mismanagement by the appointed managers for being white and sabotaging government's effort and squandering the funds and lack of timely state support (Anderson & Feder, 2003; Manenzhe, Zwane & Van Niekerk, 2016: 35).

Van Reenen *et al* (1995: 60) indicated that a prerequisite for farming is that the farmer must have the right to use the land and the way in which this right is obtained is one of the most important decisions that the prospective farmer, or the established farmer who wishes to expand his farming activity, must take. There are different basic ways of obtaining the right to manage and use land for farming purposes, namely:

- By family or household
- by collective or group farming
- by joint farming or strategic partnership or
- by lease agreement/contractual farming

2.14.1. Family/household or sole proprietorship

The definitions of “family farm”, sole proprietor” and “family farmer” varies. The choice greatly affects the numbers of holdings, land areas and economic significance of the farm sector being considered as a family one. For instance, the family farm is being considers as an agricultural enterprise where the family bears the business risk (European Parliament (EP), 2014). This model is commonly known as a model that includes the farmer alone, the farmer and spouse, the parents and children, brothers and sisters, i.e. related by kinship or marriage in the ownership and management of the farming enterprise. As a result, the family is most likely to preserve the family structure, functions and identity.

According to EP, the family farmers are the main agricultural employers, and millions of rural dwellers rely on family farming for their livelihood. In this model, EP indicated that management of a farming enterprise is an essential tool for farmers to anticipate, avoid and react to shocks. Majority of family farmers in the EU countries operates

farms that are measured less than 5 ha, a size group where semi-subsistence farmers predominate. Part time farming is often survival strategy for the family farmer, increasing household incomes by engaging in activities with higher returns than farming (EP, 2014).

However, in South African land reform, individual or household-based projects are less common than group projects and have the advantage of minimising or avoiding group-based conflicts. Such projects have emerged where restitution claimants have family-based claims, but also in redistribution where applicants are better-off and able to make substantial contributions of cash, or can obtain loans, or possess assets for leveraging larger grants, thus minimising the need to expand the applicant group to make up the purchase price and related costs. It has been actively promoted through LRAD, as provincial offices of the DLA adopted maximum project sizes, often aiming for no more than 15 members per project (Jacobs *et al.* 2003). Seniors in government such as Minister of Agriculture and Land Affairs (MALA), has outlined that, the small sizes of grants mean that this type of project is only possible where applicants have off-farm incomes.

2.14.2. Collective or group farming

A group/collective farming is a farming system in which several farmers run their holdings as a group. This type of farming is essentially regarded as a cooperative whereby members-owners engage jointly in farming activities. Notable example of this models include *kolkhozy* that dominated former Soviet Union agriculture between 1930 and 1991, *kibbutz* in the Israeli, Model B in Zimbabwe and Communal Property Association (CPA) in South Africa. These methods are explained below as follows:

(a) Kibbutz

The Kibbutz is a Hebrew word meaning “communal settlement”, is a unique rural community; a society that is dedicated to mutual aid and social justice; a socioeconomic system based on the principle of joint ownership of property, equality and cooperation of production, consumption and education; the fulfilment of the idea

“from each according to his ability, to each according to his needs”, a home for those who have chosen it.

The kibbutz was established under the motto of “work and believe”. This means that a kibbutz settlement is formed by people that have the same belief and who have decided to work together (Jewishvisualibrary, 2016). Kibbutzes are governed by a committee, for example, different parts of community needs are dealt with by committees assigned to that aspect. There are committees on finance, education and care (just to mention a few). They have a special meeting once a year where they confer and elect officers who take care of policies and other aspects of Kibbutzim needs.

The Kibbutzim model is based on common ownership of resources and on pooling of labour and income in accordance with theoretical principles of cooperative organizations. The element of this model has led to the impression that collective farming operates under the supervision and support of the state. It is a self-sufficient community. Everything the people need to live is found right there on the farm.

(b) Kolkhoz

It is a form of collective farming in the former Soviet Union. In this model, a cooperative agricultural enterprise operates on state-owned land by peasants from a number of households who belonged to the collective and who are paid as salaried employees on the basis of quality and quantity of labour contributed. It exists along with state farms or the so called *sovkhoz*. Kolkhoz began to emerge in Soviet agriculture after *October Revolution* of 1917, as an antithesis to individual or family farming.

In this model peasants were encouraged to create and join voluntarily, heralded as a better, fairer and altogether more socialist way of organizing agriculture than the system of landed estates and private farmers had gone before. However, 15 years post kolkhoz introduction, Soviet government found itself two million tonnes short (Russiapedia, 2016).

Some political seniors such as former General Secretary of the Communist Party and the Soviet Union's sole leader, Joseph Stalin, blamed the shortfall on *kulaks*, private landowning farmers. Stalin outlined that because of Kolkhoz, what had been a gradual trickle of collectivization now became a violent stampede. The rural enterprise was now out of the hands of rural people. (Russiapedia, 2016).

Although it should be noted that collective farming in the former Soviet Union has been practised with certain degree of success, as a result, some senior's politicians has warned that this type of model is not an easy process and that it could not succeed without state help. The land owned privately is facing downfall while on the other hand, the farms formed for collective farming are function profitably in the early stages. In Soviet Union, poor production by value products has been used as a yardstick to measure performance of collective farmers. Otherwise, collective farms were used as a vehicle to grow low-value staples such as grain, cotton, forage and seed.

(c) Model B

With regard to Zimbabwean Model B farming strategy, people with strong motivation and potential to form a cohesive social unit are grouped together to own and manage a purchased farm on a collective basis. The group size is designed to a range from 50 to 200 members with all adults (including wives and children above the age of sixteen years) eligible for full membership (Gonese *et al*, undated).

Collective farming in Zimbabwe is regarded as an economic activity which could enable farmers to meet their economic and social needs while at the same time contributing towards development of national economy. The main objective of this model is to develop viable agricultural production which contributes towards national food security, increased employment creation and economic growth as well as to mobilize limited resources of poor citizens in order to promote farming skills, spread overhead expenses to reduce unit cost, to achieve degree of specialization which an individual cannot achieve outside co-operative farming and to facilitate transformation of socio-economic system through dynamic efficiency in resource allocation and equitable distribution of proceeds (Gonese *et al*, undated).

In models B, Department of Cooperative Development (DCD) indicated that the beneficiaries are provided with resettlement package to capacitates the cooperatives, including land establishment grant that finances the procurement of farm implements and development funds for land preparation, together with financial resources for the construction of roads, bridges, dip tanks, clinics, schools, marketing depots, rural service centres, credit facilities, farmer training and extension services (Tilley, 2007).

The farming resources and other resources are held cooperatively and not as an individual asset. Each cooperative must be legally registered with the Registrar of Cooperatives as a legal entity. Furthermore, the cooperatives are funded by state through the annual capital budget and beneficiaries own assets which form the basis for cooperative farming. In this model, each co-operative is expected to sustain pre-purchased level of production on the resettled former commercial farms to maintain food production levels and economic growth (Tilley, 2007).

This model is regarded successful in the sense that it enables people to organise themselves into groups which promoted people of the same culture with similar interest to live together. Therefore, beneficiaries are supported by the government with funds and infrastructure which enables increased productivity and reduced poverty level.

(e) Communal Property Association (CPA)

In South Africa, Communal Property Associations (CPAs) are regarded as one of the model of land use or access by claimant community themselves or their direct descendants, with minimal involvement of outsiders. This group based farm management model has been the dominant model in land reform to date, and typically involve attempts at collective production on large farming units, usually coterminous with the previous boundaries of commercial farms, and often replicating pre-existing forms of land use (Lahiff, 2007).

Majority of the projects practicing this model are normally of community restitution claims, as well as redistribution projects. In this approach, ownership, management and production involve a great variation of group sizes, ranging from a few families to

large project involving hundreds or even thousands of households. In some cases, the largest projects can involve as many as 2000 households or even 10 000.

This 'rent-a-crowd' syndrome, as it became known, is considered a key failing of the first phase of land reform; arguably, however, underutilisation of land and limited livelihood benefits emanated not only from group dynamics, but also from the absence of capital and other inputs into production.

Group-based projects frequently involve not only joint ownership of the land but also the pooling of assets and labour, and even extend to herds of cattle belonging to the CPA, often alongside cattle owned by individual members. For instance, in land reform projects, no provision is made for the livestock already belonging to project members. Instead, the commercial land-use plan required that beneficiaries use their grant funding to build up commercial beef herds and keep their existing livestock in the communal areas (Lahiff *et al*, 2008).

Hall *et al.* (2003) defines CPAs as an appropriate form of owning and managing the land collectively, which are less useful for agricultural production, unless they consist of small groups of family members or friends. BE (2014) even states that within the CPAs, there often are insurmountable problems with incentives for labour, management input and investment. This leads to many conflicts within communities, with strategic partners, and with DRDAR officials.

2.14.3. Joint farming or strategic partnership

In the present period of scarcity of capital, high rates of interest and advanced technological development, few new entrants' farmers have sufficient capital and/ or knowledge to be able to start farming independently. A solution in such a case would be to farm temporarily with an established farmer until sufficient capital and experience have been built up to become independent. To date in South Africa, joint farming or partnership takes place mainly within the family (son and father or son-in-law and father-in-law) it, of course, does not necessarily have to be so (van Reenen *et al*, 1995).

The Oxford dictionary defines partner as a “person associated with others in business of which he shares risks and profits.” This definition is giving a clearer background of most of the definitions that were given by various authors. For instances, Department of Land Affairs (1997), recognises initiatives by private sector in land reform as partnership between beneficiaries and owners of private business.

Lahiff, Nerhene and Manenzhe (2012: 7) justify the term ‘strategic partnership’ as a term that is used to signify a joint venture or other form of collaboration between an established commercial firm and a new (or emerging) group of workers, shareholders, small farmers, entrepreneurs or community members with limited commercial experience and little or no access to finance or leading-edge markets. Such collaborations typically have social as well as economic objectives, including empowerment of workers, women or other previously disadvantaged groups, skills transfer, accelerated career paths and creation of trading opportunities for small and micro enterprises. This in turn forms part of the state’s wider programme of broad-based Black Economic Empowerment (BEE) which is being implemented across the wider economy.

Strategic partnerships in land reform enterprises in South Africa are part of a wider response to the challenge of empowering previously marginalised groups and transforming the racially-stratified economy inherited from the Apartheid era. As a result, since 2005, strategic partnerships have become the norm in high-value restitution cases, and are concentrated in the sub-tropical zones of Limpopo and Mpumalanga provinces. This can be attributed to the higher quality of the transferred land, compared to land claims in other parts of the country, the technical and financial challenges faced by large claimant communities in operating these farms and, perhaps most importantly, growing pressure on communities from state agencies to include commercial partners in order to avoid a repetition of the well-publicised collapse of a number of earlier restitution projects (Lahiff *et al*, 2012:10).

While many of these partnerships are still at an early stage, Lahiff et al. (2012) has observed that emerging evidence has shown that many are facing difficulties in establishing themselves and a number have already collapsed. The strategic partnership model has evolved gradually since it was first proposed, with some

variation between districts, but the broad concept continues to centre on a long-term commercial partnership between a community and a commercial operator. Separate partnerships are generally created for each community, although this is complicated somewhat by the fact that in Levubu, for example, multiple communities are in partnership with the same commercial operators (albeit in separate legal entities), while at Moletele a single community has entered into partnerships with multiple commercial operators (Lahiff *et al*, 2012).

In terms of the strategic partnership model, ownership of land is vested in the beneficiaries, organised in a legal land holding entity, either trust or a CPA. Subsequent to the formation of a legal land holding entity and signing of settlement agreement with the state, formal title to the land is transferred directly from the current landowner to the community with the state paying the owner the agreed purchase prices. The provision of additional state grants will be identified through Recapitalisation and Development Program (RECAP) and discussed between the beneficiaries, strategic partner and state.

In some cases, the beneficiaries and the strategic partner (or partners) may then form an operating company, in which farm workers may also be given a small share through a specially created farm workers' trust. Specific responsibilities and rights such as shareholders' agreement, a lease agreement and, in some cases, a management agreement between the parties should be clearly indicated.

Under this model, profits made is paid as dividends to shareholders according to their shares, or reinvested in the operating company. In most cases, even if the parties have agreed to work together jointly, day-to-day management of the farm is generally in the hands of the commercial partner or investor, who in terms of the shareholders' and management agreements, has control of financial and operational matters. Depending on the type of the agreement, the commercial partner or investor may charge the land holders a fee for management services, to cover salaries of senior staff and other costs. If the enterprise is already in a possession of movable property, such as tractors, trucks, packing machinery, or pumps, and do not possess other equipment required for production. Therefore, strategic partner may obtain this equipment's either by leasing arrangement or purchase.

Since the beneficiaries (land holders) obtain high value of capital assets, they are entitled to a cash rental, levied as a direct cost on the joint venture. Moreover, the beneficiaries may receive a share of any profit made. Beneficiaries may also benefit from preferential employment opportunities in the enterprise and a range of training opportunities.

When it comes to the commercial partners, Derman, Sjaastad, and Lahiff (2010:315) as quoted in Lahiff et al. (2012) quoted that strategic partnership arrangements also offer a range of potential benefits, at least in theory. Previously, it was highly recognised that the prospect of a management fee should be based on turnover rather than profit. Today because the commercial partnerships have changed, the prospect of a management salary may be more important, especially for emerging partners, some of whom are households/individual entrepreneurs working.

Yet, in South African land reform beneficiaries who have chosen to enter into strategic partnerships with business have had mixed experience to date. However, there are some success stories, but a great many failures too. Some of the partnerships established on fruit and nut farms in Limpopo have gone bankrupt and others continue to struggle to pay any kind of dividend to community members. For example, Cousin (2013: 18) detected that, small scale farmers on irrigation schemes have had their fingers burned in poorly managed joint ventures with tobacco and fresh produce companies. Many of business plans drawn up by these partners have been far from appropriate, and have not provided useful instruments with which to measure the performance of beneficiaries of land reform. Many beneficiaries could not doubt succeed on their own if provided with appropriate advice and start-up capital.

2.14.4 Lease agreement/contractual farming

Lease agreement farming method involves a business agreement between the landowner and the operator. A farm lease is a legal instrument that describes that agreement. The lease provides the basis for combining the land owner's and the lessee's resources of land, labour, capital and management to efficiently produce farm commodities (Stoneberg, 2014). Likewise, Van Reenen et al. (2013), explain the

leasing of farmland as a method of obtaining the right to use land. There is a clearly observable trend towards an ever increasing separation between owning farm and cultivating it in many developed countries (Stoneberg, 2014; Van Reenen *et al*, 2013).

The most reasons of leasing farmlands are that, the landowners are today farming less and less on their own land, and prefer leasing it to someone else who farms the land for his own account, and provide a return to their investment as well as maintain its productivity (Van Reenen & Marais, 2013). Some of landowners cannot maintain the farms because they do not have enough capital, while young entrepreneurs who have operating capital and management ability that they wish to use in a farming business to produce income for living expenses and future investment or debt reduction. So, if they are not in position to purchase land, they often lease land.

While contract farming is regarded as a system in which farmers agree in a written or verbal contract to supply produce to a buyer, usually at a pre-determined price, on a specific date and to a certain quality. Typically, the buyer provides the necessary inputs and services to the farmers on credit and exercises some control over the conditions of production. The contracted farms may be small; what makes this a large scale agricultural model is when the total area under contract is extensive in order to guarantee the buyer large volumes. Small farmers are often organised into village groups or cooperatives. The buyers are usually agribusiness processing companies or parastatals (Vermeulen & Cotula, 2010).

Under this model, an agribusiness processing company through a vertical integration, they integrate backwards within the agricultural supply chain. Farmers' production decisions are commanded by the agribusiness processing company because it has a legal title to the crop, hinting at the power dynamics inherent. The company advances some inputs and/or services on credit (occasionally they are provided by the state or a third party), to be repaid with interest by participating farmers.

2.15. Conclusion

The review of international and local literature on land reform has shown that majority of previously disadvantaged communities has been settled to fertile agricultural land

through land reform programmes. For a land reform to be considered a success, a huge number of hectares have to be transferred from a minority privileged population to majority previously disadvantaged communities, sometimes/often with very little skills and knowledge of managing a farming enterprise. In this process, reconciliation, stability, growth and development in an equitable and sustainable way will be achieved. The importance of land reform was used by politicians and social scholars to highlight the major problems of poverty, unemployment and food security that arose from lack of access to land and weaker land tenure by majority.

It was also well established that sustainability of land reform farming enterprises largely depends on conditions described by Makhura *et al*, Lahiff, Tilley as well as Jacobs. These conditions prescribe effective management model. For these conditions to be realised, a paradigm shift for the selection and implementation of land reform models is significant.

In the process of choosing these models, experiences from those with sufficiently long history of managing citrus enterprises sustainably must be taken into account. Furthermore, the nature of land reform farming enterprises plays an important role in determining the type of management model needed. In addressing the management requisite of the farming land reform enterprises, a due diligent and comprehensive planning process should be done in order to avoid a number of challenges.

To surpass these challenges, the following issues should receive attention:

- Beneficiaries should first be provided with knowledge not only of the latest techniques for raising crops and farm animals but also of how to operate a successful farming enterprise
- Business planning needs to be a participatory process, where beneficiaries are accorded the opportunity to participate in the whole farm planning process.
- Policy and legislation must discourage the top-down approach for whole farm planning and business planning.

- Extension officers and agricultural advisors, scientists and technicians should be provided with relevant business and market planning training (such as reading and analysing of trade maps).
- Independent institutions, such as, CGA, CRI, universities, and government departments should be contracted to evaluate the output of the service providers and the welfare of land reform projects.
- Service providers who are contracted to do business planning should work closely with the extension officers, CPA committee or appointed strategic partner/manager for the implementation and after-care support. Should the process of the implementation of the plan fails, the Department should review the desirability of employing the service provider and all the partners involved in future, thus the services rendered by providers should be monitored and evaluated done before another contract is signed with them
- These consultants should also be used to do a marketing planning concerning the products and where necessary, providing aid in establishing new markets, for example, for citrus fruit with processors, local traders and exporters.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. Introduction

Research methodology influences the validity of research findings; thus, *frivolous* and *vexatious* research findings may propagandize the decision of policy making. The policies that are wrong are anti-developmental. They are costly in terms of time, resources and opportunity. Sound agricultural and rural development policy decisions need to be backed by evidence based inquiries (Matunhu, 2011). This section explains the research methodology that the study has adopted.

3.2. Methodology

The study was carried out in a form of case study using land reform enterprises producing citrus and privately owned citrus estates. The researcher had chosen this method due to its relevancy to this study, rather than surveying too many enterprises. This method has proven to do well and it brought the researcher to a better understanding of complex issues within the selected enterprises and extends experience to what is already known through previous research (Matunhu, 2011: 49).

A case study has highlighted a comprehensive conceptual analysis of a limited number of events or conditions and their relationships. It is also an action research; it compelled the researcher to be fully involved as an instrument of data collection. It is an empirical inquiry in investigating modern experience within its real life context; when the boundaries between experiences and context are not clearly evident; and in which multiple sources of evidence are used.

Scholars such as Terblanche, Stevens & Sekgoka (2014) has used this method in their comparisons of land reform farm management models. Elsewhere, Manenzhe (2007), a social scientist researcher, in particular, has made wide use of this method to examine contemporary post settlement challenges for land reform beneficiaries in South Africa and provide the basis for application of ideas and methods.

This study has opted to use quantitative research approach but with a strong support of qualitative methodology. Likewise, Matunhu (2011) has advised that, no single

social research methodology must be exclusive of the others. For instances, qualitative and quantitative approaches was not viewed as polar opposites or contradictions; instead they represent different ends on a continuum.

By mixing these methods, the study went beyond the establishment of how severe is the problem at hand. The other strength of combining the two methodologies was that the study was able to use both primary and secondary data. As a result, not even a purely quantitative or qualitative research method was deemed to be appropriate for this study. This research adopted a simultaneous transformative research strategy. The researcher adopted the use of questionnaires, observations and interviews for basic data gathering.

The questionnaires were developed by the researcher. The research supervisor moderated the instruments before they are presented to the participants. The first section of closed-ended questionnaire was about the auditing of enterprise's strength, weakness, opportunities and threats (better known as SWOT) throughout selected projects to determine the challenges and factors that inhibit sustainability of land reform projects in the Mpumalanga Province.

In addition, SWOT exercise helped to reveal the opportunities present in Mpumalanga that can enhance projects sustainability. The second section was more on factors affecting land use and management model, especially those linked to the objectives of programmes implemented in Mpumalanga by respective state departments.

SWOT auditing process looked at the enterprises current situation, especially within the context of the mission, higher-level plans and higher level goals. This was done through enterprise's environment scanning and analysis, the systematic (an on-going) collection and interpretation of data about both internal and external factors that may affect enterprise management and sustainability. When conducting the situation inside the enterprise, internal audit was used while external audit was used for situation outside the enterprise.

Secondly, the personal interviews were conducted to gather information from land reform beneficiaries' stakeholders. Personal interviews involved face-to-face

discussions with respondents in order to increase response rates. For these stakeholders, open-ended questions were used to generate information on the objectives of their support programmes. Information and data about the activities and programmes of the stakeholders in Mpumalanga, such as the type of advice given to farmers on farming management was collected. Furthermore, the validation of data collected was done through focus groups discussions.

3.3. Research design

Babbie and Mouton (2001) stated that a study design is a specific and concrete process that the researcher applies in sampling, gathering and interpretation of data. These were the sets of rules that enabled the researcher to conceptualize and gather data relating to problems under study. This guide has helped to control for deviations and to provide answers to problems being researched. This study has employed the use of stratified randomised design as the sampling design and structured data gathering instruments.

3.4. Population of citrus farmers in RSA

Citrus represents one of South Africa's most important fruit group by value and volume. The industry is characterised by distinct heterogeneity of the fruit producers, ranging from emerging (land reform projects), sole proprietorships, cooperate commercial producers and state owned to resource poorer small scale producers. During the period of the study, the South Africa's citrus industry consisted of 1400 growers spread out throughout the country. It is estimated that Mpumalanga Province was contributing about 300 of growers to a total National number.

There were approximately 62, 322 hectares of land under citrus production in the country with the majority of production concentrated in Limpopo Province at 42% (26 960 ha) Limpopo is followed by the Eastern Cape and Western Cape at 26% (16 752 ha) and 16% (10 214 ha) respectively. Citrus production in hectares has declined in Mpumalanga from 9 375 ha in 2013 to 5 255 ha in 2014. Mpumalanga was the fourth largest producer in 2014 at 8% (5 255 ha) (DAFF, 2015: 5; CGA, 2015:33).

3.5. Sampling framework

Basically, the main focus of this study was citrus growers in Mpumalanga Province. The population of interest was land reform citrus enterprises within all three citrus regional representative of Mpumalanga Province being; Nelspruit, Onderberg and Senwes, as demarcated by CGA. However, enterprises selected for the participation in this study included those with sufficiently long history of sustainability to get insight and learning. To this end, experiences from state and privately owned enterprises from all three regional representatives based in Mpumalanga Province were considered for the sampling frame. There were about 330 citrus growers distributed across the province.

Five major categories of sampling frameworks were used in the study and these included communal farmers defined as land reform beneficiaries (commonly known as CPAs) who acquired their farms through land redistribution programmes and households' farmers defined as land reform beneficiaries. For the purpose of this study, households that acquired their farms without any support from state led approaches such as land reform programmes, private commercial cooperates which are producing citrus and state institutions which owns and manages citrus enterprises were included in the study. Each category of the samples is discussed below.

3.5.1. Sampling CPAs

The projects registry in the office of Regional Land Claims Commissioner (RLCC) in Mpumalanga Province, a branch of the Department of Rural Development and Land Reform (DRDLR) was visited and used to identify the number of CPA's citrus farms in the province who will be interviewed during the study. The registry depicted that there are 20 citrus producing CPA's with a total number of 186 managers within the three regions. These projects were then subjected to stratification based on proportional allocation and a sample of 134 farm managers was then taken to participate in the study, based on their willingness to take part, which will reflect a participation rate of 134/186. See Table 3.1 below:

Table 3. 1: CPAs proportional allocation stratified sampling

Region & Number of Farms	Population		Proportionate Stratified Sample	
	Number of farmers	Stratum weight	Number of participants	Stratified weight
Nelspruit (12 farms)	122	0,66	88	0,66
Onderberg (6 farms)	48	0,26	35	0,26
Senwes (2 farms)	16	0,08	11	0,08
Total	186	1	134	1

3.5.2. Sampling family's farmers benefited from land reform

Another screening process of land reform project registry was conducted to establish the number of household farmers defined as land reform beneficiaries in Mpumalanga Province. Ten household's enterprises producing citrus were identified and will be interviewed. It was decided to include all 10 households in the study area. This small number made sampling unnecessary.

3.5.3. Sampling independent commercial farming corporates and families

The meeting with Karino Citrus Pack-house representatives and a process of scanning FBO CODES D for Limpopo, Gauteng, Mpumalanga and Northwest Province confirmed that there were about 36 independent corporates farmers and 92 sole proprietorships farmers in Mpumalanga Province. The corporates were distributed in three regions as follows, 18 in Nelspruit, 3 in Senwes and 15 in Onderberg. While Sole proprietorship farmers are as follow; 76 in Nelspruit, 7 in Senwes and 9 in Onderberg. These farmers were then stratified based on proportional allocation and a sample of 20 farmers per each category were then taken from each group. See Table 3.2 and 3.3 below:

Table 3. 2: Independent Corporates farmers' proportional stratified sampling

Region	Population		Propotionate Stratified Sample	
	Number of famers	Stratum weight	Number of participants	Stratified weight
Nelspruit	18	0,5	10	0,5
Onderberg	15	0,42	8	0,43
Senwes	3	0,08	2	0,07
Total	36	1	20	1

Table 3. 3: Sole proprietorship farmers' proportional stratified sampling

Region	Population		Propotionate Stratified Sample	
	Number of famers	Stratum weight	Number of participants	Stratified weight
Nelspruit	76	0,82	16	0,8
Onderberg	9	0,1	2	0,1
Senwes	7	0,08	2	0,1
Total	92	1	20	1

3.5.4. Sampling and state owned farming enterprises

A further sample identified 06 state owned and managed enterprises in both Nelspruit and Onderberg region and the researcher decided to include all 06 enterprises. The small number of these enterprises made sampling unnecessary. However, only 190 farmers eventually participated in the study based on their willingness to take part. The breakdown of farmers who participated in the study as per all three citrus regions in Mpumalanga Province were as follows; 134 communal farmers (CPAs), 10 household farmers benefited from land reform, 20 private households' famers, 20 private commercial cooperates and 06 state owned enterprises.

3.6. Data collection

To have an in-depth understanding of the problem in the study a range of methods were used to gather data. This includes structured and semi-structured questionnaires, participant and observations and focus group discussions.

3.6.1. Questionnaire

The questionnaire is a well-established tool for acquiring information of participant's characteristics, present and past behaviour, standards of behaviour or attitudes and their beliefs and reasons for action with respect to the topic under investigation. The

study has utilized the combination of closed-ended and open-ended questions. These methods complement each other as recommended by (Matunhu, 2011). However, in the study, closed-ended questions were structured. The advantages of structured questions were that, they were more efficient of their ease of analysis.

Moreover, the open-ended questions of this study were semi-structured. The greatest strength is that the responses of this type of questions were more accurate in reflecting what the respondents want to say and openly express their feeling, beliefs or recommendations on the subject of a sustainable farm management model in the Mpumalanga Province. In order to control the responses, the study standardized questions. For example, the numbers of open-ended questions were kept low to facilitate the compliance of the participants.

Study results may be affected not only by the wording of a question, but by the context in which the question is asked (Krosnick & Presser, 2010). The order of questions can influence the reliability of the responses and the respondent's willingness to cooperate with the researcher. As an advice to the researcher, Krosnick and Presser (2010) outlined that the questions at the very beginning of a questionnaire may be especially likely to influence willingness to respond to the researcher, because they can shape respondents understanding of what the study is about and what responding to it entails.

For the above reasons, a questionnaire first question in this study beard a strong icebreaking, engage respondent interest, and impose minimal respondent burden. Due to this consideration, difficult or sensitive questions were not placed early in a questionnaire, but rather the questions were arranged in a funnel sequence whereby questions flowed coherently. The questions on related topics were grouped together. In this case, each successive question was related to the previous one.

Consistent with this logic, as according to Krosnick and Presser (2010) who stated that coherent grouping can facilitate respondents cognitive processing. In this study, the researcher adopted this method and helped respondents to recall details more efficiently. By starting with less difficult or sensitive questions, the researcher managed

to avoid unwillingness to respond to the study. The advantages of using questionnaire as a data collecting tool *inter alia*:

- They permitted respondents time to consider their responses carefully without interference from, for example, an interviewer.
- It was possible to provide questionnaire to large numbers of people simultaneously. In this case, 116 farmers.
- Each respondent received the identical set of questions. With closed-form questions, responses were standardised, which assisted in interpreting from large numbers of respondents.
- Address large number of issues and questions of concern in a relatively efficient way, with the possibility of a high response rate.
- Questionnaires were designed so that answers to questions are scored and scores summed to obtain an overall measure of the attitudes and opinions of the respondents.
- They permitted anonymity. It is usually agreed that anonymity increases the rate of response and may increase the likelihood that responses reflect genuinely held opinions.

Disadvantages of using questionnaire will include the following:

- It was somehow challenging to obtain a good response rate. Frequently, there were no strong motivations for respondents to respond.
- If they were badly designed, they could have misled the study.

3.6.2. Focus group discussion

Tembo (2003) argues that data is generated in focus group discussions rather than when is collected. The researcher encouraged such data generation, rather than just to collect data, as it reflects the respondents' knowledge as closely as was possible. The findings then will become relevant both to the respondents and the researcher. This will be done to ensure as much as possible that the research was about what farmers do and why they do it.

Thirteen focus group discussions were arranged with farmers who were willing to participate after they had been interviewed. To participate in the discussions, farmers were asked by the researcher to choose the day and place where the focus groups will be conducted. By allowing farmers to arrange their own time and groups has made the discussions very lively and open.

Prior arrangement of focus group discussions, the researcher informed the farmers about the topics which the researcher will want them to discuss. The researcher acted as a facilitator and kept records of the conversation by taking detailed notes. The focus group sessions were conducted in the local language, to improve the level of participation by the members. Recording discussions was proposed, but if the farmers would have felt uncomfortable about this, it would have been withdrawn to encourage levels of participation. Observations were made by the researcher during visits to the farms.

3.7. Data analysis

Garth (2008) recommended that, the first and important step of the data analysis process is to identify the correct technique to use for analysis. And of course, if an appropriate method of analysing data is not used, the conclusions are likely to be invalid. This study used both qualitative and quantitative methods of analysis. Each method is described below.

3.7.1. Quantitative analysis

The quantitative data created from closed-ended questionnaires were entered to a database and subjected to statistical analysis using Statistical Package for Soil Science (SPSS). The created descriptive statistics, such as means, modes, medians, and frequencies were used to determine the beliefs, feelings or recommendations on the subject of farm management model in land reform farming enterprises, especially in Mpumalanga.

3.7.2. Qualitative analysis

Qualitative themes were determined after reading through the scripts of the participants. The Narrative analysis was used to reflect the natural unfolding realities of case studies for farming land reform enterprise through descriptive pictures. The objective was to present or reveal the beliefs, feelings or recommendations on the subject of farm management model in land reform farming enterprises.

3.8. Ethical considerations

A researcher should respect the rights, needs, values and desires of the respondents when conducting research. The study observed research ethics in accordance with those of Polit and Hungler (1999), namely; the principles of beneficence, of respect for human dignity and of justice.

3.8.1. The principle of beneficence

The participants were protected from harm and exploitation. There was no physical harm produced by participating in the study. Participants who agreed to participate in the study were regarded as vulnerable group as and their identities were kept confidential because they might be described as the sell outs by their counterparts or respective farmers' associations. Careful explanation was provided to the participants about their right to refuse to participate in the study, and that their participation or refusal would not influence the beneficence provided to them in any way whatsoever. An opportunity was given for each participant to ask question and air his/her feelings.

3.8.2. The principle of respect for human dignity

The participants were provided with the right to refuse to participate in the study, the right to discontinue if they felt uncomfortable, the rights not to answer specific questions if they did not want to disclose that information and the right to ask for clarification if they were not sure about any aspect of the research project and or any specific questions.

3.8.3. The principle of justice

The participants were provided with the right to fair treatment and the right to privacy. With regard to right to fair treatment, the participants were actually treated by respecting their beliefs, habits, culture and lifestyle. The opportunity was provided for each participant to ask questions. All participants had right to privacy. The researcher assured that the participant's sensitive data will be held in the strictest confidence in order to protect their anonymity. Anonymity was adhered to by ensuring that no completed structured interview schedule will be linked to any specific participant. The completed interview schedule was and still are, only accessible to the researcher and the statistician, and are kept in a safe place by the researcher.

3.9. Informed consent

Before participants even agree to participate in a research study or project, they must be furnished with full information on the aims and objectives of the research study as well as method of research Polit and Hungler (1999). This advice was adopted by the researcher and helped in informing every participant about the research study in a way that was assumed to be clear and understandable to them. The participants were not placed under the obligation to continue participating in the study if they are no longer interested.

Each participant that agreed to participate in the study signed a consent form, or put a thumb mark on it if he/she cannot sign. The goal of the informed consent process was to provide sufficient information so that a participant can make an informed decision about whether or not to enrol in a study or to continue participation. The consent form minimized the possibility of coercion or undue influence, and the participants were given sufficient time to consider participation.

CHAPTER 4: SOCIO-ECONOMIC AND STATUS OF SMALL HOLDER FARMERS IN MPUMALANGA PROVINCE

4.1. Introduction

This section will discuss the socio-economic status of the Mpumalanga Province (MP) in order to provide a better understanding of the current level of agriculture in the province. Furthermore, the socio-economic overview of the province will also provide valuable information on the state of socio-economic structures and institutions that will support sustainable citrus farming in the province. This will be followed by a discussion of the primary infrastructure that supports a sustainable citrus farming, an economic overview of the province as well as a better understanding of the relative importance of citrus sector on the economy of the province. In the third section, the status of the small holder citrus farmers is dealt with, due to its importance in the study.

4.2. Socio-economic demographics

The manner in which the population of each province is arranged shows an important factor in the understanding the causes for sustainable and unsustainable farming enterprises. The arrangement of the population is discussed below, with specific emphasis to its profile, poverty, health and social security.

4.2.1. Population profile and age distribution

MP's Socio-Economic Review and Outlook (SERO) of 2015, shown that the province's population was 4.04 million or 7.8 percent of the national total (Table 4.1). Mpumalanga Province registered the sixth largest share among the provinces (Department of Finance (DoF), 2015a).

The latest population estimates by Statistics South Africa (*2016 Mid-year Population Estimates*) are also presented in Table 4.1. According to these, Mpumalanga Province's population was expected to increase to 4.3 million in 2016, whilst the share of the national total remained constant at 7.8 percent. MP was one of three provinces where the shares will remain unchanged, whilst the shares of three provinces are expected to decrease and three increases (StatsSA, 2016).

Table 4 1: Population in South Africa by province, 2001, 2011 & 2016

	2001		2011		Number	% share of national
	Number	% share of national	Number	% share of national		
Western Cape	4 524 335	10,1	5 822 734	11,2	6 293 200	11,3
Eastern Cape	6 278 651	14	6 562 053	12,7	7 061 700	12,6
Northern Cape	991 919	2,2	1 145 861	2,3	1 191 700	2,1
Free State	2 706 775	6,1	2 754 590	5,4	2 861 600	5,1
Kwazulu Natal	9 584 129	21,4	10 267 300	19,8	11 079 700	19,8
North West	2 984 097	6,7	3 509 953	6,8	3 790 600	6,8
Gauteng	9 388 855	20,9	12 227 263	23,7	13 498 200	24,2
Mpumalanga	3 365 554	7,5	4 039 939	7,8	4 328 300	7,7
Limpopo	4 995 462	11,1	5 404 868	10,3	5 803 900	10,4
Total	44 819 777	100	51 734 561	100	55 908 900	100

Source: Department of Finance – SERO (2015a); Statistics South Africa –Mid-year Population Estimates (2016)

Figure 4.1 shows the population cohort of Mpumalanga Province as per *2016 Mid-year Population Estimates*. According to the figure, females constituted 2.19 million or 50.7 per cent of the provincial population distribution and males 2.13 million (49.3 per cent). The youth cohort (0-34 years) made up 69.1 per cent of the total population in the province and the age group 60 years and older, only 6.8 per cent. The age cohort of 25-29 years represented the most populous age cohort with 450 034 individuals or some 10 per cent of the provincial population. In South Africa, the youth cohort made up 66.6 per cent of the total population and the age group 60 years and older, 8.0 per cent (DoF, 2015; StatsSA, 2016).

The population of South Africa increased by 11.1 per cent between 2012 and 2016, as is evident from Figure 4.2. When expressed in absolute terms, the population of MP increased by 7.7 per cent between 2012 and 2016. This was lower than South Africa's population increase and the joint fifth largest population increase behind Gauteng (23.2 per cent), KwaZulu-Natal (19.8 per cent), Eastern Cape (12, 0) and Western Cape (11, 1) over the period under review.

The breakdown by population group for Mpumalanga Province in 2001 and 2011 as per *Census 2011* is presented in Figure 4.3. The majority of MP's population in 2011

was Black Africans (90.7 per cent) with Whites contributing 7.5 per cent. Coloureds (0.9 per cent), Asians (0.7 per cent) and others (0.2 per cent) jointly contributed nearly 2 per cent to the total population in 2011.

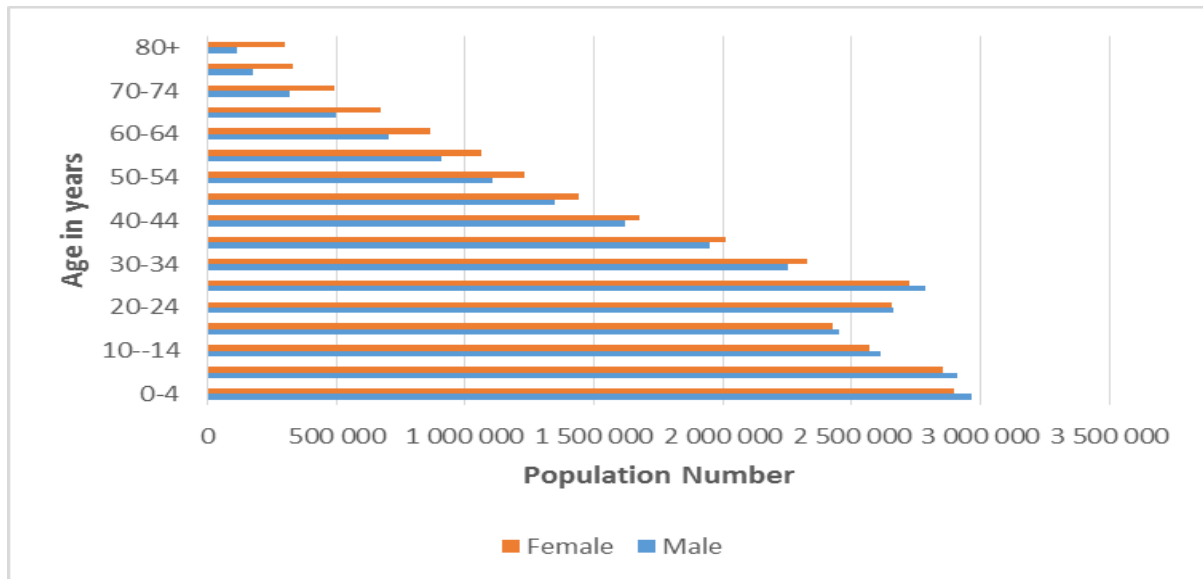


Figure 4. 1: Population cohort of Mpumalanga, 2016

Source: Statistics South Africa – Mid-year Population Estimates (2016)

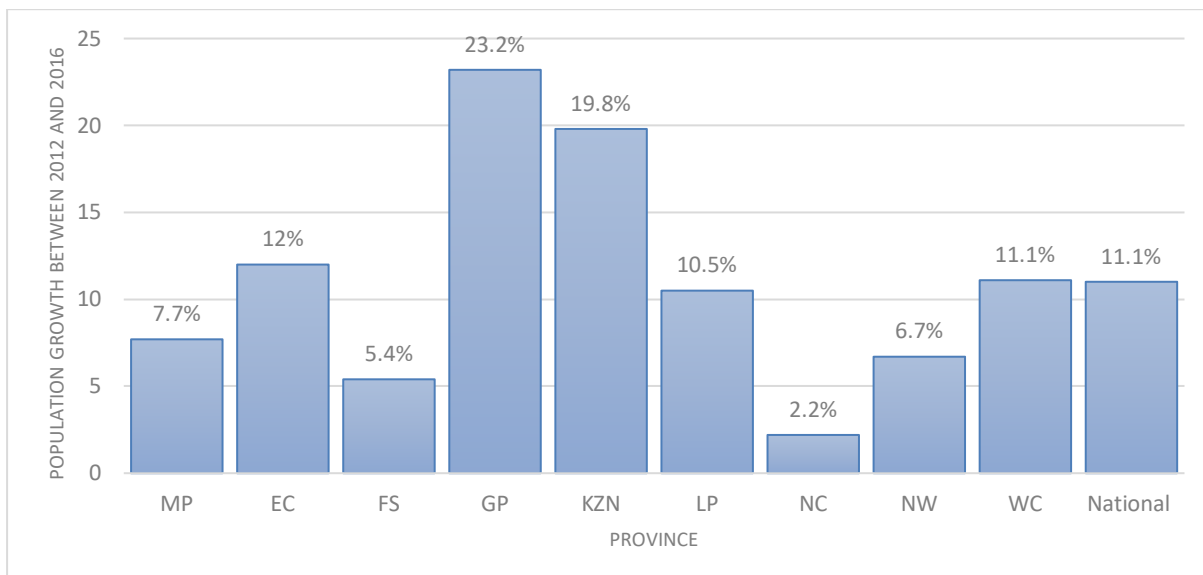


Figure 4. 2: Comparison of population increase in South Africa, 2012-2016

Source: Statistics South Africa – Mid-year Population Estimates (2016)

In 2011, 41.8 per cent of Mpumalanga Province’s population resided in Ehlanzeni, 32.4 per cent in Nkangala and 25.8 per cent in Gert Sibande (Figure 4.3). Females

were in the majority in both Ehlanzeni (52.4 per cent) and Gert Sibande (50.7 per cent), whereas males formed the bulk of Nkangala's population with a share of 50.2 per cent. In 2011, 72.1 per cent of Ehlanzeni's population was younger than 35 years of age, followed by Gert Sibande (69.0 per cent) and Nkangala (66.2 per cent).

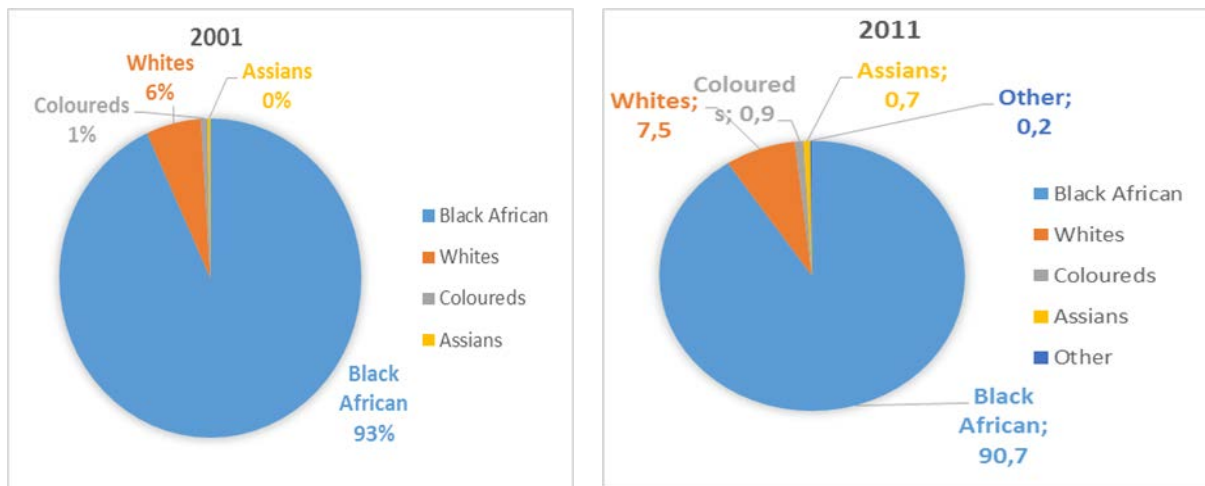


Figure 4. 3: Mpumalanga's population by population group (2001-2011)

Source: Statistics South Africa – Census (2011)

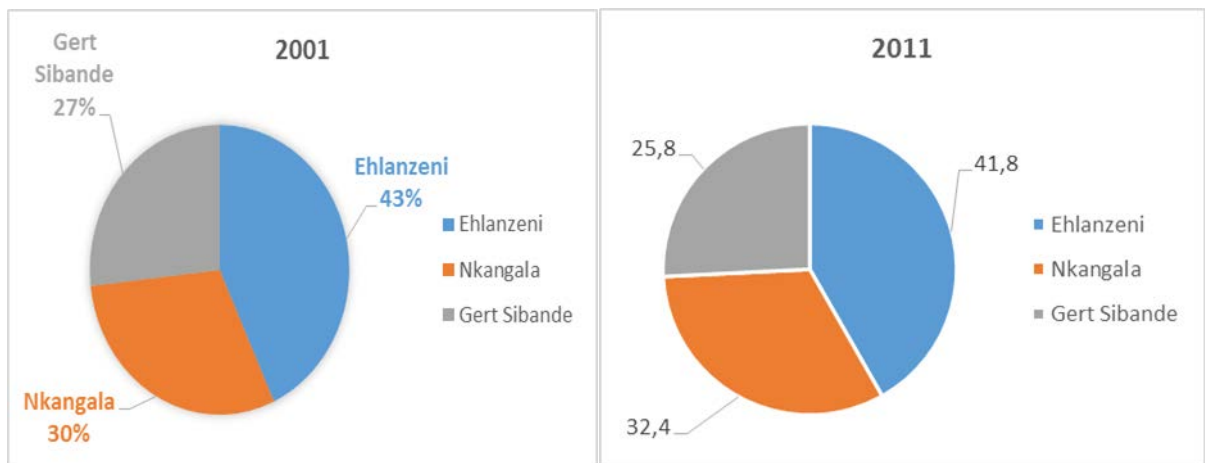


Figure 4. 4: Mpumalanga's population by district (2001-2011)

Source: Statistics South Africa – Census (2011)

4.2.2. Unemployment

According to Statistics South Africa's QLFS, the unemployment rate in Mpumalanga Province was 30.4 per cent at the end of the third quarter 2016, which was higher than

the 26.2 per cent recorded at the end of the third quarter 2015 (Figure 4.5). This was higher than the national average of 27.1 per cent at the end of the third quarter 2016. Mpumalanga Province, recorded the third highest unemployment rate among the nine provinces with Free State (34.2 per cent) registering the highest unemployment rate. Mpumalanga Province's unemployment rate increased along with seven other provinces from the end of the third quarter 2015 to the end of the third quarter 2016.

4.2.2.1. Unemployed by gender and age

At the end of the second quarter 2015, the unemployment rate of males (24.4 per cent) was lower than the female unemployment rate of 29.2 per cent. The unemployment rate of youth of working age (15-34 years) in MP was 38.8 per cent, whilst the unemployment rate of adults (35-64 years) was 16.6 per cent. At the end of the second quarter 2015, females contributed 50.4 per cent to the number of unemployed, which was marginally more than males (49.6 per cent). This was slightly lower from twelve months earlier when females contributed 51.7 per cent. The youth constituted 70.0 per cent of the total number of unemployed in the province, which was lower than the 72.8 per cent at the end of the second quarter 2014 (DoF, 2015).

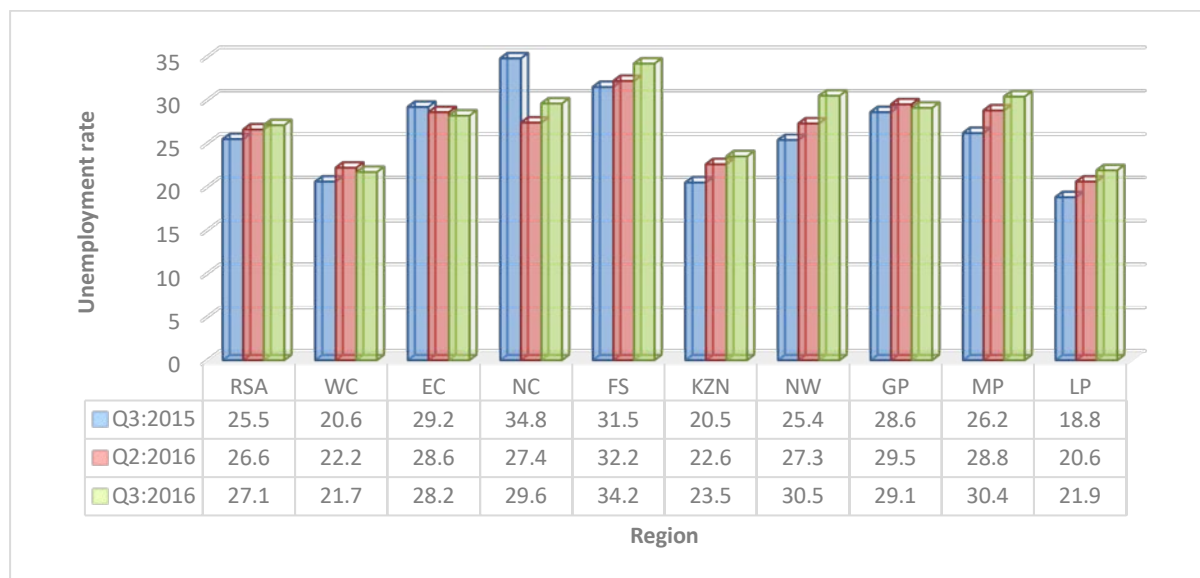


Figure 4. 5: Unemployment rate for South Africa by province, 2015-2016

Source: Statistics South Africa – QLFS (2015; 2016)

Figure 4.6 reflects the share of employment per sector in 2015. Community services accounted for the largest percentage of employment, at 21.1% of the Mpumalanga Province population. This was followed by trade (20.3 %), finance (12.1 %), manufacturing (9.3%), private households (9.1%) and the agricultural sector (7.5 %). However, it is important to bear in mind that although the agricultural sector employs just a smaller percentage of the Mpumalanga Province population, other sectors such as manufacturing, trade, private households and transport are highly dependent on the agricultural sector for their survival. Thus, any upsets and challenges in the agricultural sector could potentially affect other sectors in the MP as well.

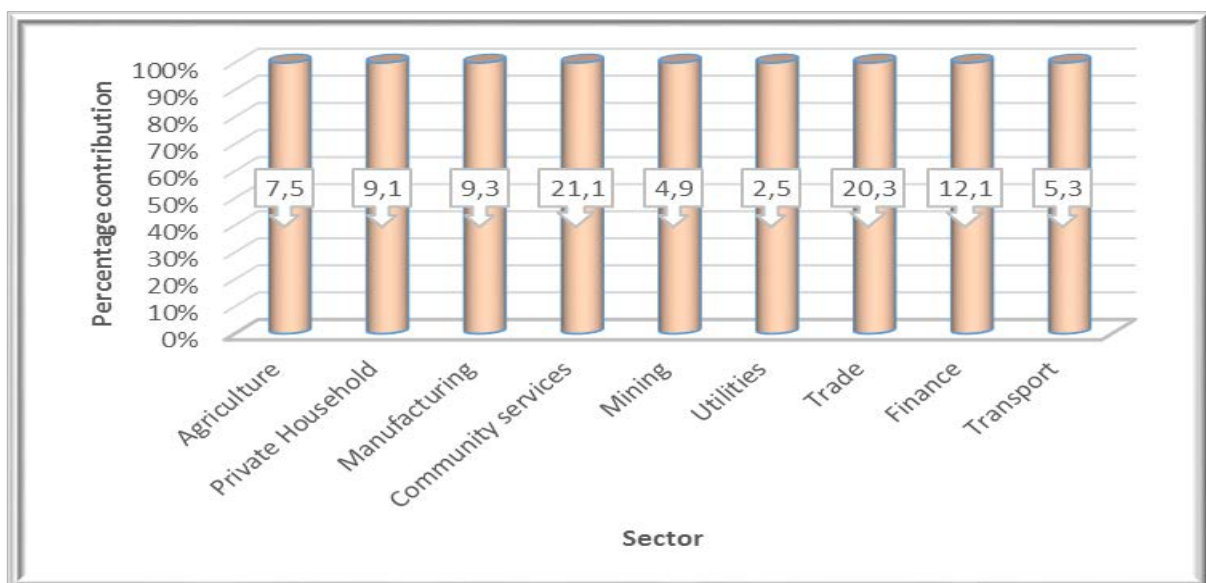


Figure 4. 6: Employment by industry in Mpumalanga, 2015

Source: Department of Finance – SERO (2015a)

Although, agriculture only accounted for 7.5 % of total employment in the province in 2015, it remains an important source of employment especially in the remote rural regions. Moreover, the agricultural sector is also more likely to play an even bigger role as an employer, with government targeting the sector as one of the main sectors for its development initiatives.

4.2.3 Poverty

The high poverty level in the Mpumalanga Province impacts on a varied unified issues, such as the level of household income, education and literacy, employment, health and

health care, social security, migration, and access to basic services. Moreover, poverty levels relate directly to the institutional framework present in the province. Likewise, alleviating poverty has the potential to address a wide range of other social disparities within the province. This could be achieved through an improved institutional environment.

Agricultural development against the backdrop of the rural nature of the Mpumalanga Province and its diverse natural resource base makes it the ideal vehicle through which poverty alleviation initiatives can be established. However, the current environment of emerging and small holder farmer's pressure, deprived infrastructure, time consuming and unsuccessful land reform and redistribution programmes, etc. within the agricultural sector needs to be enhanced. Such improvement could be brought about by an improved institutional environment which will form the basis of the successful poverty alleviation through a sustainable land reform.

Table 4.2 shows the percentage of people in the province living in poverty. It is evident from Table 4.2 that the share of South Africa's population living in poverty declined from 51 per cent in 2004 to 34.8 per cent in 2014. Mpumalanga's share was, however, still the fourth highest among the provinces with Limpopo (43.9 per cent) registering the highest share and Western Cape (22.6 per cent) the lowest.

Table 4 2: Share of population living in poverty in South Africa & provinces, 2004-2014

Province	% of population		
	2004	2009	2014
Eastern Cape	64.4	57.5	43.5
Free State	52.3	46.7	35.4
Gauteng	54.7	47.3	35.3
Kwazulu Natal	58.1	54.7	42.5
Limpopo	66.8	59.7	43.9
Mpumalanga	58.3	51.1	37
Nothern Cape	47.7	38.7	29.3
North West	54.7	47.3	35.3
Western Cpae	30.5	27.7	22.6

Source: Department of Finance – SERO, June (2015b)

Table 4.3 shows the percentage of people in the different districts of the Mpumalanga Province living in poverty. Nkangala (31.3 per cent) recorded the lowest share of population in 2014 followed by Gert Sibande (36.5 per cent). In 2014, Ehlanzeni

recorded the highest share of people with 41.8 per cent. Ehlanzeni, however, recorded the largest decrease (improvement) in terms of percentage change (20.3 percentage points) between 2004 and 2014.

Table 4 3: Share of population in Mpumalanga’s districts, 2004-2014

District	% population		
	2004	2009	2014
Gert Sibande	57.5%	49.6%	36.5%
Nkangala	52.5%	44.8%	31.8%
Ehlanzeni	63.0%	56.9%	41.8%

Source: Department of Finance – SERO, June (2015b)

The population living in poverty within all eighteen local municipal areas in Mpumalanga in 2014 is shown in Figure 4.7. The figure displays that, Steve Tshwete has 20.7 per cent and Mkhondo (51.2 per cent) the highest. Seven of the eighteen local municipal areas recorded higher percentage of population living in poverty than Mpumalanga’s percentage of 37.0 per cent.

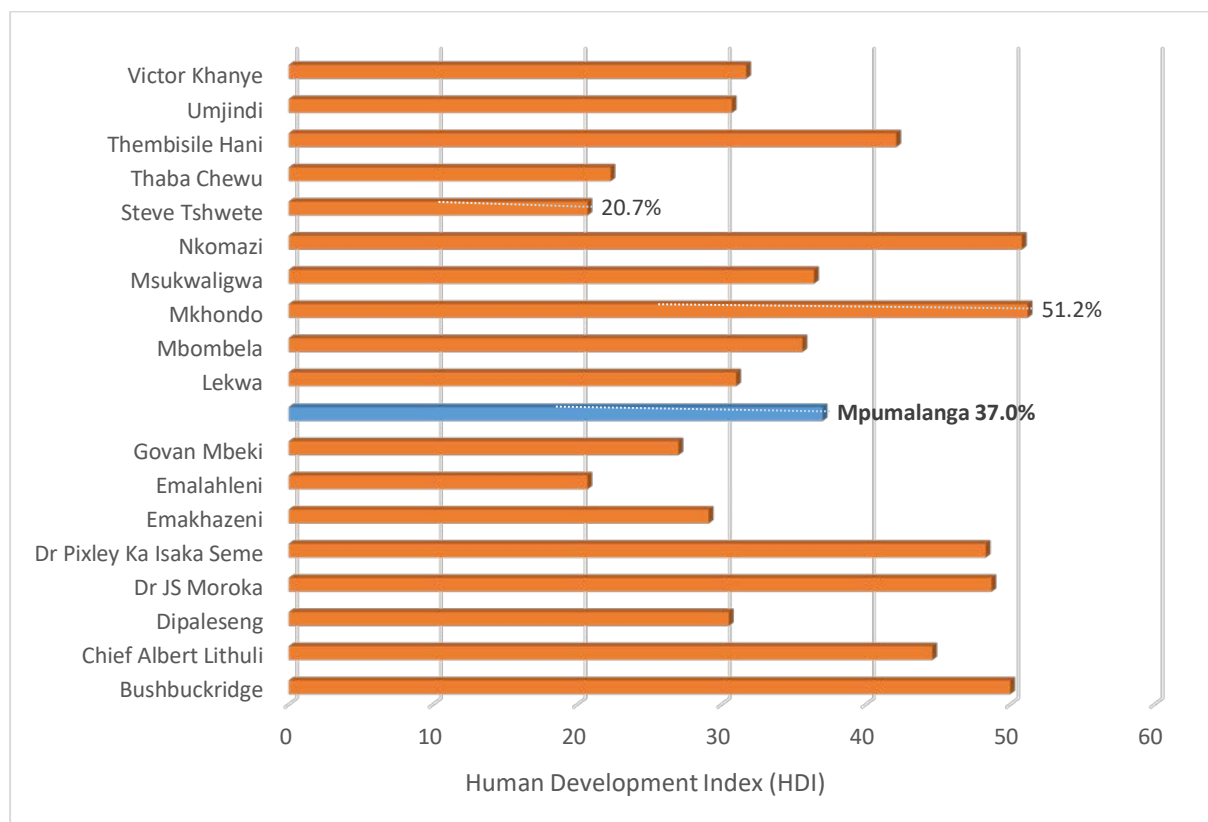


Figure 4. 7: Population living in poverty by local municipal area in Mpumalanga, 2014

Source: Mpumalanga Provincial Treasury – SERO, June (2015b)

4.2.4. Income

A depiction of the average annual household income for all households in South Africa increased from R48 385 per annum in 2001 to R103 204 per annum (R8 600 per month) in 2011. This represents an absolute increase of 113.3 per cent in nominal terms over the 10-year period. Average household income in Mpumalanga increased from R31 186 per annum in 2001 to R77 609 per annum (R6 467 per month) in 2011 (Figure 4.8).

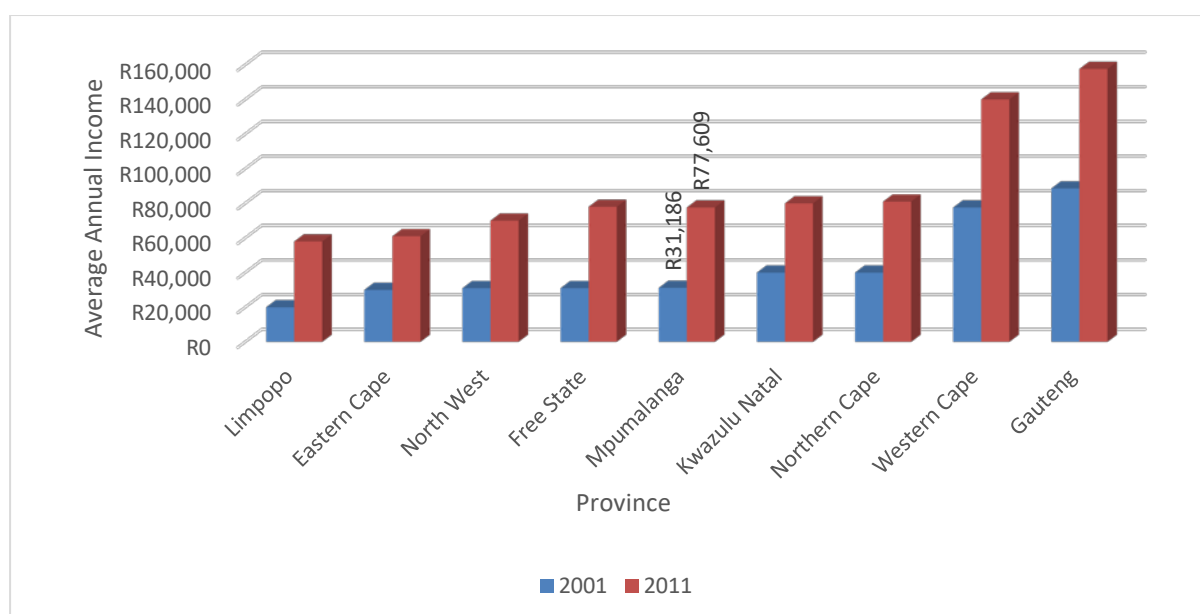


Figure 4. 8: Average annual household income by province, 2001-2011

Source: Statistics South Africa – Census (2011)

4.2.5. Education and literacy

Figure 4.9 reflects the percentage of the population aged 20 years and older, by their highest level of education in Mpumalanga Province and all its districts. Between the two census of 2001 and 2011, the proportion of persons with either no schooling or some primary education has significantly decreased, whilst the proportion of persons with Grade 12 or a higher education has increased.

In 2011, MP recorded 14.1% percentage of the total population that had no education, which was an improvement from 30.0 % in 2001. In addition, an estimated 4.2 % of the Mpumalanga Province MP population had only primary schooling (Grade 0 to

Grade 7) as their highest qualification, with 30.8 % of the population having only a Grade 11/Standard 9 education and below. On the contrary, almost 29 % of the population had a Grade 12 or Standard 10 qualification, with 10.2 % of the population having post-secondary school qualifications.

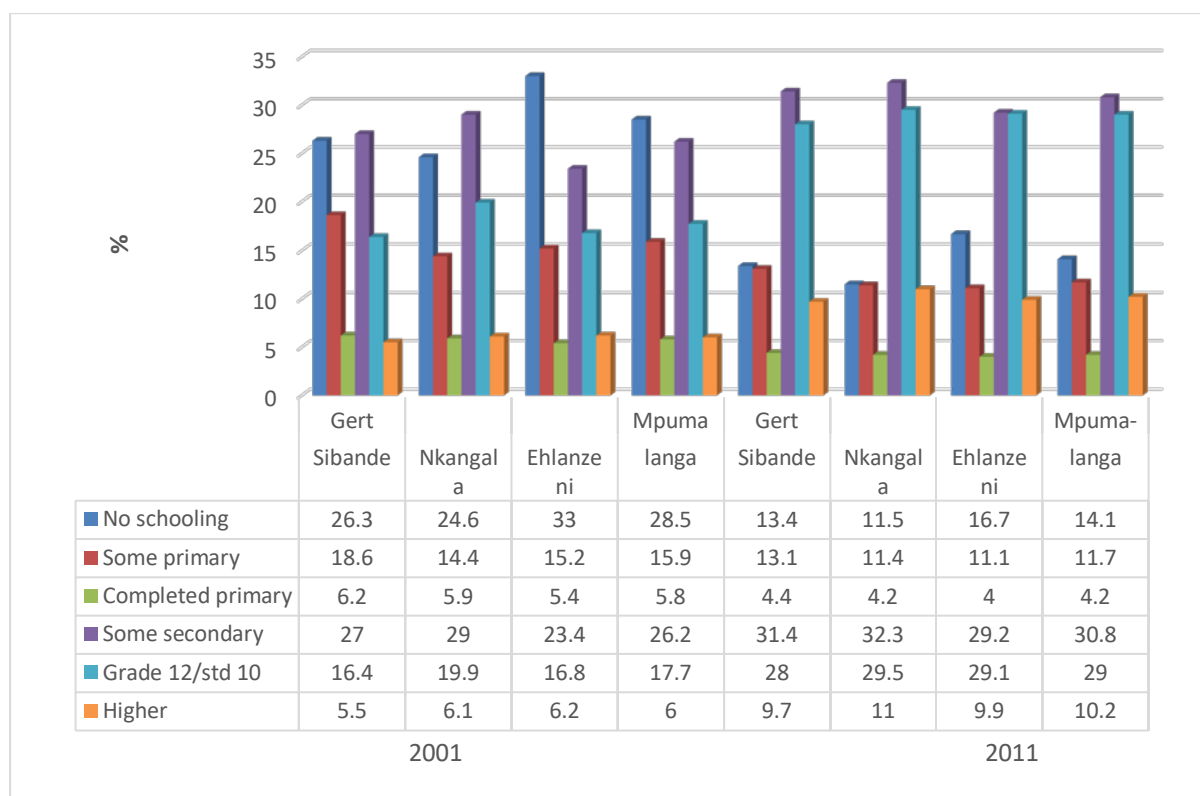


Figure 4. 9: Highest educational attainment amongst persons aged 20 years older by district municipality

Source: Provincial profile: Mpumalanga – Census (2011)

4.2.6. Health and health care

According to Cloete (2010:65), the health of people, especially those living in remote rural areas, is predominantly influenced by environmental factors (i.e. social and natural). In the Mpumalanga Province, the vast majority of people find themselves in circumstances where factors such as air quality, water quality, sanitation, etc. have a direct impact on their health. This situation is further exacerbated by their everyday exposure to wood, coal and paraffin smoke from indoor cooking fires, etc. This highlights the importance of proper healthcare in the province, as it might well be one of the most important factors ensuring economic growth and a better standard of living for the people of the province.

The first phase of the National Health Insurance (NHI) has been piloted in eleven districts across the country commencing in 2012. Gert Sibande was selected as the district in Mpumalanga where a District Service Package based on primary health care (PHC) principles will be piloted.

However, Massyn, Peer, Padarah, Barron and Day (2015) in their report titled Health Systems Trust reported that in Mpumalanga Province, the measles 1st dose dropout rate was the second highest (worst) in the country at 8.9 per cent. In 2013, the province's stillbirth rate was recorded at 21.3 per 1 000 births, which was slightly lower (better) than the national rate. The TB cure rate of 76.8 per cent in 2012 was better than the national average and the fourth highest (best) in the country.

Mpumalanga's maternal mortality rate of 149.1 was higher (worse) than the national rate of 133.3 and the fourth highest (worst) among the provinces. The 2013 immunisation coverage of 71.1 per cent was considerably lower (worse) than the national level of 84.4 per cent and the second lowest overall. The inpatient early neonatal death rate in facility of 8.6 per 1 000 live births was lower (better) than the national rate and the second lowest (best) among the provinces. Table 4.4 compares some of Mpumalanga's health indicators with the national average level.

Table 4 4: Comparison of selected health indicators between South Africa and Mpumalanga Province (2012-2013)

Description	South Africa		Mpumalanga	
	2012	2013	2012	2013
Measles 1st dose drop-out rate		6,3		8,9
Facility stilbirth rate per 1 000 births		21,5		21,3
TB cure rate	75,8		76,8	
Facility martenal mortality rate (per 100 000 live biths)		133,3		149,1
Immunisation coverage (< 1 year rate)		84,4		71,1
facility inpatient early neonatal death rate (per 1 000 live births)		10,1		8,6

Source: Massyn *et al* (2015)

Moreover, despite the fact that there is an improvement in overall health and healthcare in Mpumalanga Province, it is unfortunate that a large portion of the

Mpumalanga Province population is unable to access the health support system due to inequalities and poverty.

4.2.7. Prevalence of HIV/AIDS

In South Africa, HIV/AIDS is a prominent health concern. Globally, it is believed that South Africa has more people with HIV/AIDS than any other country in the world. This will probably make it the single most important driver that will shape the future social and economic developments and trends within the Mpumalanga Province.

The National Department of Health stated that the HIV/AIDS prevalence of the female population distribution for the 15–49 age groups in the province and nationally between 1990 and 2012 has been increasing. This is depicted in Figure 4.10. For instance, the estimated overall prevalence rate for this group in 2012 was 29.5 per cent for South Africa and 35.6 per cent for Mpumalanga. With the exception of the first few results in the early nineties, the prevalence rate in Mpumalanga was consistently found to be higher than the average recorded nationally.

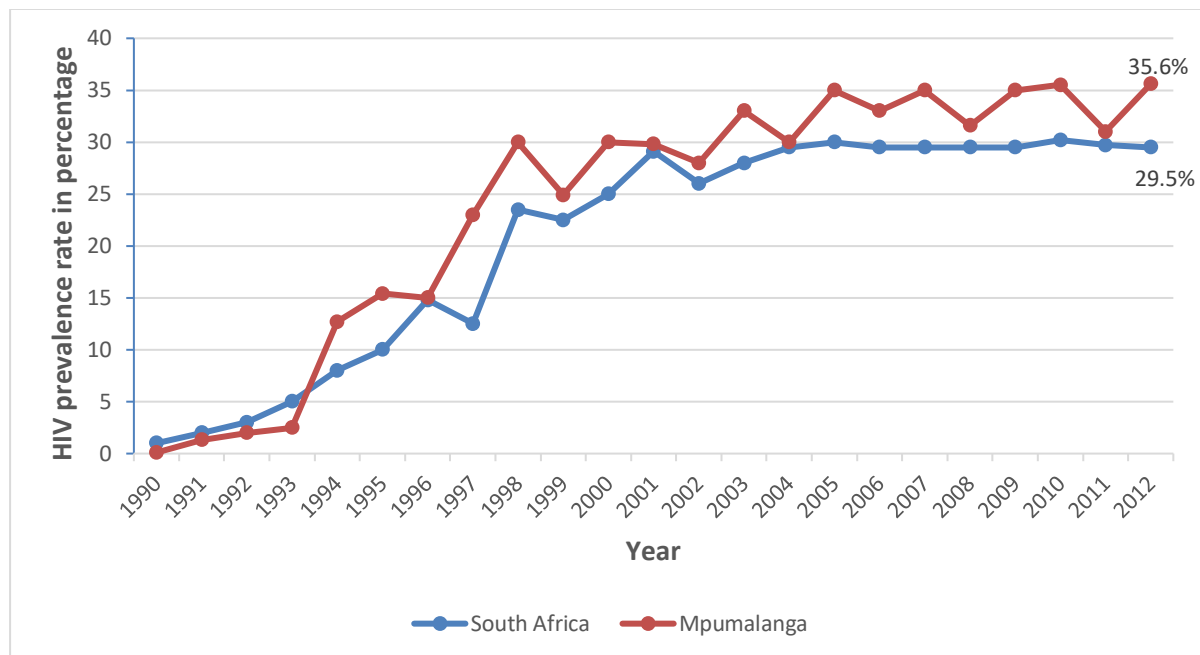


Figure 4. 10: Comparison of HIV prevalence rate among females aged 15-49 in South Africa & Mpumalanga (1990-2012)

Source: National Department of Health- National Antenatal Sentinel HIV and Syphilis Prevalence (2012).

However, on the district level (Figure 4.11), the highest HIV prevalence rate for females aged 15-49 in Mpumalanga was recorded in Gert Sibande (40.5 per cent) and the lowest in Nkangala (32.1 per cent). Among the 52 health districts nationally, Gert Sibande recorded the 2nd highest (worst) prevalence rate in 2012, followed by Ehlanzeni and Nkangala in 12th and 20th highest, respectively.



Figure 4. 11: HIV prevalence rate by district among females aged 15-49, 2007-2012

Source: National Department of Health- National Antenatal Sentinel HIV and Syphilis Prevalence (2012).

According to StatsSa, the number of people suffering from HIV/Aids in Mpumalanga as diagnosed by Doctors and nurses is increased from 64 000 in 2011 to 105 000 in 2014. This is an average increase over the 3-year period of 17.9 per cent per year. Between 2011 and 2014, the number of males suffering from HIV and AIDS in Mpumalanga increased from 22 000 to 37 000, while females increased from 42 000 to 68 000. Despite the fact that the number of males did not increase between 2013 and 2014, the average annual increase of males (18.9 per cent per annum) over the 3-year period was higher than females (17.4 per cent per annum).

Table 4 5: Population in Mpumalanga suffering from HIV and AIDS as diagnosed by a medical practitioner or nurse (2011-2014)

Year	Suffering from HIV and AIDS		
	Male	Female	Total
2011	22 000	42 000	64 000
2012	27 000	53 000	80 000
2013	37 000	66 000	103 000
2014	37 000	68 000	105 000

Source: Statistics South Africa – GHS (2014)

4.2.8. Social Security

In Mpumalanga Province, the payments of social grants made a positive impact on poverty and income inequality. Grants assisted to reduce poverty and redistribute income in Mpumalanga and its sub regions through the provision of income security. The total monthly value of grants paid out in Mpumalanga amounted to R779.3 million in March 2015. Between March 2009 and March 2015, the annual increase in the value of social assistance grant payments was 11.3 per cent.

The South African Social Security Agency (SASSA) has reported that South Africans that received social assistance grants increased from nearly 13.8 million in March 2009 to nearly 16.6 million by March 2015. In March 2009, 1.02 million residence of Mpumalanga received social assistance grants. This was equal to a 7.4 per cent share of the total national grant recipients in 2009. By March 2015, the number of recipients in Mpumalanga increased to 1.4 million or 8.3 per cent of the total number of national grant recipients. Mpumalanga registered the sixth highest number of social assistance recipients among the nine provinces (Figure 4.12). KwaZulu-Natal (3.9 million) registered the highest number of grant recipients by March 2015 and Northern Cape (446 260) the lowest (SASSA, 2016).

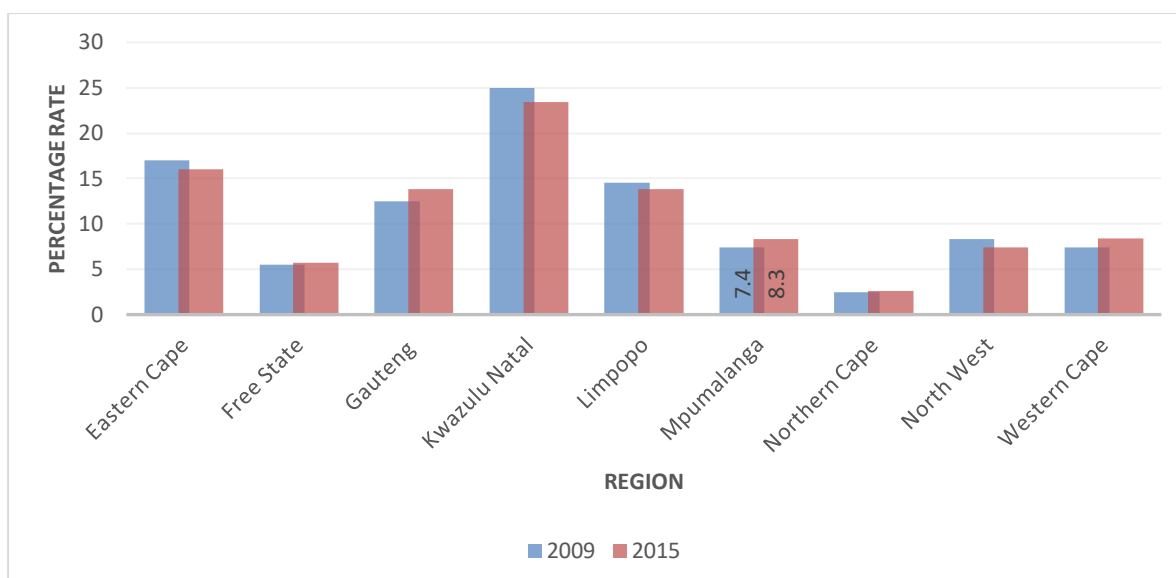


Figure 4. 12: Provincial shares of national social assistance grant number, 2009-2015

Source: SASSA – Fact Sheet (2016)

According to SASSA, in March 2016 child support grants contributed to 74.5 per cent of Mpumalanga’s total social assistance grants, which was higher than the 71.6 per cent share in 2009. This simply means that child support grant beneficiaries increased from 735 648 in 2009 to 1 034 942 in 2015. However, the number of old age grant beneficiaries increased from 174 343 in 2009 to 226 625 in 2015, the share of the total number of grant beneficiaries decreased from 17.0 per cent in 2009 to 16.3 per cent in 2015. Disability grant recipients decreased marginally in number from 79 244 in 2009 to 78 487 in 2015 and recorded a smaller share in 2015 (5.7 per cent) of the total number of assistance grant beneficiaries than in 2009 (7.7 per cent). This is evident from Table 4.6.

Table 4 6: Distribution of various types of social assistance grants in Mpumalanga, 2009-2015

Description	2009	2015
Child support grant	71.6%	74.5%
Old age grant	17.0%	16.3%
Disability grant	7.7%	5.7%
Foster care grant	2.8%	2.5%
Care dependancy grant	0.6%	0.7%
Grant in aid	0.3%	0.4%
War veteran's grant	0.0%	0.0%

Source: SASSA – Fact Sheet (2016)

4.2.9. Migration

The estimated provincial migration streams conducted between 2011 and 2016 simply revealed that Gauteng and Western Cape received the highest number of migrants. On the other hand, Mpumalanga and North West provinces also received positive net migration. The Eastern Cape, Free State and Limpopo experienced the largest proportion of outflow. The result of these analyses is shown in Table 4.7.

The results show the estimated provincial migration patterns for 2011 to 2016. Mpumalanga Province citizens went to other provinces, while many moved to MP. Majority of MP immigrants came from other countries, which recorded the highest proportion, since MP share borders with Mozambique and Swaziland.

Table 4 7: Estimated provincial migration streams 2011–2016

Province in 2011	Province in 2016									Out-migrants	In-migrants	Net-migrants
	EC	FS	GP	KZN	LIM	MP	NC	NW	WC			
EC	-	9 639	71 946	45 419	7 029	8 745	3 983	19 277	81 399	247 437	194 507	-52 930
FS	7 401	-	67 227	7 657	6 007	9 878	6 753	21 651	10 794	137 367	133 048	-4 319
GP	59 561	48 103	-	80 968	102 672	95 107	15 225	120 436	108 977	631 048	1 216 258	585 211
KZN	18 463	9 613	149 361	-	7 027	25 813	2 275	9 172	21 714	243 439	242 755	-684
LIM	3 848	5 179	222 147	6 635	-	32 513	2 047	23 479	9 182	305 030	266 751	-38 279
MP	4 936	5 787	116 691	14 014	27 016	-	2 227	13 734	8 959	193 363	254 363	61 000
NC	4 459	8 896	19 456	5 860	2 537	4 471	-	13 076	19 159	77 914	74 759	-3 154
NW	4 950	12 369	112 810	5 829	19 024	11 366	21 184	-	8 691	196 223	291 821	95 598
WC	60 042	7 644	73 275	15 324	6 782	7 901	14 964	8 395	-	194 328	363 114	168 786
Outside SA	30 846	25 819	383 345	61 049	88 657	58 570	6 101	62 601	94 240			

Source: Statistics South Africa – Mid-year Population Estimates (2016)

4.2.10. Life expectancy

MP's male life expectancy at birth for the period 2006-2011 was 51.0. The projections for the period 2011-2016, according to the 2016 Mid-year Population Estimates, suggest that it will increase further to 55.0 years. Mpumalanga Province's male life expectancy for the period 2011-2016 is expected to be the fifth highest/fifth lowest. Western Cape (64.2 years) is expected to have the highest/best male life expectancy with Free State (52.5 years) the lowest.

Mpumalanga Province's female life expectancy for the periods 2001-2006 and 2006-2011 were 52.5 years and 52.8 years, respectively. The provincial figure is projected to increase to 60.6 years for the period 2011-2016, which will leave Mpumalanga with the fourth highest/fifth lowest female life expectancy. Western Cape (69.0 years) is expected to have the highest/best female life expectancy and Free State (58.0 years) the lowest. The National Development Plan (NDP) targets both average male and female life expectancy at birth to improve to 70 years by 2030. This higher life expectancy predicted for 2030 could be explained by government initiatives aimed at improving healthcare delivery in the province.

4.3. Economic structure and performance of agricultural sector in Mpumalanga Province

In this section, agricultural sector of the Mpumalanga Province is discussed to provide a better understanding of the relative importance of this sector and its contribution to the provincial economy. Firstly, an overview of the current provincial infrastructure is provided, followed by an economic overview. Due to the project's focus on citrus sector, greater emphasis is placed on the citrus sector of the province.

4.3.1. Resource analysis and infrastructure as prerequisites for a sustainable economic growth and development in the Mpumalanga Province

It is imperative to recognize that for any meaningful agricultural growth and development, certain fundamentals need to be in place and these include natural resources such as land, water, and biodiversity as well as physical resources such as electricity, road and rail infrastructure, Information Communication Technology (ICT) , financial services, human resources such as skills, education, research and development.

On the other side, the direct involvement of population in labour market activities and entrepreneurship has the potential to contribute to economic growth. The development of natural and physical resources provides the inputs that are necessary to produce goods, creating jobs, ensuring food security and thus alleviating poverty. Enough and reliable infrastructure provides the physical connections between different inputs needed for the economy to be functional. Therefore, in order to better understand the

On the other hand, almost 70% of all the arable land in the province is under land claim. This means that enough attention needs to be given to the land reform legislation to fast track all the backlogs in land claim in the province. The question of land availability is a serious concern in the province and land remains one of the critical means of production, and should be given attention. The ownership patterns of strategic land in the province are in private hands. This inhibits the state's capacity to influence development aimed at the poor and previously disadvantaged. There is a need for the province to embark on a process of empowering the state by proactively acquiring strategic land and use it as a tool to foster economic development. Figure 4.14 below show the land claims in the province per district.

Land tenure on land reform farms is also a key challenge that needs to be addressed. Land tenure reforms in land reform could unlock dormant capital and be an incentive as well as a source of empowerment for communities/emerging farmers.

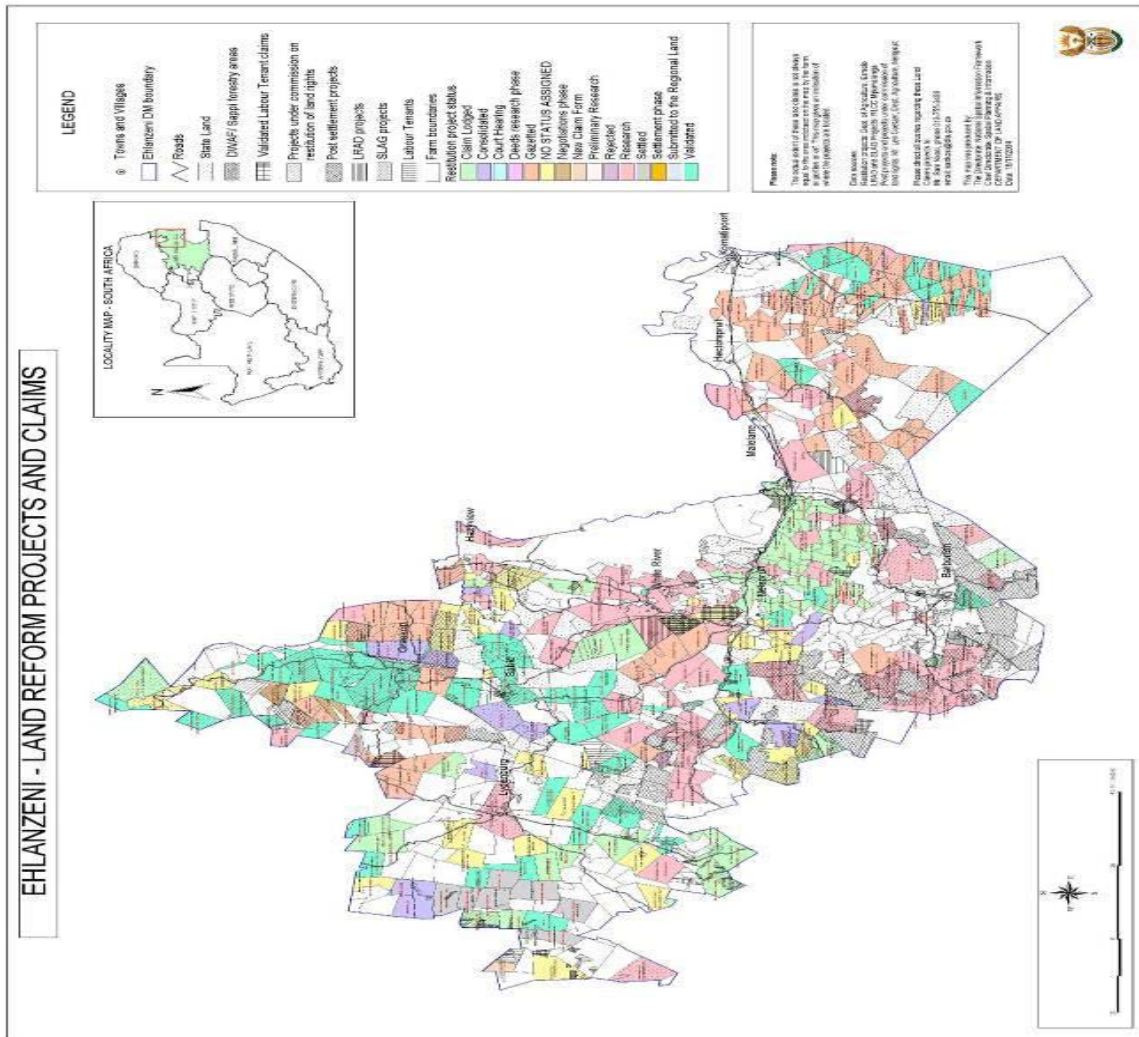


Figure 4. 14: Land claims- Ehlalzeneni District

Source: DED (2011).

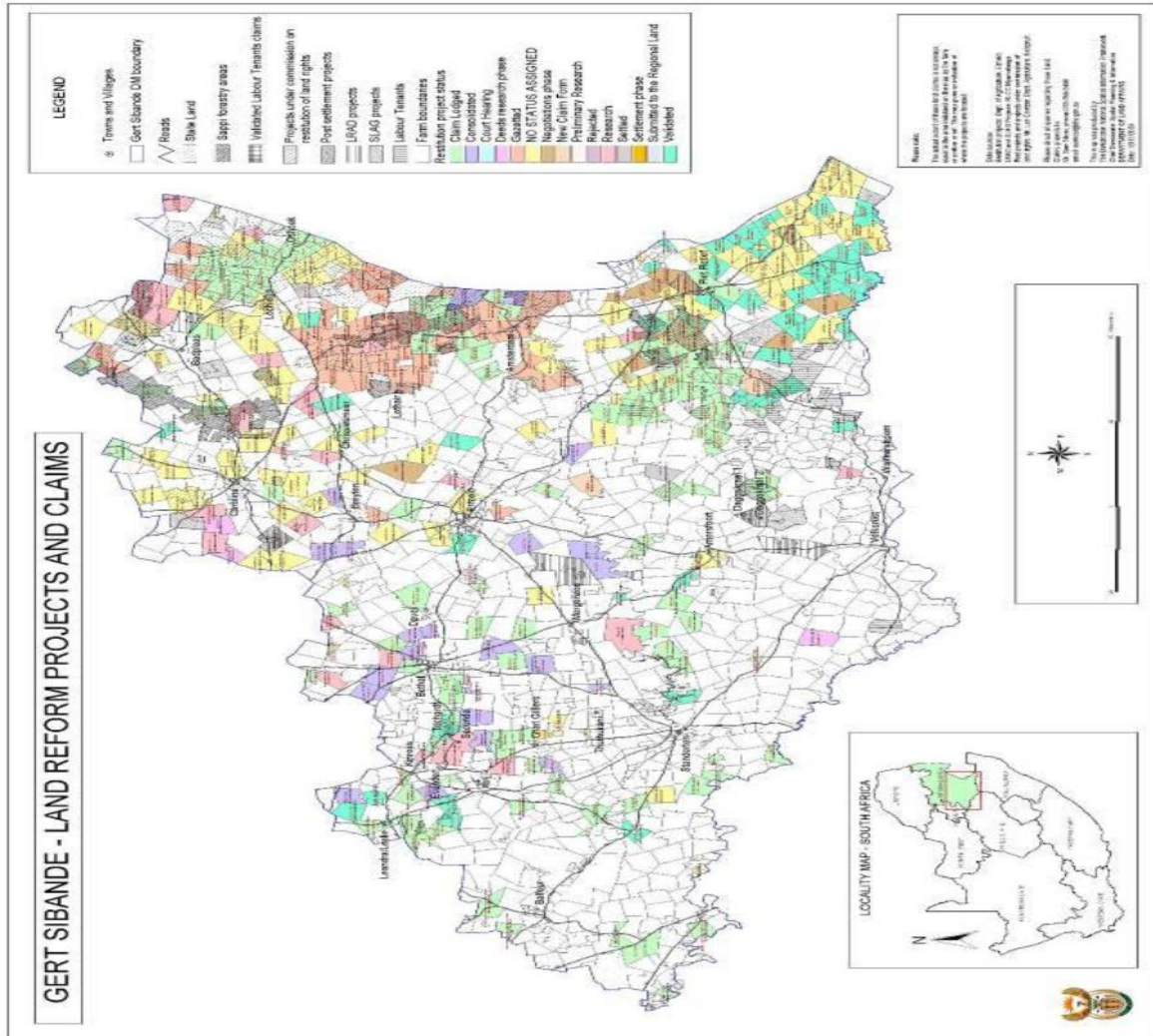


Figure 4. 15: Land claims- Gert Sibande District

Source: DED (2011).

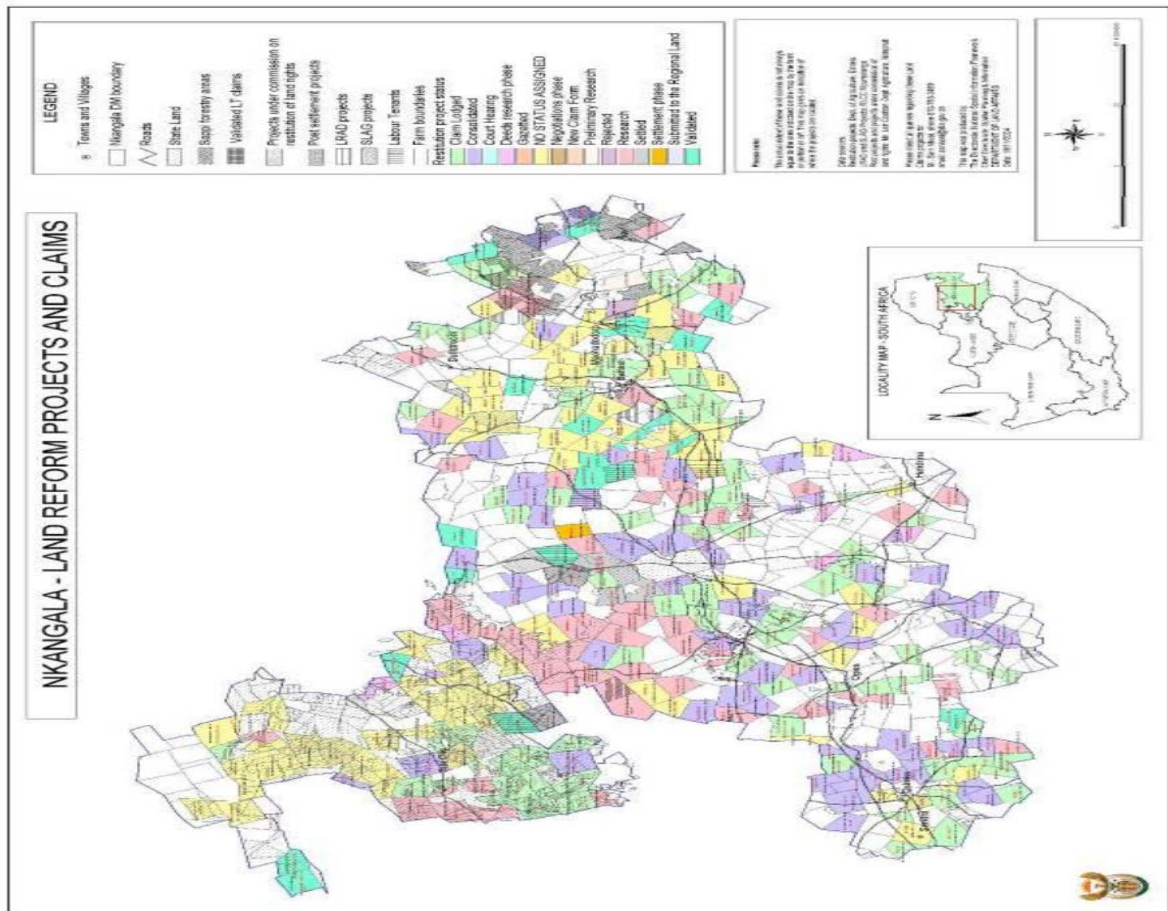


Figure 4. 16: Land claims- Nkangala District

Source: DED (2011).

4.3.2.2. Water

South Africa stands out as one of the most water-scarce countries within the Southern Africa’s region. The country is also characterised by extremely variable rainfall, both geographically and over time. In the 12% of the country that is suitable for the production of rain-fed crops, productivity tracks rainfall, making farming a challenging business. Climate change predictions are that rainfall will be more infrequent but more intense. This will shrink the country’s arable land and increase agricultural unpredictability. Farmers will find it increasingly difficult to increase productivity to meet the growing demand for food (Goldbalt, undated). This highlights the need for sound water usage good practices to conserve more water to counterbalance these predicted intense rainfall events.

The Department of Water Affairs (DWA) the three sources of water cycle (being liquid form rivers lakes and rain; solid form in ice and snow as well as gas in form of water vapour) are currently under stress. Within the province, the annual precipitation varies from less than 500 mm in the eastern Lowveld and 700 mm in the western Highveld to more than 1 100 mm in the escarpment. The Provincial Government has acknowledged that water is a scarce resource and there are enormous concerns that there has been a general decrease in water quality and quantity over the past few years.

Water quality indicators have shown a general an increase in surface water quality. The average level of surface water nutrients has increased and indicate a potential for enrichment. The most significant impacts on water quality are a result of mining, malfunctioning sewage treatment works and soil erosion from various practices especially agriculture and urban and rural development projects.

However, the water quantity in the majority of water catchments in the Mpumalanga Province are over committed with current demands on the available water outstripping the water available in the system. New development initiatives must consider the water availability prior to engaging in unsustainable developments with high water demands.

The bulk of water resources (65%) available in Mpumalanga come from surface water resources. Water transfers in the province provide 19% of total water availability, while groundwater accounts for 6% of available water. Ten percent results from return flows from the mining, industrial and urban sectors and from irrigation. Of particular concern is that irrigation is already by far the biggest water use in Mpumalanga. Irrigation is extracting 46% of the province's available surface water. With the available water resources allocated, there is little room for increased extraction, particularly as other sectors compete for the surplus (which is itself dependent on rainfall). Mpumalanga has few exploitable aquifers and extracts groundwater (Figure 4.17).

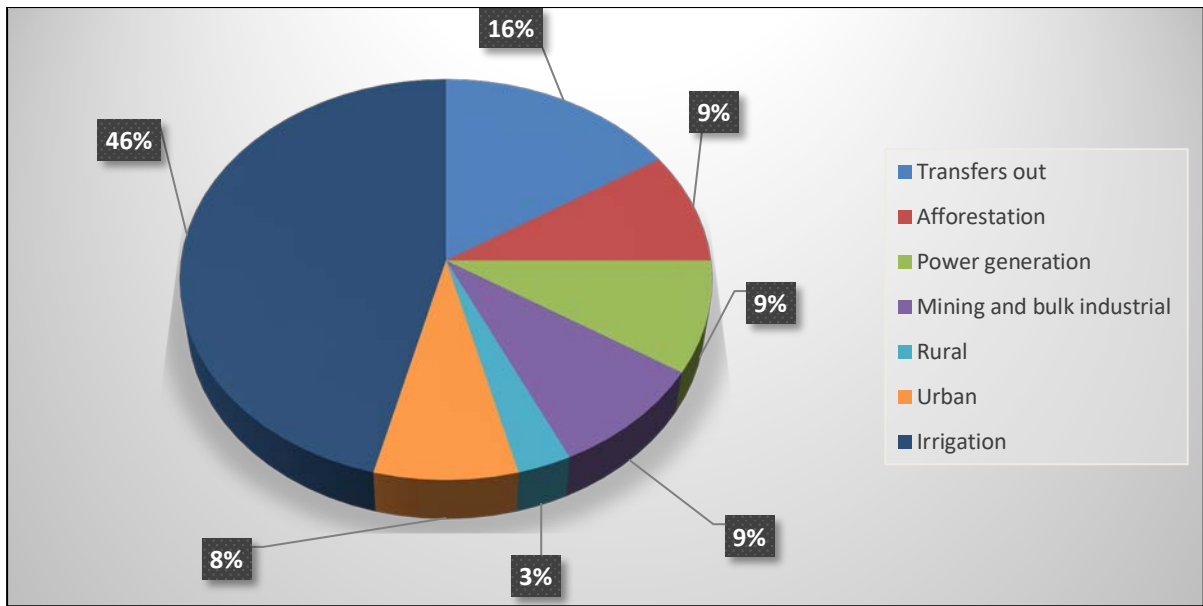


Figure 4. 17: Total surface water used per sector within the Mpumalanga province

Source: Department of Water Affairs (DWA), 2002)

The second largest requirement for water is for transfers out (16%). Water resources in Mpumalanga are therefore important in supplying water to neighbouring catchments. The issue of water sharing (both internationally with Mozambique and Swaziland as well as internally between provinces) is extremely important, and one which requires careful management. The issue of water trading as well as water use licensing need to be given attention for the MP government to realise its growth trajectory.

4.3.3. Transport Infrastructure

MP has transport infrastructure and kinds of transport to move people, goods and services between the main centres of the Province, the country and globally .The transport infrastructure in the province include road and rail transport. Commodities that are transported by these modes of transportations outside of the province include coal, fuel and chemicals, timber, iron and chrome ore, fruit, maize, animal feed, wholesale and retail goods, steel, building supplies, fertiliser and consumer goods

4.3.2.1. Rail

The rail network in South Africa is controlled by Transnet and the Passenger Rail Agency of South Africa (PRASA). The MP rail system covers a distance of 2 233 km

and generates the most freight traffic in South Africa enabling the Province to play an important strategic economic role in the national economy. Pretoria-Maputo and the Johannesburg-Durban lines (of which portions run through the Province) are the most important and busy lines. The remainder of the Province is generally fairly served in terms of rail infrastructure which serves most of the urban nodes. The proposed Moloto Rail Development Corridor project will expand the rail system of the province (DoF, 2015).

The commodities are transported within and outside of the Province are coal, fuel and chemicals, timber, iron and chrome ore, fruit, maize, animal feed, wholesale and retail goods, steel, building supplies, fertiliser and consumer goods. On the MP to Richards Bay line minerals, grain and fuel are transported.

Management and control of the rail network in MP is the responsibility of the Mpumalanga Freight Logistic Forum (MFLF). It becomes imperative from a rail perspective to implement a seamless rail service from Gauteng to Maputo. The province needs to engage and work together with the rail partners of neighbouring countries through Transnet. The expedition of the rail line stabilization in order to increase the export volumes through the Maputo harbour should be given immediate attention. We need to promote the restoration of rail reliability and to communicate progress on the rail seamless service agreements; promote the movement of rail friendly cargo currently on road back to rail in an orderly manner (DoF, 2015).

4.3.3.3. Roads

Beside this background, the road infrastructure serves as the pillar in making sure that there is a strong physical linkage between the primary, secondary and tertiary economies present in the province. Table 4.8 depicts the road lengths and conditions in the province per district. However, sufficient road infrastructure available within the province, increased pressure as a result of the railway system not being functional, along with the growth in the agriculture and manufacturing industries, has seen primary and secondary roads deteriorate to their current poor condition.

The main challenge is that, only 14% of the national road network in the province is in a good or very good condition. On the other hand, the overall condition of the provincial paved road network has declined substantially, resulting in a significant backlog of rehabilitation and maintenance requirements and consequent high budget requirement. A significant portion of freight transport had moved from rail to road transport e.g. mining and forestry related freight transport. This has put tremendous pressure on the road network leading to early pavement failure. Moreover, at an average age of 30 years, most paved roads in the Mpumalanga Province are at the end of their design life, which means that maintenance issues should be high up on the agenda. In fact, the greater part of the budget should be reserved for maintenance.

As a result, the agricultural sector is facing an obstacle due to the poor condition of several roads in the province. The conditions of these roads negatively affect agricultural activities and linkages in the remote rural areas where farmers are mainly relying on these roads to access their supply and product markets. Furthermore, the status quo of the roads (particularly in the remote rural areas of the province – has far-reaching consequences that exceed the direct impact on agricultural and other industries.

Agricultural sector as one of the leading employers of unskilled people in the province faces major setback due to the condition of these roads in the Mpumalanga Province. Poor roads make it difficult to reach rural settlements as a result, farmers are forced to compete for labour resources within other regions or sectors. Likewise, the road infrastructure of the Mpumalanga Province is vital to the development of the provincial economy. The condition of this infrastructure will not only impact directly on agricultural sector, but all the sector's performance will face a direct impact on the efficiency and sustainability of farmers, manufacturers and other sectors, as well as the socioeconomic climate of the province.

Table 4 8: Mpumalanga road lengths and conditions

Name	Paved	Gravel	Tracks	Total
<i>Gert Sibande</i>				
Labert Lithuli	47	768	122	937
Msukalikwa	221	174	59	454
Mkhondo	130	507	96	733
Pixley KaSeme	91	355	67	514
Lekwa	117	456	86	659
Dipaleseng	51	198	37	286
Govan Mbeki	530	398	139	1067
Total	1187	2856	606	4650
<i>Nkangala</i>				
Delmas	115	200	47	362
Emalahleni	308	1198	226	1732
Steve Tshwete	519	211	110	840
Emakhazeni	84	1899	297	2281
Thembisile Hani	69	1038	1059	2166
Dr JS Moroka	210	2720	440	3370
Total	1305	7266	2179	10751
<i>Ehlanzeni</i>				
Thaba Chweu	86	334	63	483
Mbomela	388	74	1531	1993
Umjindi	63	246	46	355
Nkomazi	361	1407	265	2033
Bushbuckridge	703	2736	516	3955
Total	1601	4797	2421	8819

Source: DED (2011).

4.3.4. Electricity infrastructure and electricity supply in the agricultural sector

The power shortages that were experienced in 2014 had severe consequences for both the national and provincial economies. In the Mpumalanga Province, the power shortages contributed towards the challenges already being faced by the operational infrastructure, with majority of sectors being highly dependent on electricity to remain productive and sustainable.

The new Eskom mega power station named Kusile is under construction. The construction of Kusile presents the province with a number of economic opportunities. The provision of the new power station will ensure that the power shortages experienced by the province in 2014 does not occur in future and that will ensure a conducive business environment for the country and Mpumalanga.

The rapid increase of informal settlements in the province makes it difficult to provide electricity or access to electricity for the entire provincial population and all its economic sectors. Nevertheless, the electricity availability is spread throughout most of the urban and semi-urban areas of the province, thus ensuring electricity supply to the major economic sectors, which include the mining, manufacturing and agricultural

sectors. Mpumalanga province is the leading province with number of Eskom's power stations. Eskom's power stations in MP are listed in Table 4.9.

Table 4 9: Eskom's power stations in MP

Name	District Municipality	Location	Fuel
Arnot	Nkangala	Middelburg	Coal
Camden	Gert Sibande	Ermelo	Coal
Duvha	Nkangala	Witbank	Coal
Grootvlei	Gert Sibande	Balfour	Coal
Hendrina	Gert Sibande	Hendrina	Coal
Kendal	Nkangala	Witbank	Coal
Komati	Nkangala	Middelburg	Coal
Kriel	Gert Sibande	Bethal	Coal
Lethabo	Gert Sibande	Sasolburg	Coal
Majuba	Gert Sibande	Volksrust	Coal
Matla	Gert Sibande	Bethal	Coal
Tutuka	Gert Sibande	Standerton	Coal

Source: DED (2011).

4.3.5. Economic performance of the agricultural sector of the Mpumalanga Province

It is estimated that in 2013, Mpumalanga contributed some R269.9 billion in current prices or some 7.6 per cent to the GDP of South Africa. Mpumalanga's contribution in constant 2010 prices was R215.1 billion. According to estimates, Mpumalanga's contribution in constant 2010 prices was the fifth largest among the nine provinces and registered a decrease from a 7.8 per cent contribution in 1995, to 7.3 per cent in 2013.

In 2015, the economic growth of the province, as measured by real GDP growth, was higher than the national rate. However, the provincial economy has not outperformed the national economy in terms of GDP growth since 1999. The forecasted annual growth rates for South Africa and Mpumalanga is projected to rise between 2014 and 2019. The NDP targets average national GDP growth above 5 per cent up to 2030.

In terms of the contribution of each of the economic industries in Mpumalanga in 2013, it was estimated that the province was a substantial role-player in the national mining and utilities (mainly electricity) industries, with respective shares of 21.4 per cent and 15.3 per cent. It is noticeable that the contribution by mining, manufacturing and utilities increased, whilst agriculture remained constant at 8.6 per cent. In addition, manufacturing (6.8%), construction (6.3%), trade (7.2%), transport (4.7%), finance (4.1%) and community services (5.2%) also remained constant (Department of Finance, 2015a).

4.4. Status of the small holding farmers in Mpumalanga Province

South Africa's agriculture has changed rapidly over the past two decades, posing major challenges for all those in the sector, and in particular the small-scale farmers. Understanding the current status of these farmers is essential to developing solutions. Before discussing the status of the small-scale farmers, it is pertinent to clarify what is meant by small –scale farmers.

4.4.1. Small-Scale farming: a misunderstood phenomenon

The concept small-scale farming is completely misunderstood. The poorly understanding of this concept tells itself in the way small-scale farming is defined; the support the small-scale farmers receive; how the services are structured; and, the small-scale approaches used.

4.4.1.1. Definition

The problem with the concept small-scale farming starts with its definition. There have been so many definitions concerning this concept and they are still changing almost on a daily basis. There is confusion about what small-scale farming is and what it is supposed to achieve. This concept is one of the concepts that are loaded with different meanings in the agricultural discipline. It is not an abracadabra as to why even today the role that small-scale farmers play is not easy to be assessed. One of the reasons are failure to have common agreement on what really this concept mean and what it is supposed to achieve and how.

Makhura *et al* (2011:1) produced a study report that defines small-scale farmers as the farmers who were previously excluded from mainstream agriculture based on their skin colour, and who are now able to access resources and having potential to farm for the market. These farmers are always finding it difficult to sustain themselves, and often their production levels cannot even cover their production costs. The majority of these farmers, particularly land reform beneficiaries, are facing different challenges such as legal action by financial institutions that want to recover their loans.

Stephen Greenberg, a researcher at PLAAS defines small-scale farmers as those farmers that don't really have any meaningful role to play except maybe as a poverty reduction exercise (Greenberg, 2013: 15). This corresponds with the sentiments made by ANC that, "a land reform farmer should not be automatically be equated with small-scale production".

However, Sophia Murphy (2012) has developed useful typology of approaches that explains small-scale farming in current discourse globally (Table 4.10). In her first approach, she views small-scale farmers as an anachronism due to fade out of existence as the rationality of large-scale agriculture spreads. In her second and third views, she regards these farming as either a poverty reduction platform, while large-scale production takes care of the fundamentals of food production.

Murphy's fourth and fifth types considers small-scale farming as a farming that makes business sense in its own right, and seeks to support the expansion of small-scale agriculture as a competitive alternative to large-scale agriculture in the market. The fifth approach regards this farming as alternative to capitalist systems of production and reproduction as a whole, rooted in food sovereignty.

I thought these definitions by Murphy have offered an excellent guide to what we should look for in assessing status of small-scale farmers. This study will be interested in finding out whether these farmers have ingredients that they need to be sustainable in their farming business. The study will also be interested in finding out whether these farmers are able to alleviate poverty and create employment.

The poverty could be about a sustained low level of income for small-scale farmers, it includes a lack of access to services like education, markets, health care, lack of decision making ability, and lack of natural facilities, like land, water, infrastructure such as roads, transportation and communication. The list goes on.

According to Murphy's typology, the ANC RDP's programme and current mainstream thinking about small-scale agriculture is clearly situated in the second and third explanations, which see a minor role for small-scale agriculture in reducing poverty and possibly integrating a thin layer of commercial producers into formal markets, but which continues to view large-scale, increasingly concentrated production as the basis for food security in the future.

I argue that whatever small-scale farmers does (or we expect or wish it to do), whether it is access to services as well as natural resources, training, markets, health care, decision making abilities, infrastructure and communicating facilities, it is all aimed at alleviating poverty and creating employment.

Table 4 10: Typology of approaches to small-scale agriculture

Yesterday's economy	Agriculture to reduce poverty	Room in the shade	Small scale = good business	Food sovereignty and 'right to food'
Agriculture mostly irrelevant to a modern economy	Food should come from mix of small-scale and industrial farms in short to medium-term	Small-scale producers as a vital and necessary part of agricultural production, but also a minority	Exploit/work with small-scale producer attributes	Agriculture and rural economies are at the heart of development
Aim for less than 2% employment in agriculture	Governments should aim at a slow transition to less than 2% employment in agriculture	Focus on Entrepreneurs	Small-scale producers are the majority and likely to remain so for some time	Small-scale producers should grow our food
Food should come from industrial producers	See roughly 25% of current small-scale farmers as viable		Small-scale producers as basis of the rural economy	Diversity and small-scale over mono-crops and industrial-scale production

Source: Sophia Murphy - useful typology of approaches to small-scale agriculture in current discourse globally (2012:15-20).

4.4.1.2. Perception of success and failures by small-scale farmers

Various studies have been conducted to assess the status of small-scale farmers and causes of the generally poor performance of these farmers in South Africa. This section provides perception of success and failures of small-scale farmers in South Africa.

According to a study conducted by Mmbengwa, Groenewald, van Schalkwyk, Gundidza and Maiwashe, the small-scale farmers in the South Africa perceive their success status rate as positive. The study reveals that there is significant difference among provinces. The results indicate that rate of success status of different provinces are not the same? For example, Gauteng is perceived to be the highest performing province, followed by Mpumalanga and subsequently followed by Eastern Cape, North West, and KwaZulu-Natal respectively. The results indicate that only the findings in the Eastern Cape Province were significant. It appears that small-scale farmers perceive that they are highly successful. This could be as a result of lack of capacity to monitor and evaluate their success rate. It could also imply that the farmers might be indicating that they aim to be highly successful.

However, when the status of these farmers is measured using actual net farm profit compared to perception, net farm profit is regarded as more objective and reliable relative than farmer' perception. The objective assessment results show a very low success rate of small-scale farmers compared to the results obtained through subjective assessment. This picture indicates that small-scale farmers' judgement of success status is unreliable. It also shows that these farmers lack the ability and reliable tools to accurately judge their success rate. This might be as a result of their lack of knowledge about different instruments used in measuring success status (Makhura *et al*, 2011: 7).

Table 4.11 also reflects different levels of success rate status amongst individual provinces. According to the results, Free State, KZN, North West and Northern Cape, are the worst performers. Gauteng Province still performs far much better than the rest of the Provinces, followed by Eastern Cape, Western Cape, Mpumalanga and Limpopo Provinces respectively.

Table 4 11: Net Farm profit for Small-scale farmers in RSA

Variables	N	Success status (%)	95% lower confidence limit	95% upper confidence limit
All Provinces	127	51.18	42.16	60.15
EC	18	66.67	40.99	86.66
FS	15	33.33	11.82	61.62
GP	3	100	29.24	100
KZN	6	16.67	0.42	64.12
LP	11	54.55	23.38	83.25
MP	14	57.14	28.86	82.34
NC	19	47.37	24.45	71.14
NW	19	36.84	16.29	61.64
WC	22	63.64	40.66	82.8

Source: Mmbengwa *et al* - Critical assessment of the performance and sustainability of Land Bank customers among small-scale farmers in South Africa (2010:2755).

However, there are some reasons for success of small-scale famers in various provinces. Additionally, the success rate was not high. Majority of the small-scale farmers' regard skills as the most important reason for their success, while finance, good prices, market, infrastructure and absence of drought were also regarded

important. Farmers do not view theft, disease, transport and land as factors that play a role in their success.

With regard to the above findings, it appears that small-scale farmers apparently do not properly understand the value chain. This is because it is unclear how small-scale farmers could believe that the abovementioned factors play no role in their successes, whilst, it is known that without land, transport, disease control and proper security, production could be severely affected and consequently the profit could be adversely impacted. Likewise, Makhura *et al* (2011: 8) reported that, in South Africa the farmers facing droughts are unable to access immediate funding, which in turn means that they cannot raise enough money to plant more and make money. These results therefore, reflect a level of incapacity on the part of small-scale farmers (Mmbengwa *et al*, 2010).

The reasons of failure show that based on location, some industries have a higher incidence of failure than others. Grains, livestock, horticulture (fruit/subtropical industry), sugarcane and cotton are more prone to failure, or have experienced a negative cycle. Factors such as inadequate finance, followed by inadequacies in infrastructure and skills, and subsequently, drought, theft and insufficient land were regarded as major causes. In addition, low prices, poor markets and diseases are perceived to play a small role in causing failures amongst the small-scale farming sector (Makhura *et al*, 2011 & Mmbengwa *et al*, 2010).

4.5. Conclusion

It is clear from the overview that a majority of the population residing in the Mpumalanga Province finds themselves in some degree of economic hardship. This is intensified by the high level of unemployment. Even though economic growth in the province has contributed towards a moderate decline in the level of unemployment, it still remains higher than the national average.

Amongst these is the high level of functional illiteracy, which relates closely to socio-economic differences in the quality and quantity of education, limiting the employment opportunities of these people. This has directly contributed towards the income inequalities present in the province, with people with low or no education finding it

difficult to access skilled employment opportunities and to earn associated wages. Furthermore, the lack of access to health care and basic services such as clean running water, sanitation, housing and good nutrition contributes towards unemployment and subsequently to the economic hardship being experienced by many in the province.

Though, many actions by provincial and local government have seen improvements, especially when it comes to eradicating the backlog with regard to basic governmental service delivery, as well as the improvement of the healthcare system. However, despite the decline in overall government healthcare personnel and equipment, support structures from the private sector have improved, contributing towards the decline in the mortality rate amongst infants and children, as well as an increase in life expectancy at birth. Moreover, predictions indicate a decline in the prevalence of HIV/AIDS in the foreseeable future. However, the current prevalence of HIV/AIDS and associated diseases is of some concern, with this being probably the single most important driver that will shape the future socio-economic and economic development of the MP.

The rail and road infrastructure are the main linkage for producers and manufactures to reach local and international markets and input suppliers, i.e. physical inputs and/or human resources. Moreover, the lack of an international cargo airport in the MP makes it difficult for local producers and manufacturers to unlock the potential of export market opportunities.

From the assessment of the status of small-scale farmers, the following were found: the perception of the small-scale farmers reflected more on their lack of capacity than the successes and failures, the level of successes found was average, the skills, finance and infrastructure are major success barriers for small-scale farming fraternity and the major improvements in skills, finance, extension support and production are required.

On the basis of the results of reasons for the failure of the small-scale farmers, it is clear that small-scale farmers do not clearly or realistically understand factors that cause failures in their farming enterprises. Therefore, it would be important to train

these farmers and to monitor and evaluate their risk factors, so that they can be able to detect those factors that may indicate failure prior to the actual collapse. In this way, development institutions would have more confidence in investing in their enterprises.

CHAPTER 5: PERFORMANCE AND SUSTAINABILITY OF COMMERCIAL COOPERATIVES AND SOLE PROPRIETORSHIPS CITRUS FARMS IN MPUMALANGA PROVINCE, SOUTH AFRICA¹

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Abstract

Citrus farming is one of the specialized crops which need special attention in order to have a better product at the end of the value chain. Citrus crops that are well looked after brings good income while poor crops become costly to the farmer. Any suspicions of pests' damage may render the consignment for export to be turned down at the expense of a farmer. The objectives of this paper were to assess performance and sustainability between cooperatives and sole proprietorships citrus farms. The research also looked at the reasons as to why other farmers are more successful than others who farm in the same region with similar circumstances and challenges. This study compared the performance of commercial cooperatives and sole proprietorships of citrus farmers in Mpumalanga. A total of 40 farmers were interviewed in order to establish their scale of performance and contribution to sustainability. The findings revealed that the following factors were critical; knowledge: they were found knowledgeable in citrus, such as management, business planning, and packaging and marketing. It is recommended that the emerging citrus farmers should be exposed to acquisition of appropriate knowledge and skills if they have to perform better.

Keywords: Performance, sustainability, cooperatives, sole proprietorship, citrus farms, extension service

5.1. Introduction

The production of citrus is considered as one of the specialized crop which needs special attention in order to have a better product at the end of the value chain. The

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citrus industry recognizes this challenge and is making efforts to address product improvements. For example, the industry has alluded to competitiveness as a key for superior value for its customers and improved profits for the stakeholders in the value chain (DAFF, 2017:60). The industry even outlined that the productivity that is output efficiency in relation to specific inputs with regard to human, capital and natural resources is the driving force in sustaining a competitive position. However, there are criticisms over the poor performance and weaker sustainability of some of the citrus enterprises in South Africa.

In South Africa, the performance and sustainability of privately owned citrus farms as well as their sustainability as compared to their counterparts both in land reform and state owned farms has created many questions. These farms are operating in the same vicinity under similar natural conditions. But how do these privately owned farms use their opportunities and strengths to offset weaknesses and threats while their counterparts are tumbled-down by the same factors? Are the managers of privately owned farms just lucky or do they have some confidential tactics?

The answer is that, privately owned farms performs better and sustainably due to the fact that farm managers manages them better than land reform CPAs, family orientated and state owned farming enterprises. Nevertheless, what is the current performance and sustainability level of privately owned farms in Mpumalanga? This paper provide a profile of external and internal key fundamentals in the functional areas of the management capability, production, marketing, finance, procurement, personnel, risk management, training of extensionists in citrus and logistics, as significant in the advancements of better performance and sustainability.

According to Makhura (1992), the farmers that are in the high net-income category are considered to be performing well. The farm that reflects low net-income is considered to be performing poorly and unsustainable. This viewpoint is related to the approach used to assess the farmer support programme (Development Bank of South Africa [DBSA]), which determines whether farmers are net buyers or net sellers of food. Nieuwoudt (2017) describe a farm's performance as an assignment that is measured by how sustainable is the farm within its main markets and is determined by financial and non-financial measurements. In this regards, non-financial measurements inter alia; employee growth, job satisfaction, self-sufficiency and so forth. Financial

performance refers to minimization of costs, maximization of business growth and the ability to increase profit.

The concept sustainability has recently risen on top of land reform agenda. The policy for the Recapitalization and Development Program for the Department of Rural Development and Land Reform (DRDLR, 2017:7), ‘The Comprehensive Rural Development Plan (CRDP)’, was the first major land reform initiative that enhanced the awareness of land reform beneficiaries and other related stakeholders about “*vibrant, equitable and sustainable rural communities*” through social cohesion and inclusive development of the rural people and economies.

However, World Commission on Environment and Development (WCED, 1987) defines sustainability as a practice that meets the needs of the present generation without compromising the ability of the future generation to meet their own needs. The definition of sustainability in this regard emphasizes the need for the present generation to ensure inter-generational equity by; safeguarding the interests of future generations through maintaining the natural resources capital of this planet intact.

Performance and sustainability are regarded important elements of the modern farming enterprises. However, depending on a situation and requirements, enterprise’s performance may have preference over sustainability. For instance, financial institutions and investors usually focus more on the overall picture of the enterprise’s performance (SBASA, 2013). Elements of financial performance are also included in a complete sustainability stewardship and vice versa.

Although, Norton (2004:427) and Van Reenen et al. (2013:5-6) indicated that performance may be hampered by other elements of sustainability more particularly, social and political pressure from the stakeholders that stand to lose from it, even if they might be regarded to be small minority, they may apply pressure to derail performance. Likewise, a rapid expansion may also be hampered by biological factors and rising marginal costs on a limited area.

Researcher’s reflections are that, improved performance and sustainability in a farming enterprise are vehicles for keeping abreast with the ever changing climate,

technology, marketing, government policy as well as meaningful decision making. They are those tasks of farmers charged with the responsibility of, as SBASA would say, “*having knowledge not only of the latest techniques for raising crops and farm animals but also of how to operate a farm business successfully*”. It is therefore no surprise that, when poor performance and weaker sustainability takes place in the farm level, the blame lies squarely on the shoulders of the manager.

5.2. Methodology and materials

As far as the methodology of this paper is concerned, a total of 20 Cooperatives farm managers as well as 20 sole proprietorships farms who acquired land without state assistance within all three citrus regional representatives of Mpumalanga Province being; Nelspruit, Onderberg and Senwes, were sampled and interviewed. A proportionate simple sampling approach was adopted in this study which meant that each element of the survey population had a known and equal chance of being selected (Illowsky & Dean, 2013:27).

There were two strata, one stratum represented commercial cooperatives and while other represented sole proprietorships and simple random sampling was applied in each stratum of the total population. A total of 40 respondents were reached from a survey population of 40 farms that were producing citrus under study in the 2017/18 season. Majority of the respondents (50% of sole proprietorship farm and 78% of cooperatives) were located in Ehlanzeni District in Nelspruit region.

5.2.1. Data collection

There are numerous data collection methods, namely; observation, face to face interviews, self-administered methods, focus groups and personal interviews (Matunhu, 2011). The data collection methods/ techniques that were applied were predominantly face-to-face interviews. In terms of the data collection instruments a structured questionnaire was utilized since this is mainly quantitative research.

The collected data was captured and manipulated using statistical software. SPSS was then employed for the statistical analyses. With regarding to ethical consideration,

the respondents were assured that confidentiality would be assured and that they were not forced to participate in the study.

5.3. Results and discussion

5.3.1. Cooperative and sole proprietorship farm composition

This section focuses on farm structure of two farming entities; being cooperatives and sole proprietorship farms in Mpumalanga as part of the study.

5.3.1.1. Cooperatives

Naude (2018) offered the following definition for farming cooperative, “cooperative is a venture that is established by a group of farmers with a common goal, which is to achieve economic viability and societal acceptance in a collective manner by all members. It is a joint benefit to all farming members that seek to maximize profits for themselves and affiliated members”. Their operational structures enhancing performance and sustainability as well as maximization of profit and societal acceptance in Mpumalanga are shown below (Table 5.1).

Table 5 1: Farming cooperative composition

Farming Cooperatives composition		
Manager's gender	N	%
Male	20	100%
Manager's age group	N	%
18-35	1	5
36-45	1	5
46-55	11	55
56 and older	7	35
Total	20	100
Number of farming members	N	%
2-5	11	55
6-10	8	40
11-15	1	5
Total	20	100
Number of women in executive positions	N	%
1-2	4	20
3-4	4	20
None	12	60
Total	20	100
Highest level of education	N	%
Completed secondary education (Matric)	1	5
Obtained tertiary education	19	95
Total	20	100

In Mpumalanga, the management of cooperatives citrus farms was found to be dominated by males (100%). The reason why this situation is like this is because in the previous dispensation, women and inequality was the order of the day. However, the new dispensation has instituted laws that provide equal opportunities in all aspects of the citizens of the country. Of these males, (55%) were of the age categories 46-55 years, (35%) were older than 56 years, while (5%) were youth (18-36), comparing to (5%) of middle aged (36-45).

Further, the majority of these farm managers (55%) were managing cooperatives with the lowest affiliated members (2-5 members), followed by (40%) of managers who manages cooperatives consisting of 6-10 members, while, only (5%) of the managers takes care of cooperative comprised of highest affiliated members of 11-15 members (Table 5.1). This clearly shows that a new approach is needed for agricultural

development and extension to ensure that gender sensation programmes are introduced and a full potential of youth and women is fully exploited.

Almost all male’s farm managers obtained tertiary education (95%), as comparing to only (5%) farm manager who has only completed secondary education (Matric). However, in order to assess female’s participation in other segments of farm management and decision making, the respondents were asked to provide the number of female’s in executive positions. Majority of female’s (60%) were not part of cooperatives executive and thus, they were not participating in the cooperatives decision making. Although, (40%) of females were part of executives and decision making. This might be ascribed to the new legislation of the country, which empowers women, (See Table 5.1).

5.3.1.2. Sole proprietorship farms

The sole proprietor’s farms have to perform better and sustainably to maximize projected profit. During the interviews with Olwagen (2017), “he explained that in the sole proprietorship farm, the decision making process is relatively short and the owner is entitled to majority of profit”. The farm operational structure influencing performance and sustainability of these farms is depicted in Figure 5.1.

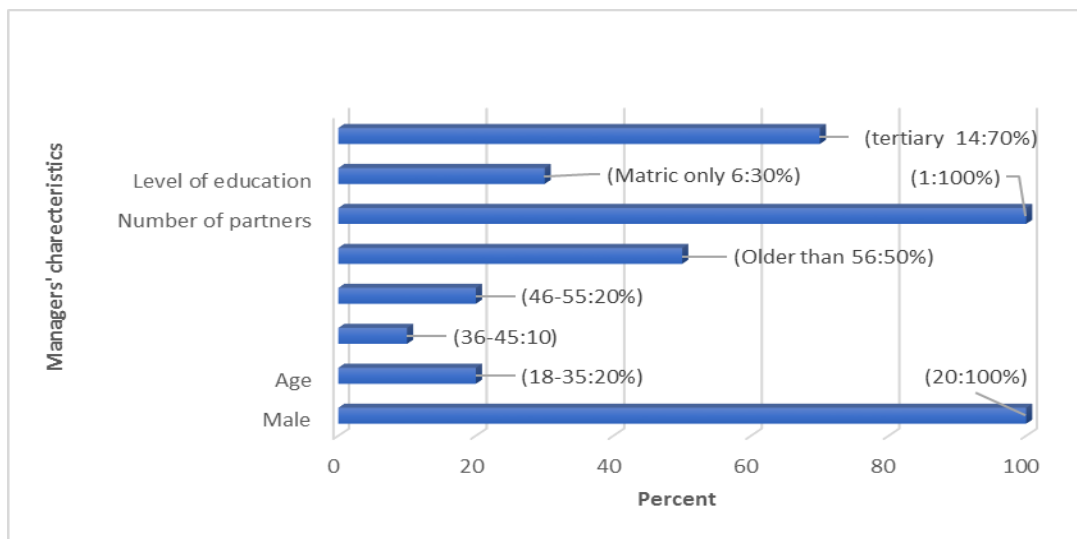


Figure 5 1: Farm structure of sole proprietors

The management of sole proprietor farms in the Mpumalanga are conquered by males (100%) older than 56 years old accounting 50%. The farm managers of between the

age groups of 18 to 35 (youth) accounts for 20%, while those of the middle age of 36-45 accounts for 10%. Furthermore, those of the age groups 46 to 55 account 20% of the sole proprietor's farms managers.

Furthermore, majority of the managers (70%) obtained tertiary education as comparing to (30%) that only completed grade 12. In addition, these managers take care of sole proprietorships owned by only one family 100% (see Figure 5.1). Beside the positive results of the sustainability in the farms that are conquered by males, there should be an equal opportunity and recognition for women and youth in agriculture. The circumstances of women and youth in many agricultural projects are characterized by long hours of toil by women and youth under-utilized, lack of recognition, and often negative attitude towards agriculture in general.

5.3.2. Closer analysis of farm's performance and sustainability

The results in Table 5.1 and Figure 5.1 shows that all cooperatives and sole proprietorships farms under this study are managed by males. Thus, this section will then do an assessment of performance and sustainability as well as the particular unique characteristics enhancing performance and sustainability. The unique characteristics are divided into two categories namely; unique farms operation and unique farm management model. As far as the first characteristics it enhances performance and sustainability. Whereas the second characteristics a close analysis reveals that it focuses on management of human resources, farm business and succession planning.

5.3.2.1. Characteristics enhancing performance and sustainability

WCED (1987) denotes sustainability as the need for the present generation to ensure inter-generational equity by safeguarding the interests of future generations through maintaining the natural resources capital of this planet intact, meeting societal needs and economic viability.

However, Naude (2018), one of the managers interviewed has this to say about enterprises performance and sustainability *"a farming enterprise just like any other business entity should at least operates in a sustainable way to ensure better*

performance, if the farm is not operating well, such farm cannot maintain a good performance over the long period”.

Reputable and sustainable farming enterprise needs firstly, good investment in principled operators. It is the writer’s observations that a farm that seeks to perform better and remains sustainable should start by carefully employing an operator with the particular technical knowledge and general management skills. The particular characteristics of the farm operators are depicted in Table 5.2 below.

Table 5 2: Particular operator’s characteristics

Particular operator's characteristics	Cooperative		Sole proprietors	
	Yes (%)	No (%)	Yes (%)	No (%)
Prior farm management experience				
I managed a farming entetrprise before	100	-	95	5
Performance and sustainability prior current manager				
	Yes (%)	No (%)	Yes (%)	No (%)
This enterprise was performing good and sustainable prior	95	5	95	5
Number of years managing prior enterprises				
	N	%	N	%
I previously managed an enterprise for 3-5 years	4	20	5	26
I previously managed an enterprise for 5-8 years	10	50	7	37
I previously managed an enterprise for more than 8 years	6	30	7	37
Previous management model within the current enterprise				
	N	%	N	%
The enterprise was managed by sole families	19	95	19	95
The enterprise was managed by state entity	1	5	1	5

Majority of cooperatives and sole proprietorship’s farms were previously owned and managed by sole families (95%), relating to (5%) cooperatives and sole farms which were previously owned and managed by state. These farms were performing well and sustainably, these sentiments were attested by 95% of all the participants, while 5% of these farms were not performing well and were unsustainable (Table 5.2).

Table 5.2 above shows that, these farming enterprises have invested largely in employing principled operators with the particular technical knowledge and general management skills. All cooperatives farms (100%) employed farm managers who previously managed a farming enterprise and most managers had a minimum of 5-8 years relevant farm management experience (50%), while other managers had a

minimum of more than 8 years (30%) and the other managers with the least number of years in managing a farm accounts for (20%).

Likewise, sole farms also invested heavily in technical and skilled operators (95%) comparing to only (5%) which is not investing deeply in the afore-said characteristics. Furthermore, 95% of these farmers have recruited managers with the most combined minimum of 5 to more than 8 years' relevant farm management experience (74%), while 5 farmers have recruited managers with the least experience of 3-5 years 26% (Table 5.2). It is clear that these farming enterprises are reputable and sustainable due to the fact that, good investment is made in recruiting principled operators with particular technical knowledge and general management skills.

5.3.3. Farm management model

5.3.3.1. Analysis of human resource management model and enterprise

In South Africa, it is believed that management of farming enterprises has changed radically in the past decades due to factors such as political, economic, social-cultural, technological changes, environmental awareness and legislation (Woods, 2013:33-36; Makhura *et al*, 2011: 5-6; DAFF, 2017: 93; Goldblatt, undated: 20). The writer's conviction is that, these factors are proven to have critical impact on the management model as well as performance and sustainability of farming enterprises.

According to Naude (2018) and Olwage (2017) based on their experience and observations has this to say, "the farm managers are now even expected to have good interpersonal skills to be able to manage human resources accordingly and farms sustainably to ensure continuous performance". However, for these managers to be hold accountable, it is the writer's contribution that there should be a depicted model or roadmap of the successfully employing and managing human resources. Table 3 below illustrates the analysis of human resource management model applied by cooperatives and sole proprietorship farms and key factors supplementing the model.

Table 5 3: Analysis of human resources management and supporting systems

Farm human resource management model and supporting systems				
Local community members employed	Previous model		Current model	
	N	%	N	%
Cooperatives	20	100	20	100
Sole families	20	100	20	100
Key systems sustaining the enterprises	Cooperatives		Sole families	
	N	%	N	%
Management model	14	74	10	51
Support	4	18	2	8
Ability to management change & innovation	2	8	8	41

As seen in Table 5.3, the way in which both cooperatives and sole proprietorship farms employ and manages human resources to improve and maintain performance has not change, irrespective of changes in the factors of agricultural production and the current uncertain political climate, in which these farming enterprises has to perform. As far as employee’s recruitment and management is concerned, both cooperatives and sole proprietorships were previously and are still currently employing labour force from their local villages (100%).

Furthermore, recruitment can as well be done from within the family itself or from relatives/extended family members. Either way, it is always good to bear in mind the returns of recruiting both family and community members. Human resources management model involves labour relations to ensure that good labour relations are maintained all the times. However, for any sectional management model to be successful, supporting systems must be in place. Without proper supporting systems, efforts of sectional model will in future be of no value (Van Reenen *et al*, 2013:168). The key supporting systems as set out in Table 5.3 are discussed.

The whole farm management model was found to be a key catalyst for good implementation of cooperatives (74%) and sole families’ (51%) human resources management model. Majority of sole families (41%) used their strategies for dealing with change and innovation to supplement their human resources model, comparing to (8%) cooperatives farms. Further, key factor to some of these farmer’s cooperatives (18%) and sole families (8%) was a support from their principals and investors. The key system supporting the human resources model to remain relevant at all the times

and value adding to the performance and sustainability of cooperatives and sole families is a farm management model, which is of particular concern to this study.

5.3.4. Farm business and succession planning

Farm business and succession plans are regarded the most vital aspects of the modern farm business (SBASA, 2013: 91; Ntshangase *et al*, 2016: 53). However, in the present period of high inputs prices, technical economic recessions, shortage of capital and high interest rates and Value Added Taxes (VAT), it is the writer's submission that a business plan has a huge preference over succession plan.

Mogoru (2017) even stated that in South Africa, "majority (if not all) of financial lenders and investors usually pays more attention on the affordability and financial projections in the business plan. Even though, the components of business plan are included in the succession plan and vice versa". This section provides summary and perspective of both business and succession planning.

A business plan is a roadmap that describes a farm business, its products or services, the way in which farm business will generate income, management, financing, operations model, and other details that are essential to both operation and performance (SBASA, 2013: 91). The new entrants in farming develop business plan as part of the start-up process while existing farm businesses often write the business plan when changing direction or strategy.

Furthermore, experience has shown that both new entrants and existing business plans mirrors the farm business for at-least the first three to five years' period. For instance, a Champagne citrus farm business plan by Andrews and Mavimbela (2011) aiming at the strategy of maximizing production and profit has mirrored the plans for five years' period as follows, "to improve production by rehabilitating the existing orchards in order that extended benefits will accrue from current tree and replanting programme".

The researcher's observation is that, a succession plan is developed to provide a clear succession planning measures that will assist the employees and farm business on

career management and managers on their management roles and responsibilities. It also assists in the facilitation of deployment and retention of high performing managers and employees through effective career planning in line with the farm business development programmes or plan and maintains and enhances the particular farm knowledge.

Succession plan is also vital because it creates a pool of suitably competent and high performing employees that can be eligible to fill vacant positions which may require specific scarce, critical and high risk skills such as management positions (SBASA, 2013). The preference of business plan over succession plan and vice versa is illustrated in Figure 5.2.

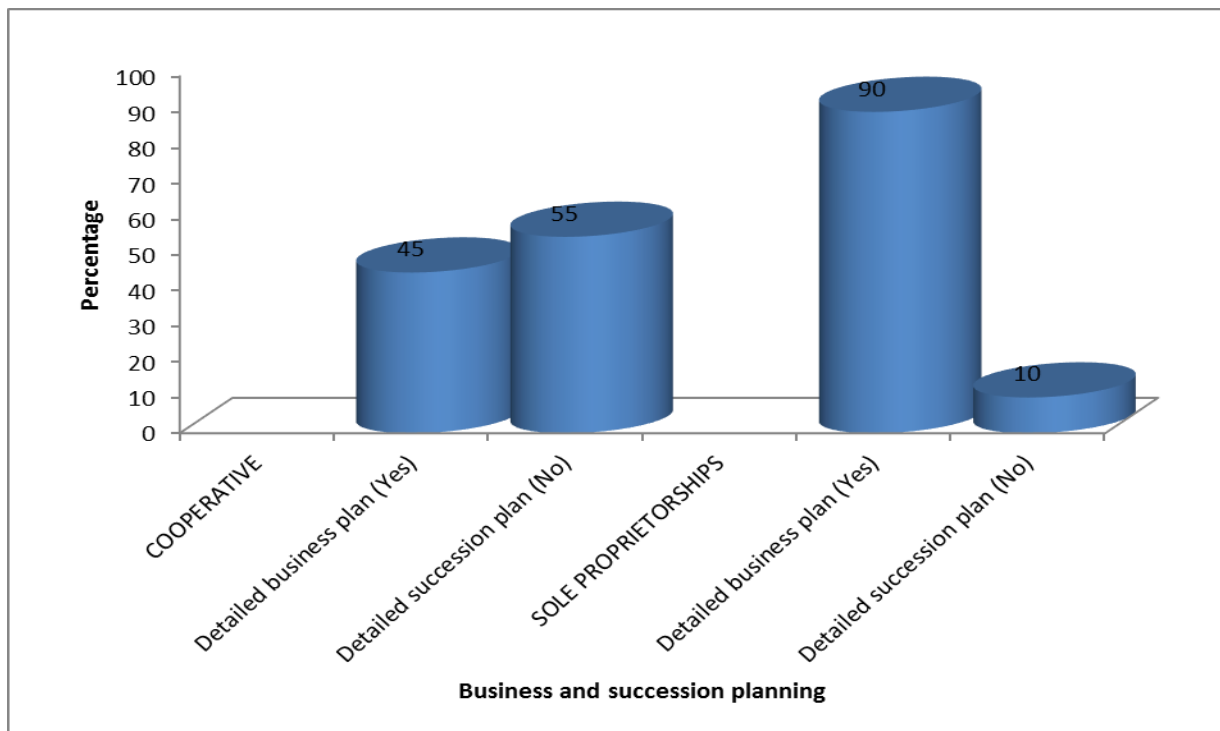


Figure 5 2: Preference on business and succession plan

Both long existing cooperatives and sole proprietorship farming business has a farm business plans. This is encouraging to see that these farming businesses seek to change direction or strategy to curb the ever changing farming factors such as changes in the characteristics of farming production, economic and political climate.

According to Figure 5.2, 45% of cooperatives and 90% of sole proprietors has detailed business plans, while 55% of cooperatives as comparing to only 10% of sole proprietors operate without a succession plan. It is clear that cooperatives farm businesses in Mpumalanga operates without a clear succession planning that would have, otherwise assisted in terms of facilitating the deployment and retention of high performing managers and employees, maintain and enhance the particular farm business culture and knowledge.

5.3.5. Internal and external issues affecting performance and sustainability

The earlier section has looked at the performance and sustainability of cooperatives and sole proprietorship farming business, especially, within the context of farms compositions/structure and unique characteristics (farms operations and farm management model). This was done by scanning and analyzing current farm manager's age and experience in managing similar farming business as well as previous and current human resource management model and supporting systems.

However, this section evaluates and distils the information captured in the above section into a critique reflecting these farming business's primary strengths, weaknesses, opportunities and threats, better known as the SWOT analysis. According to Woods (2013:25) SWOT analysis is the process of looking at the inside and outside the farming enterprise. In addition, this study conducts a SWOT analysis of current or potential pitfalls to clarify the competitive situation.

Furthermore, the objective of this paper was to assess performance and sustainability of cooperatives and sole proprietorships citrus farms, find key strengths and opportunities that assist these farmers to prosper more than others who farm in the same region under similar circumstances and find out threats and weaknesses that crimples some farmers as compared to other farmers.

5.3.5.1. Identifying strengths, weaknesses, opportunities and threats (SWOT)

The internal issues such as the way in which these farming businesses fulfill their mission, serves customers and compete in the marketplace is identified and analyzed in this section. This include issues such as farm’s market resources/infrastructure and capabilities, current offerings and quality, business relationships and other key issues. The issues to be identified herein are the key instrumental in the way that these farming businesses perform better and sustainably, serve both local and international customers. These key issues are just important in contributing to farms strengths and weaknesses in using current management model to deal with opportunities and threats.

Table 5 4: Analysis of SWOT factors enhancing performance and sustainability

Farm's strengths	Cooperatives	Families	Farm's weaknesses	Cooperatives	Families
- Access to infrastructure	100%	100%	- Over reliance on traditional markets	100%	85%
- Good quality	100%	100%	- High inputs costs	100%	100%
- Good relationship with suppliers and customers	90%	100%			
- Meeting all required operating standards	80%	100%			
- Farming skills & knowledge	100%	90%			
Farm's opportunities			Farm's Threats		
- Accessing new markets	100%	100%	- Shortage of water	100%	100%
- High demand of produce	100%	100%	- Increased protectionisms	55%	85%
- To grow local market shares	100%	95%			

According to the SWOT analysis in Table 5.4, the cooperatives and sole families’ farmers in Mpumalanga, like most land reform and emerging farmers in the province, have less weaknesses and faces fewer threats. However, most of the farming factors enhancing performance and sustainability within cooperatives and sole families in the Mpumalanga stem from (i) access to infrastructure (100%), (ii) good relationship with suppliers and customers (90%), (iii) meeting of all the required operating standards (80%), (iv) good product quality (100%), and (v) adequate farming knowledge and skills (100%).

These factors also leverage the increased protectionisms by international markets. Although several other factors might contribute towards mitigating increased protectionism, it is indirectly related to poor strengths (i.e. poor product quality, failure to meet the required standards and inadequate farming skills and knowledge) as well as the inability of farm manager to implement the fixed standards.

The increased protectionisms hold several threats for citrus farmer's performance and sustainability in the Mpumalanga, and are one of the main reasons for the collapse of reputable farms. Within the current economic climate, the collapse of high reputable farms holds severe consequences for both the development and commercial legs of the sector, with a potential decline in productivity and local economy's growth.

The weakness by these farmers is the inability to be creative in their marketing strategies. Majority of farmers 100% cooperatives and 80% sole families rely heavily on their traditional markets. This relates especially to the current global agriculture, political and economic environment faced by producers. Hence, the creativity of these producers relates directly to country's trades bilateral agreements, which can be regarded as one of the prerequisites for success in modern day agriculture (DAFF, 2017).

Besides the threat of increased protectionisms by international markets, the lack of capacity and knowledge within government institutions pose additional stumbling blocks for performance and sustainability, especially with regard to the successful implementation and management of trades' bilateral agreements (i.e. tariffs and meeting pythosanitary certifications). However, all the cooperatives and sole families; (i) have access to new markets (100%), (ii) their products are in high demand (100%) and (iii) there is a huge capability of growing in local market shares particularly for cooperatives (100%), as comparing to 95% for sole families.

Moreover, lack of commitment on the part of various government intuitions has resulted in poor farmer-support. This relates directly to problems that are experienced by farmers with product affected by "*black spot*" and "*codling moths*", etc. The problems in governmental projects in several instances originate from officials not

being properly made aware on the consequences of the local economy or competent to execute their respective roles and responsibilities.

Another factors that poses stumbling block for performance and sustainability in these farms in the Mpumalanga, unrelated to increased protectionisms, pertains to the possibility of shortage of water and high inputs costs as stated by 100% of both cooperatives and family's farmers.

The entire Mpumalanga faces water shortages due to lack of water resource and general decrease in water quality and quantity over the past few years. The water shortages result from a climate change, while high input costs relate to unstable economy. The consequence of these quarrels generally result in farmers failing to procure farming inputs and workers retrenchments, which effectively takes local people out of works and farmland out of production.

5.4. Agricultural extension implications for the citrus farmers in South Africa

This study has portrayed that performance and sustainability are key elements in the viability of the cooperatives and sole proprietorship farms. Due to good performance and sustainability, these farms have managed to offset the ever increasing protectionisms from the international markets, water deficiency and high inputs costs. These farmers also did well in producing a better product at the end of the value chain and this has brought a good income to the farmers. Otherwise, if these farms had performed poorly and unsustainable, the consignment for export would have been turned down at their expense.

Part of the implication of this study indicates that there is a weakness in having human resources such as extensionists who are trained in citrus. The study also pointed out a shy commitment from government agencies and institutions providing agricultural extension on the provision of extensionists trained in citrus. Knowledgeable advisors play a role in making citrus farms sustainable. It is not a surprise that the Citrus Growers Association (CGA) has signed a memorandum of understanding (MoU) with

the provincial departments of agriculture and rural development agreeing that the departments should provide government extension personnel who are trained as citrus specialists to provide support to growers (DAFF, 2017:101).

5.5. Conclusion

This study has examined the performance and sustainability of citrus farming cooperatives and sole proprietorships in Mpumalanga, South Africa. This experience arose in the context of poor performance and unsustainability of land reform citrus farming enterprises. It shows how cooperatives and sole proprietorships farms were previously and are currently managed by managers, whose experience in farming is largely enough. Performance and sustainability of these enterprises have not changed in some ways, yet also demonstrate beneficial levels of improvement and continuity.

Overall, this study reveal that the business models promoted as part of both cooperatives and sole proprietors have succeeded in producing sustainable enterprises or distributing benefits to the shareholders. From Mpumalanga's perspectives, the assessment of performance and sustainability of cooperatives and sole proprietorships appears to be largely positive. Enough material progress has been made in any of the cases outlined here to conclude that this type of farming enterprises are performing well or are delivering sustainable benefits to the shareholders over time.

Despite a discouraging period; including land reform and unfavourable conditions for production as a result of climate change, it is clear that some fundamental progress has been made in the design and implementation of these enterprises. On the cooperative side, a detailed business plan, management model is adhered to and the managers that are employed has farming skills and knowledge and cooperatives are able to deal with increased protectionisms.

On the sole proprietor's side, little firm commitments as comparing to cooperatives have been made regarding investment on employing managers with farming skills and

knowledge, tackling the ever increasing international protectionisms and putting in place a detailed business plan.

It is concluded that that cooperatives performs much better and are sustainable as comparing to the sole proprietor's farms. As it is revealed that the Mpumalanga's cooperatives and sole proprietors are doing well using their ancient model, these models are also crucial to the future. Mpumalanga is increasingly becoming a land reform beneficiaries farming industry

Arising from this study, the following recommendations are offered, functionality within government institutions needs to be revived, as it serves as the foundation from which most of the factors hindering farmer's performance and sustainability need to be resolved. Additionally, government support is needed to boost existing citrus farmers as well as to motivate the establishment of new initiatives to address current and emerging problems in order to enhance the performance and sustainability of the sector in provincial, national and global markets.

It is recommended that the department should prioritise training dedicated extensionists who will service the Black citrus growers. This approach will promote sustainability of citrus growers. The departments such as Department of Agriculture, Department of International Relations, Trade and Industry as well as marketing channels should put their attention highly on cooperatives and sole proprietorship farmer's basic capabilities.

The government extension policies and programmes should be determined based on extension officers and famer's abilities, international needs and standards. Furthermore, bilateral agreements should be arranged on time to give extension officers adequate time to familiarize themselves with the agreements and farmers to prepare and comply.

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CHAPTER 6: THE ELEMENTS OF SUCCESS AND FAILURE IN THE CPA'S, STATE OWNED AND SMALL SUBSISTENCE FAMILY FARMS⁵

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Abstract

Communal Property Associations (CPAs) as well as state owned and family orientated citrus farms lack human capacity development, modern infrastructure and operational inputs, and have been in distress since 1994. They are not resilient and are unable to adapt to technological changes and overcome challenges. These enterprises are highly important within the citrus fruit group by value and volume. Success of these farms could increase export, job opportunities, foreign exchange revenue, rural development, and economic growth. However, failure could be burdensome for the state and to the beneficiaries. The purpose of this paper is to evaluate the root causes for the failures and successes amongst CPAs as well as state owned and family orientated citrus farms, and recommend measures to uplift success and ensure that current and future CPAs and state owned and small family orientated citrus farms do not face the same challenges that have existed up until now. The study focuses on CPAs, state owned farms and family orientated citrus farms supported by the government. It provides an in-depth analysis based on a survey that was carried out to identify the causes of farm failures.

Keywords: Elements, success, failure, CPA, state owned farms, small subsistence family oriented farms, livelihoods

6.1. Introduction

⁵ This paper has been submitted for publication in the South African Journal of Science (SAJS); Email: www.sajs.co.za.

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The majority of Communal Property Associations (CPAs), state owned farms and small subsistence citrus farms lack human capacity development, infrastructure and operational inputs. Some of these farms are in distress or lying fallow, more especially the farms that are acquired through the land reform redistribution programme, restitution and other programmes since 1994. Different projects require different development interventions and timeframes for how easily and quickly they may be rehabilitated. There are especially those that involve large groups that have complicated social issues and conflicts to resolve and these are taking longer to identify solutions and to obtain consensus on rehabilitation solutions (DRDLR, 2013; Lahiff *et al*, 2012; Terblanche, 2014).

According to the Department of Rural Development and Land Reform (DRDLR) a reviewed Recapitalisation and Development Programme (RADP) indicates that:

Interventions in provinces such as Free State Province have done extremely well, wherein a total number of 70 projects were supported, 12 partnerships were established, and 77 000 ha were put under production with different commodities. A total number of 1375 jobs were created. A total number of 5945 cattle have been produced and 9546 sheep under the red meat value chain. A total of 2074 ha was put under crop production. The Free State Province was producing just over 1.5 million chickens per annum. By the end of March 2013, the total budget spent by the province on RADP was R129 174 115 (DRDLR, 2013:15-16).

However, the key focus of this study remains directly on citrus farming enterprises, not on crop production in general.

The objective of this article was to explore the elements of success and failure in CPAs, state owned farms and family orientated citrus farms. The study focussed on 134 CPAs' farm managers, 10 farm managers who managed the farms on behalf of their households' acquired land through the land reform programme, and six state owned farm managers. These participants were all interviewed. All the participants comprised of farm managers from three districts in the Mpumalanga Province, however, the majority of the managers were from Ehlanzeni District Municipality. This involved

a wide selection of managers representing those who performed well under stress and those who failed.

6.2. Methodology and materials

The study was carried out in a form of case study using CPAs, as well as state owned and family orientated citrus farms. This study made use of a quantitative research approach but with a strong support of qualitative methodology.

The combination of these two methods went beyond to the establishment of how severe the problem at hand is. The study also used both primary and secondary data. In Mpumalanga Province, there were 20 citrus producing CPAs with a total number of 186 managers, 10 family orientated citrus farms with 10 managers, and six state owned farms with six managers.

A proportionate simple sampling approach was adopted in this study which meant that each element of the survey population had a known and equal chance of being selected (Illowsky & Dean, 2013). There was one stratum representing CPAs and simple random sampling was applied. A total of 134 respondents were reached from a survey population of the managers of 186 land reform farmers who farm citrus under study in the 2017/18 season. This represented 72% of the entire population of these farmers. For the case of state owned and small subsistence family orientated farms, it was decided to include all 10 households and six farms in the study area. This small number made sampling unnecessary.

6.2.1. Data collection

A range of methods were used to gather data, namely structured and semi-structured questionnaires, participant face to face interviews, observations, and focus group discussions. The interview schedule used a combination of closed-ended and open-ended questions. Matunhu (2011) has also recommended that these methods complement each other. The collected data was captured and manipulated using statistical software, namely the Statistical Package for Social Sciences (SPSS). With

regards to ethical considerations, the respondents were assured that confidentiality would be maintained and that they were not forced to participate in the study.

6.3. Theoretical background

6.3.1. The definition of success and failure

Before discussing the results of elements of success and failure of farmers under the study, it is pertinent to clarify what is meant by success in an emerging citrus-farming sector context. Justin Chadwick, CEO of the Citrus Growers Association (CGA) in Mpumalanga, explains success in terms of export, job creations, foreign exchange income, and economic growth. For instance, Chadwick explained that a successful farming enterprise is an enterprise that is able to rise in export and create more job opportunities and foreign revenue and economic growth (Bakkes, 2019).

However, success is also defined in terms of net income per hectare. In each area, farmers were classified as low, middle and high net income earners. Those who were in the high net income category were considered successful (Makhura *et al*, 2017). In the land reform and state sponsored farming entities vein, the farms are considered successful if they are able to continue to improve the quality of life of the participants and make significant contributions towards transformation without systematic and comprehensive post transfer support from government (Williams & Van Zyl, 2008).

6.4. Results and discussion

6.4.1. Farm structure by managers' characteristics

Cross tabulation method was used in this section to analyse farm structure and managers' characteristics. This method was employed to present a grouping of variables, which has minimised the potential for confusion or error by providing clear results. It has clearly mapped out relations between categorical variables that has helped a researcher to gain better and deeper insights, insights that otherwise would have been overlooked or would have taken a lot of time to decode from more complicated forms of statistical analysis. The clarity offered by this method helped the

study to evaluate current farm management models and charted out future model. The results of managers' age, gender and level of literacy are discussed below.

6.4.1.1. Age and gender of land reform household, CPAs and state owned farm managers

Appropriate age in farming is often associated with response to technological change and decision making. For instance, Makhura et al. (2017); Mokgadi and Oladele (2013) has reported that young and middle-aged farmers appear to be more conversant to modern technology than older farmers. Furthermore, the old-aged farmers are able to make the best decisions due to practical experience, technical knowledge, integrity, and a sense of responsibility (Van Reenen *et al*, 2013).

Rural women's prospects of participating in commercial farming are severely limited. Like women everywhere, they have primary responsibility for raising children, preparing food, and taking care of sick family members, plus extra burdens, such as collecting fuel wood. Gender roles reduce rural women's participation in labour markets and confine them to lower paid and more precarious employment in agriculture.

Limiting women's participation in farming has high efficiency costs. It also leads to less investment in girls' education. Since girls receive less schooling, they are more likely to be employed as poorly paid "bonded labour" on large farms and plantations. An increased participation in farming can help women escape from poverty by increasing their income and strengthening their household bargaining power (FAO, 2009; Ravhuhali *et al*, 2014).

6.4.1.2. Farming entities managers

In this study, the participants were asked to indicate the number of participants in decision making of their respective farming entities by gender. Figure 6.1 portrays information of males and females who are involved in the management and decision

making of CPAs, independent cooperatives, sole proprietorship families, as well as state owned and land reform household farms.

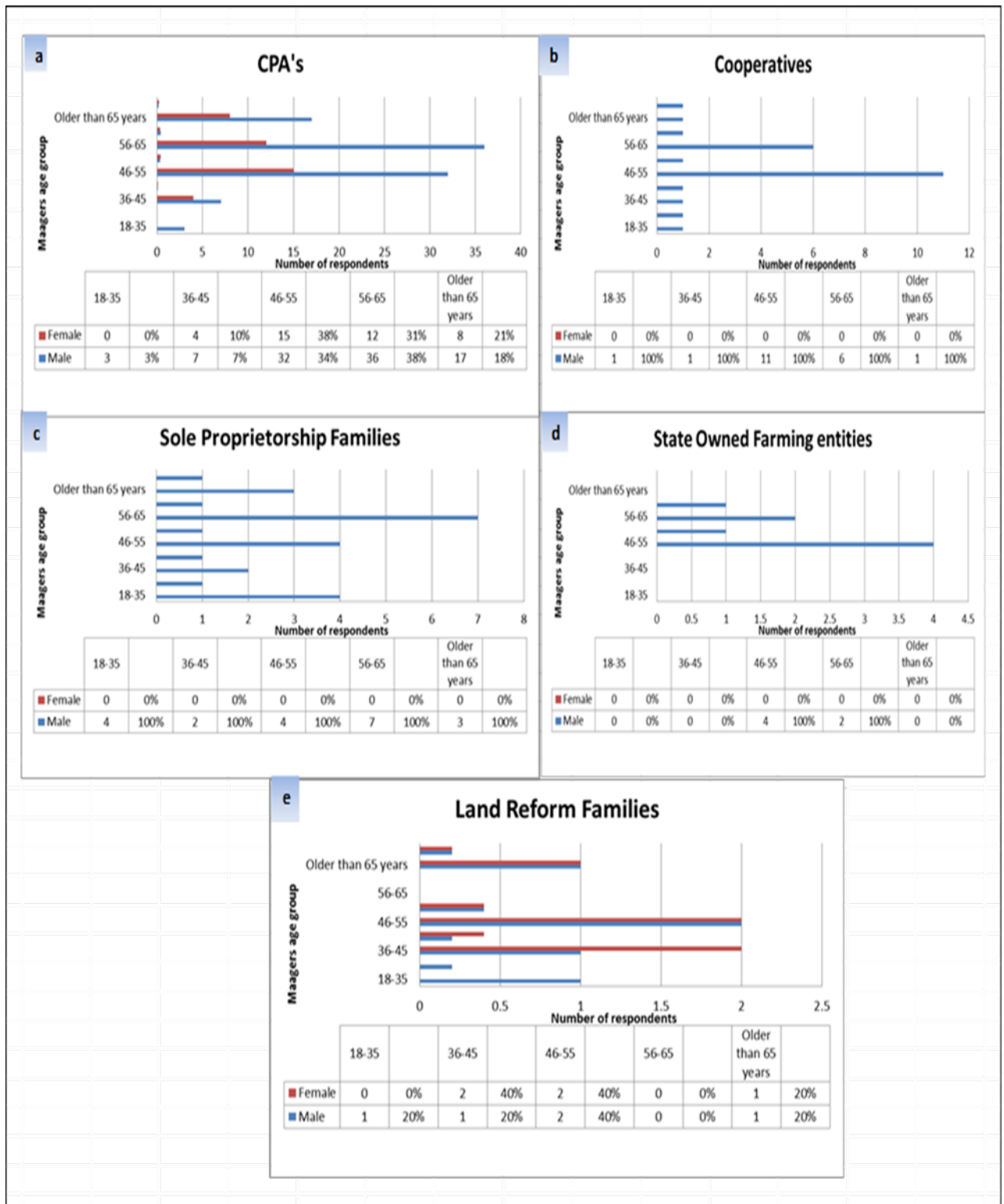


Figure 6 1: Farmers age and gender

According to the results in Figure 6.1, of the 134 farm managers, the male's managers and female's managers of the age category accounts for 7% and 10% respectively. Furthermore, managers of the age group 56-65 years comprised of 38% males and 31% females. Those older than 65 years (old aged) consisted of 21% females, comparing to 18% males. Only 3% males representing youth (18-35 years) were found to be managing CPAs farms. This shows that CPAs in the Mpumalanga Province are dominated by males from the middle-age group.

Independent farming cooperatives are dominated by males (100%) from the age group 46 to 55 years, followed by males from the age group 56 to 65 years old, while youth and those who are between 36 and 55 years of age consist of only 1%. With regards to sole proprietorship farms, all the managers are females. However, this sector is conquered by those who are older than 55 years (100%), but not yet at the age of 66 years.

All six state owned farms are managed by males. This shows that the management of state owned farms in the area under study is dominated by males. In terms of age categories, all the middle-age managers (46-55 years) comprised 100% of males within this age category (Figure 6.1).

Figure 6.1 further show that male (40%) and female (40%) of the age groups of 46-55 years old within the land reform household farms are managing the household's farms. Furthermore, the males (40%) and females (20%) of the age group 36-45 years are also managing these farms. Those older than 65 years (old aged) are represented by 20% of females and 20% males. Lastly, youth (18-35) is represented by males (20%) as comparing to nil females.

It can be inferred from the results in Figure 6.1 that majority of farm managers are between 46-55 years old and gender is not balanced. The gender disparity and lack of participation by youth in citrus farming is a great concern that needs to be addressed as soon as possible.

6.4.1.3. Educational level and gender of land reform household farms, CPAs and state farm managers

The analysis of managers' age in the previous section showed that managers have the favourable age to contribute in farming ventures. However, it needs to be highlighted that managers' age must be supplemented with sustainable level of literacy, regarded as post primary school up to tertiary education and sustainable farming experience.

However, by any indicator of global human development, female power and resources are lowest in rural areas of the developing world. Rural women make up the majority of the world's poor. In the developing countries, in which South Africa is classified, women have the world's lowest levels of schooling and the highest rates of illiteracy. The female-headed rural households are among the poorest of the poor (FAO, 2009). The farmers were asked to indicate their level of education and farming experience. Farmers' level of literacy and farming experience are indicated in Table 6.1.

Table 6 1: Farm manager's age and educational level

Education by gender		No schooling	Did not complete primary education	Completed primary education	Did not complete secondary school	Completed secondary education/ matric	Post-matric education
Managers	Gender						
CPA's (N=134)	Male	N 0 % 0%	N 6 % 6%	N 6 % 6%	N 24 % 25%	N 25 % 26%	N 34 % 31%
	Female	1 % 3%	N 4 % 10%	N 5 % 13%	N 16 % 41%	N 6 % 15%	N 7 % 18%
Land reform Households (N=10)	Male	N 0 % 0%	N 2 % 40%	N 0 % 0%	N 3 % 60%	N 0 % 0%	N 0 % 0%
	Female	N 0 % 0%	N 0 % 0%	N 0 % 0%	N 2 % 40%	N 2 % 40%	N 1 % 20%
State owned farms (N=6)	Male	N 0 % 0%	N 0 % 0%	N 0 % 0%	N 0 % 0%	N 1 % 17%	N 5 % 83%

In this study, it is revealed that within the CPAs, managers with the highest level of education of 41% are those who attended secondary school, but failed to complete it,

and the majority of managers are female. Furthermore, 26% of males obtained their senior certificate in comparison to 15% of females. Moreover, 31% of males managed to obtain tertiary education as compared to only 18% of females (Table 6.1).

Furthermore, the findings in Table 6.1 show that females involved in the management of land reform household farms have a higher level of education than their male counterparts. The results indicate that 40% of females have attended secondary school, but never finished grade 12, 40% completed matric, and 20% have post-matric education.

In contrast, 40% of males attended primary school, but never finished, while the majority (60%) of male farmers attended secondary school, but failed to complete. None of them have post-matric education. This is an indication that the majority of CPAs and land reform household farm managers in Mpumalanga can read and write.

All of the males involved in the management of state owned farms have secondary education and above. The study found that 17% of the state owned farm managers obtained a senior certificate (matric) while 83% have tertiary education.

6.4.2. Farming operations

6.4.2.1. Prior engagement in farming by gender

Lack of previous engagement in farming is regarded as a lack of knowledge and coaching and is one of the main reasons that could lead to a high failure rate amongst emerging farms or empowerment deals in agriculture (Chistoplos, 2010). Similarly, previous engagement in farming is an important element and it comes with a calling, passion, dedication, and willingness. Participants were asked of their previous engagements in the farming enterprises. The results are depicted in Table 6.2.

According to Table 6.2, 5% of males were previously engaged in farming, while 95% have never participated in any farming activities prior to managing the current farms. None of the female participants had ever participated in any farming activities prior to managing the current farm. Furthermore, 60% of male household managers were

never exposed to farming prerequisites, while 40% were exposed prior to managing the current farm.

Table 6 2: Previous engagement in farming by gender

Managers categories	Gender	Farmers engagement in farming					
		Yes		No		Total	
		N	%	N	%	N	%
CPA's (N=134)	Male	5	5%	90	95%	95	100%
	Female	0	0%	39	100%	39	100%
Land reform Household (N=10)	Male	2	40%	3	60%	5	100%
	Female	1	20%	4	80%	5	100%
State owned farms (N=6)	Male	6	100%	0	0.0%	6	100%

The majority of females (80%) were never exposed to farming prerequisites, while 20% were introduced to farming prerequisites prior to managing the current farm. Finally, 100% of males within the state owned farms had farming prerequisites prior to managing the current farming enterprises. The results above indicate that male managers have a slightly more farming and management experience than females.

6.4.2.2. Number of years in farming

Number of years in farming is described as something that 'enhances entrepreneurs' knowledge, not only for the modern technological techniques for raising crops, farm animals, management of personnel, but also how to operate and manage the whole farm sustainably (Mtshweni, 2017; SBASA, 2013). The managers were asked a question regarding the number of years they have spent thus far in the current farm. Their responses are captured in Figure 6.2 below.

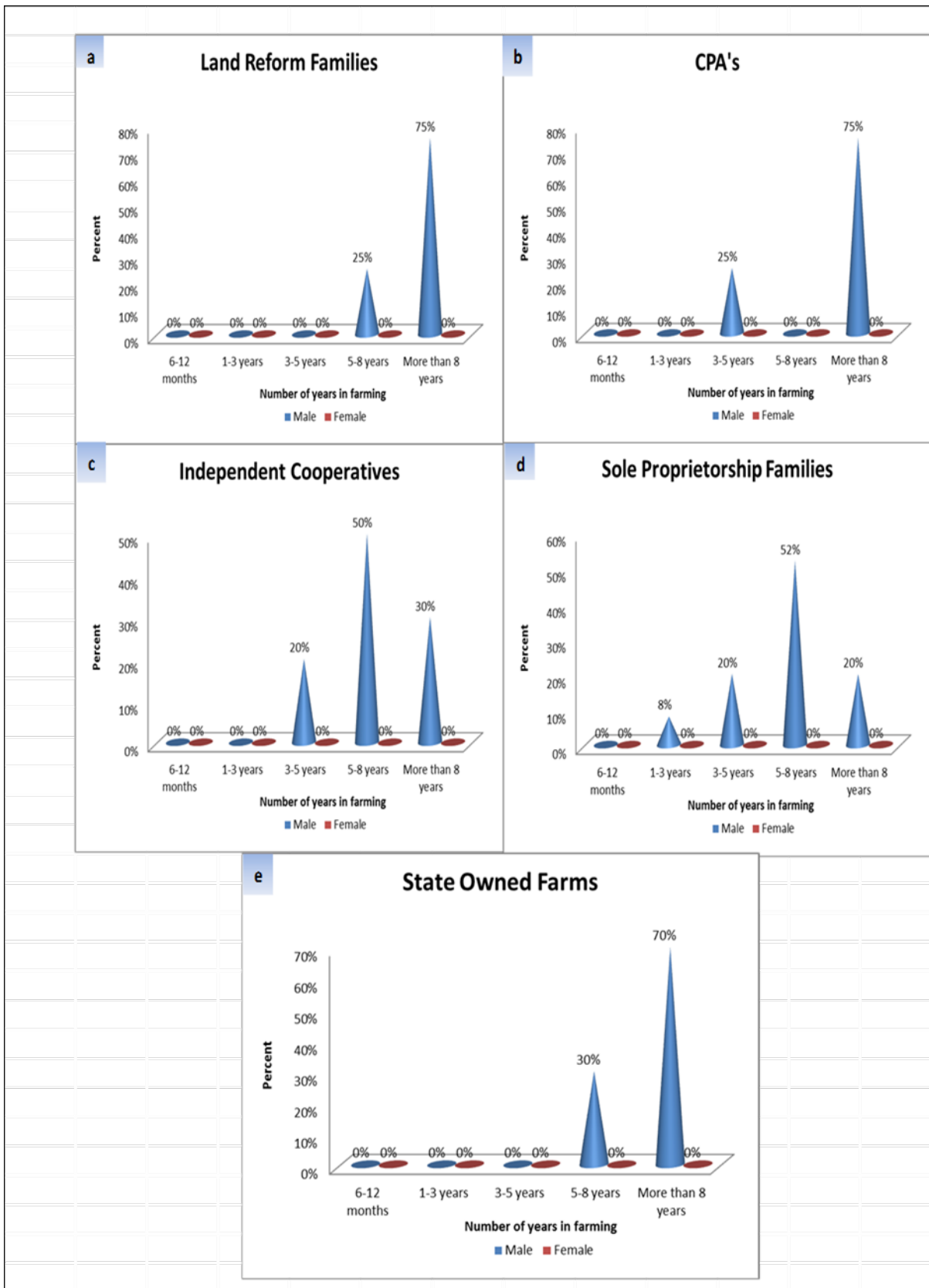


Figure 6 2: Number of years in farming

The results in Figure 6.2 show that the majority of farm managers who had more than eight years of farming experience prior to their management of the current farm accounted for 75% were males, while females with farming experience were not reported. This shows a serious threat to the success of land reform households' farms managed by females or to be managed by females due to insufficient experience as compared to males (Christoplos, 2010; Ravhuhali *et al*, 2014). The question that one would ask would be that of how females could be assigned to manage a farming enterprise without having met farming prerequisites.

Furthermore, of the five male managers within the CPA who were found to be exposed to farming prerequisites prior to the land reform programme, 75% had been exposed to farming for more than eight years, while 25% had been exposed for between three and five years (Figure 6.2). In general, this means that despite the promise of establishing successful land reform projects, neither the number of years in farming nor experience has facilitated the realisation of managing these projects successfully which has also been observed by Greenberg (2013) in a study on the disjuncture of land and agricultural reform in South Africa.

With regards to both independent cooperatives and sole proprietorship families, 50% and 52% of males respectively had five to eight years and more than eight years' experience in farming, while those who had between three and five years' experience covered 20%. Lastly, 30% and 20% of males in both independent cooperatives and sole proprietorship families indicated that they have been managing farms for more than eight years. Further issues were to analyse the number of years in farming of state owned farm managers prior to managing current farming enterprises. The findings are indicated in Figure 6.2.

In the farms that are owned by government, males are an outlier from their female counterparts. Of the six managers, 50% had more than eight years in farming prior to managing the current farm, similar to 50% who had four to six years in farming. The results indicate that there are problems in terms of gender disparity in the management of farms owned by the state in Mpumalanga Province (Christoplos, 2010; Ravhuhali *et al*, 2014; Oladele, 2011).

The gender inequality persists in the agricultural sector since it is deeply rooted in gender relations in several areas that are crucial for farming, namely household level, land and property rights, access to agricultural inputs, extension services, as well as credit and financial services. It is clear that there is an on-going process by which young manager's progress through a series of farming stages in both sole proprietorship families and cooperatives.

6.4.2.3. Land ownership and rights

Land is a key asset infrastructure in the agricultural production processes. Reenen, Marais and A De (2013) reported that a prerequisite for farming is that a farmer must at least own land or have access to land and the right to use land is one of the most important aspects. The participants were asked to indicate their land ownership, the farm size, and land under production by both males and females. Table 6.3 shows the number of times and percentages for each type of land ownership and tenure, the farm size, and land under production by both males and females.

6.4.2.4. Land ownership and type of tenure

From Table 6.3, it can be seen that most CPA managers (n=69), accounting for 51%, manage the farms owned by a title deed. Moreover, 36 managers (27%) indicated that they manage farms that are leased from government, as compared to 29 managers (22%) who stated that their farms are acquired through tribal arrangement.

Of the 10 household farm managers, nine indicated that their access to land is through tribal arrangements, while one manager stated that he/she owns the farm through a title deed. However, of the six state owned farm managers, four illustrated that the farms are owned through a title deed (67%), whereas two managers reported that they access the farms through tribal arrangement.

It is encouraging to see that government has transferred full ownership of land to the majority of CPAs in Mpumalanga. However, for household farmers to have a stronger tenure, they may upgrade their land tenure rights through individual title to them with

quitrent, permission to occupy (PTO), or other registered tenure rights according to the Upgrading of Land Tenure Rights (ULTRA) Act 112 of 1991 and Informal Land Rights Act (IPILRA) 31 of 1996 respectively.

Table 6 3: Land ownership and usage by gender

(a) Land ownership and type of tenure				(b) The farm size			
Land ownership and type of tenure				Farming entity	Extent (ha)	Frequency (n)	Percent (%)
Farming entity	Type of tenure	Frequency	Percent				
CPA's	Tribal/communal	29	22	CPA's	100-300 ha	29	22
	Gomment lease	36	27		301-500 ha	25	19
	Title deed	69	51		More than 500 ha	80	51
	Total	134	100		Total	134	92
Households	Tribal/communal	9	90	Households	Less than 100 ha	9	90
	Title deed	1	10		More than 200 ha	1	10
	Total	10	100		Total	10	100
State owned	Tribal/communal	2	33	State owned	Less than 100 ha	1	17
	Title deed	4	67		101-300 ha	2	33
	Total	6	100		301 and more ha	3	50
					Total	6	100

(c) Land under production by gender					
Land under production	Manager respondents	Female		Male	
		N	%	N	%
Less than 100	CPA	4	10%	15	16%
101-300 ha		7	18%	6	6%
More than 300 ha		28	72%	74	78%
Less than 100	Households	3	60%	2	40%
101-300 ha		0	0%	0	0%
More than 300 ha		2	40%	3	60%

6.4.2.5. The farm size

The farm size had no effect on greater returns on production. However, the small farms produce far more per acre or hectare than large farms. One reason for the low levels of production on large farms is that they tend to be monocultures (Bothoko & Oladele, 2013). The farmers were asked to outline the number of hectares that they have

access to. Their results are represented in Table 6.3 (reflecting hectares transferred to emerging farmers under restitution and redistribution programmes).

Table 6.3 (b) indicates that 51% of the CPAs have access to land of more than 500 hectares while 22% have access to 100-300 ha's, and 19% has access to 301-500. Moreover, the majority of the household farmers (90%) have access to less than 100 ha. Furthermore, 50% of the state farms are operating on 301 and more ha, 33% reported that they operate on 101-300 ha, while 17% reported to operate on less than 100 ha. The farm size should not be a greater effect, but rather the farmer's capability (Bothoko & Oladele, 2013). However, it is not unexpected to notice that CPAs have more access to land than households and state owned farms. It is due to the context that CPAs consist of more households, for instance, some CPAs consist of more than 500 households.

6.4.2.6. Land under production by gender

In South Africa, many hectares of land have been transferred to black farmers through land reform programmes (Jacobs *et al.* 2003; Lahiff *et al.*, 2012). Similarly, in this study, a question was asked to assess whether the farms distributed to black farmers were under production, and if so, how many hectares had been allocated to males and how many to females. The findings are recorded in Table 6.3 (c).

Based on the results in Table 6.3 (c), the majority of the male CPAs respondents (78%) indicated that more than 300 ha that had been transferred to them were under production, while 16% indicated that less than 100 ha were under production, and 6% indicated between 101 and 300 ha were under production. Furthermore, 72% of females indicated that more than 300 ha that had been transferred to them were under production, while 18% stated that between 101 and 300 ha were under production, and 10% stated that less than 100 ha were under production. However, 60% of female respondents from household farm indicated that less than 100 ha of their farms were under production, whereas 40% indicated that more than 300 ha were under production. The majority of males (60%) stated that their farms operate within more than 300 ha, as compared to 40% who operate in less than 100 ha.

6.4.3. Key elements contributing to success and current failures

6.4.3.1. Factors contributing to current failures

In the view of the nature of a farm’s failure, certain elements can be used to determine their contribution in the failure to design a model or technique to lessen the impact of failure. One of the questions that this study asked was, “Which elements are most likely to contribute to farm failures?” The results are shown in Figure 6.3.

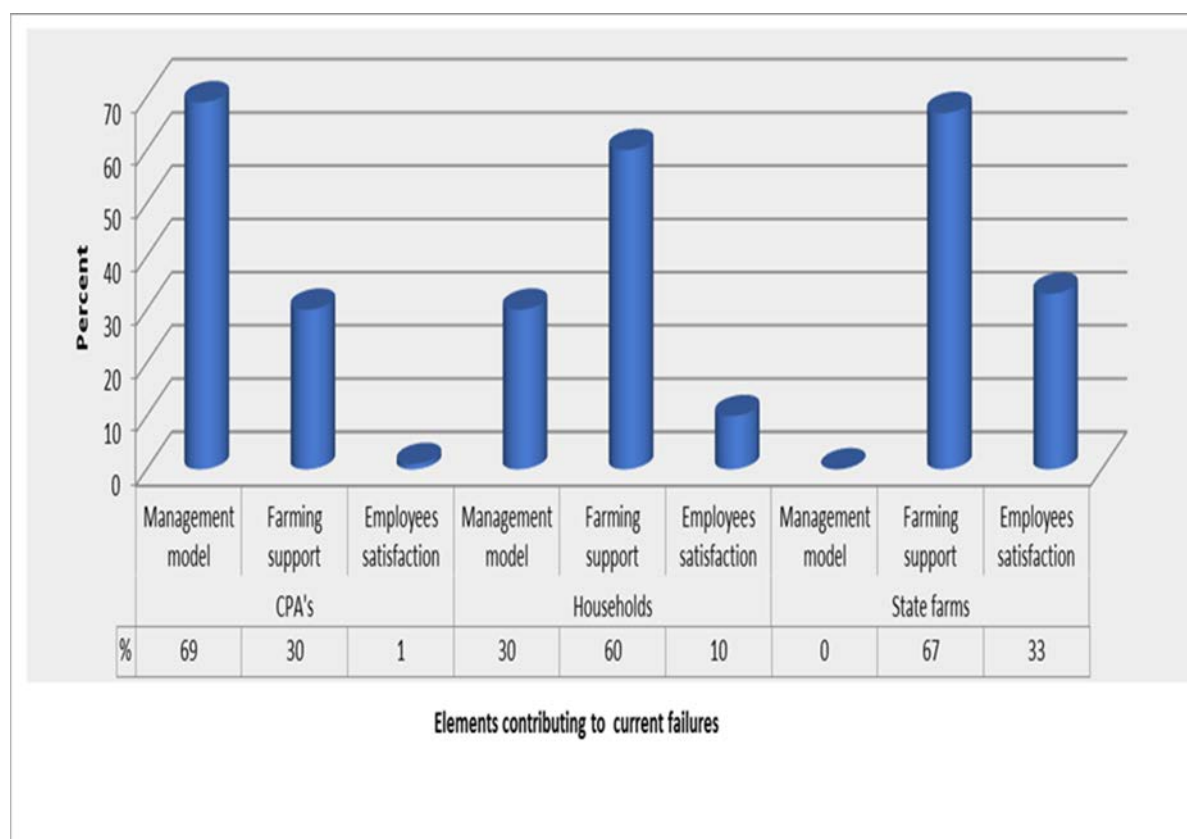


Figure 6 3: Elements contribute to current failure

Figure 6.3 shows that CPA farm managers perceived the current management model as a major element contributing to their farm failures (69%). Surprisingly, the farming support of 30% was not perceived as a major contributor to farm failures, which is in contrast with the widely held belief that land reform farms are not obtaining necessary post-settlement support, while employee satisfaction accounts for 1%.

However, the majority of household farm managers (60%) perceived the manner in which farming support is ushered to them as the main cause of failure, followed by the

current farm management model (30%) and employee satisfaction (10%). Furthermore, state owned farm managers indicated the manner in which farming support is provided to them as a major contributor to their failures (67%), as compared to 33% who identified employee satisfaction as a contributor (Figure 6.3).

6.4.4. Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis for CPAs, land reform households, and state owned farms

6.4.4.1. Strengths and weaknesses analysis

A sustainable citrus farming sector is characterised by a return to growth in export volumes, while failure to mitigate risks could bring weaknesses (CGA, 2018). The strengths and weaknesses identified by the farmers during the interviews are depicted in Table 6.4.

6.4.4.2. Farmers' strengths

As indicated in Table 6.4, the main strengths according to CPA farm managers are: (i) the availability of a well-established export infrastructure (78%); (ii) access by farmers to export infrastructure facilities (76%); (iii) sufficient technology within the farm's pack-houses (63%); and (iv) meeting of accreditation standards such as Good Agricultural Practice (GAP) certification (63%). These strengths were also raised by the Department of Agriculture, Forestry and Fisheries in its profiling of the South African citrus market value chain (DAFF, 2017).

Furthermore, 73% of managers indicated that communication with key project sponsors is poor, 49% reported that poor quality of their product is one of the elements that has affected the sustainability of the farms, 37% stated the failure to meet the accreditation prerequisites, 37% highlighted lack of sufficient technology within the farm's pack-houses, 33% pointed to a lack of availability of well-established export infrastructure, and 24% highlighted lack of access to available infrastructure.

Table 6 4: Strength and weaknesses in the functional areas of farming enterprises

Strengths						
Strength (resources and capabilities)	CPA (N=134)		Households (N=10)		State farms (N=6)	
	n	%	n	%	n	%
Our export infrastrucrure is well established	105	78	2	20	4	67
Our export infrastrucrure is not well established	29	33	8	80	2	33
	n	%	n	%	n	%
We have access to eficeint export infrastucture	102	76	2	20	4	67
We have no access to eficeint export infrastucture	32	24	8	80	2	33
	n	%	n	%	n	%
The quality of our produce is good	69	51	1	10	3	50
The quality of our produce is poor	65	49	9	90	3	50
	n	%	n	%	n	%
There is sufficient technology in the packhouse	85	63	1	10	3	50
There is not sufficient technology in the packhouse	49	37	9	90	3	50
	n	%	n	%	n	%
Communication with main sponsors is good	36	27	1	10	2	33
Communication with main sponsors is not good	98	73	9	90	4	67
	n	%	n	%	n	%
Our enterprise meet the required acreditations	85	63	1	10	3	50
Our enterprise does not meet acreditations requirements	49	37	9	90	3	50
	n	%	n	%	n	%
Weaknesses						
Weaknesses (lack or difficiency of resources and potential disadvantages to farming enterprises)	CPA (N=134)		Households (N=10)		State farms (N=6)	
	n	%	n	%	n	%
Our traditional markets are already saturated	24	18	1	10	1	17
Our traditional markets are not saturated	110	82	9	90	5	83
	n	%	n	%	n	%
Our produce is mainly destined for our traditional markets	89	66	8	80	3	50
Our produce in not heavily destined for traditional markets	45	33	2	20	3	50
	n	%	n	%	n	%
The costs of farming inputs is high	134	100	10	100	6	100
	n	%	n	%	n	%
We lack modern farming skills and knowledge	111	83	6	60	2	33
We have modern farming skills and knowledge	23	17	4	40	4	67
	n	%	n	%	n	%
Is difficult to graduate to a competetive commercial level	126	94	10	100	4	67
Is easy for us to graduate to a competitive commercial leve	8	6	0	0	2	33

With regards to land reform household farms, managers reported the following strengths: (i) the availability of a well-established export infrastructure (20%); (ii) access to export infrastructure facilities (20%); (iii) good quality of the produce (10%); (iv) efficient technology with the farms pack-house (10%); (v) good communication with project's main sponsors; and (vi) meeting of the accreditation requirements (Table 6.4).

However, 90% of the respondents stated that the quality of their produce is poor, farms lack efficient technology within the pack-house, there is communication breakdown with the main project's sponsors, and the farms are not able to meet the accreditation requirements. Moreover, 80% of the respondents indicated that they do not have export infrastructure in their vicinity, as a result, they do not have access to export infrastructure (Table 6.4). It is clear that land reform household farms have no access to export markets due to an unavailability of export infrastructure. They are consequently unable to compete and export their produce.

Furthermore, according to Table 6.4, the main strength for state owned farms as reported by managers are: (i) the availability of a well-established export infrastructure (67%); (ii) access by farmers to export infrastructure facilities (67%); (iii) sufficient technology within the farm's pack-houses, good quality of the produce, and meeting of accreditation standards such as GLOBAL GAP²¹ certification (50%); and (iv) reported break-down in communication with project's main sponsors (33%).

6.4.4.3. Farmers' weaknesses

The analyses of lack or deficiency of resources in the farms under study and potential disadvantages contributing to the failure of these farms are presented in Table 6.4 (reflecting the analyses of CPAs, land reform households, and state owned farm manager respondents).

All respondents echoed that the farms are failing due to elements such as high costs of farming inputs. Secondly, 100% (households), 94% (CPA), and 67% of the state owned farms indicated that their farms are failing as a result of inability to graduate to

a commercial level. Moreover, the majority of CPAs (83%) and household farm managers (60%) stated that managers' lack of farming skills and farming knowledge (Table 6.4). It is also stated that farmers in South Africa fail due to institutional arrangements such as services, systems, time and flexibility of institutions. It is not surprising that such factors feature prominently in success, because institutions tend to interact directly with farmers (Makhura *et al*, 2011).

6.4.4.4. Opportunities and threats analysis

In the citrus sector, increases in market access, demand due to the consumer's demand for healthy diets and potential for increased local market consumption are the main opportunities. Threats relate to increased competition developed countries, oversupply of fruit into established export markets and availability and cost of irrigation water (DAFF, 2017). Opportunities and threats raised by the farmers during the interviews are illustrated in Table 6.5.

Table 6 5: Promising opportunities and threats

Promising opportunities							
Promising opportunities	CPA (N=134)		Households (N=10)		State farms (N=6)		
	n	%	n	%	n	%	
We have opportunity to access new markets	62	46	1	10	4	67	
There is no opportunity to access new markets	72	54	9	90	2	77	
	n	%	n	%	n	%	
Our produce is in high demand	79	59	2	20	3	50	
Our produce is not in high demand	37	28	4	20	1	17	
Not sure	18	13	4	40	2	33	
	n	%	n	%	n	%	
There is an opportunity to expand our markets locally	48	36	2	20	3	50	
There is no opportunity to expand markets locally	61	45	8	80			
Not sure	25	19					
Threats							
Threats	CPA (N=134)		Households (N=10)		State farms (N=6)		
	n	%	n	%	n	%	
Competition is high from new entrants	80	60	10	100			
Competition is not high from new entrants	54	40			6	100	
	n	%	n	%	n	%	
Cost and availability of water is a threat	132	99	10	100	5	83	
Cost and availability of water is not a threat	2	1			1	17	
	n	%	n	%	n	%	
Protectionism in the established market is high	112	84	10	100	3	50	
Protectionism in the established market is low	22	16			3	50	
	n	%	n	%	n	%	
The established markets are oversupplied	16	12	1	10	1	17	
The established markets are not oversupplied	118	88	9	90	5	83	

6.4.4.5. Promising opportunities

According to Table 6.5, the following promising opportunity was reported by CPAs, high demands of the produce (59%). Similarly, state farms reported high demands of the produce (50%) and the possibilities of expanding local markets (50%). However, the majority of CPA respondents (54%) indicated that they do not have the opportunity to access any new markets. Household (90%) and state farm (77%) respondents echoed that they do not have access to any new markets.

Furthermore, 28% of CPA respondents stated that their produce is currently not in high demand, while 13% indicated that they are not sure if their produce is in high demand or not. Household respondents stated that their produce is currently not in high demand (20%) and 40% stated that they are not sure if their produce is in high demand or not. Very few state owned farm respondents outlined that their produce is currently not in high demand (7%) and 33% said that they are not sure if their produce is in high demand or not (Table 6.5). For instance, ⁷ stated that the majority of these farmers lack the technical skills to manage the product (be it crop or livestock) to a level where it appeals to the market. Farmers also need financial skills to track and manage costs and income to determine the financial success of the business.

Lastly, the majority of CPA respondents and household farms indicated that there are no opportunities for expanding locally, reported by 45% and 80% respectively. Moreover, 19% of the CPA respondents indicated that they are not sure if they still have a chance of expanding locally or not. Opportunities analysis concluded that farmers are failing due to insufficient opportunities that could be used to offset weaknesses and threats.

6.4.4.6. Threats

Table 6.5 shows that the main threat facing farmers in the study is cost and availability of water for irrigation. The threat is analysed as follows: households (100%), CPAs (99%), and state owned farms (83%). This is not surprising because the availability and cost of irrigation water as a serious threat within the South African Developing Countries (SADC) region (Nkomisa, 2011; Turton, 2000). South Africa stands out as one of the most water-scarce countries. Furthermore, 100% of household farms and 60% of CPAs also indicated competition from new entrants. In addition, all household farms, 84% of CPAs, as well as 50% of state owned farms reported high protectionisms from external or international markets.

Remarkably, the majority of farmers across all three groups indicated that their established markets are not oversupplied (households = 90%, CPAs = 88%, state

farms = 83%). In addition, 100% of state farms and 40% of CPA respondents reported that competition from the new entrants is not high. Furthermore, three (50%) of state farms and 22 (16%) of CPAs stated that protectionisms from external or international markets is not high. Moreover, one (17%) of the state farms and two (1%) of CPAs highlighted that the cost and availability of water for irrigation is not a threat that can contribute to a failure of their farming enterprise. Similarly, it is also reported that 31.6% of farming projects are affected by a lack of water and 68.4% of projects are not affected by the shortage of water (FAO, 2009).

6.5. Conclusion

The aforementioned finding has revealed that the elements contributing to success and failure stems from external and internal elements. The findings of this study have provided the necessary background to understand these farming enterprises, as well as the type of environment in which they operate and have to perform.

In the CPAs, causes of success fall under farm operational structure which is critical in view of the study's concerns for the rate of sustainability of land reform farms under the current management model. This element is of particular relevance to this study. The other contributing elements were strengths, weaknesses, opportunities and threats (SWOT). These elements affect government's capability to guide land reform farmers towards sustainability.

The farm operational structure element feature prominently. The SWOT elements, particularly strengths and opportunities, were also perceived as major contributors towards farm success. This shows that farmers have advantages over competitors and have opportunities and strengths to offset weaknesses and threats to ensure success and sustainability of their farms.

Furthermore, household farm managers perceived operational structure. Household farm managers do not view gender equity within the management of the farm as a key contributor to their farms' success. As it was expected, state owned farm managers

emphasised the farm operational structure, particularly a manageable number of executives and available succession plan, as major contributors to farm success.

The causes of failures for farms under the study were observed within all elements, namely farm management structure, and SWOT (particularly weaknesses and threats). The current management model and the manner in which farming support is provided to farmers are the main causes of failure. Poor communication with the main stakeholders and inability to meet the Good Agricultural Practice (GAP) certification requirements are also major causes of failure. Finally, gender inequality is also perceived as one of the major pitfalls in the success of the farms.

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CHAPTER 7: ASSESSMENT OF ELEMENTS THAT PROMOTES TRUE SUSTAINABLE CITRUS FARMING IN MPUMALANGA⁹

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Abstract

This study examined elements that promote true sustainable citrus farming in Mpumalanga Province in South Africa to identify elements that citrus industry and relevant stakeholders can use in preparing and becoming more resilient to face future shocks and challenges. The study utilized data from randomly selected 190 citrus farmers collected through face-to-face interview using a questionnaire containing both open-ended and close-ended questions. The data was analyzed using descriptive statistics (mean, frequency) using the software Statistical Package for Social Sciences (SPSS). Results showed that the independent cooperatives and sole proprietorships farmers are educated, have business plans are able to exploit their opportunities for higher sustainability and handle new farming threats. While, the Communal Property Associations (CPA's), state owned and family orientated citrus farms are not sustainable. This is disheartening because majority of these farms were transferred to the farmers almost fifteen years ago. The study recommend that government needs to review functionality, as it serves as the foundation from which most of the factors hindering performance and sustainability need to be resolved. Government must provide support to boost existing citrus farmers and encourage the establishment of new initiatives to address current and emerging problems to enhance e performance and sustainability of the sector in provincial, national and global markets.

Keywords: Assessment, elements, promotes, true sustainability, citrus farming

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7.1. Introduction

Sustainable farming is a prerequisite that citrus farmers must adopt to ensure sustainability of their farms and citrus industry as a whole. A farm that is sustainable will be able to face current and future challenges and shocks and promote its growth. In the 21st century, farmers must know as much, or more about how to manage a farm to counterbalance unsustainable consumption of natural resources like healthy soil, water, and air as well as climate change that is impacting negatively on their crops than they do about the pests or bacteria that are eating their crops. (JoF, 2011:34; SBASA, 2013:3).

Sustainable farming it is that discipline of agriculture charged with the responsibility of, as Dumanski (1997:15) would say, 'taking care of the natural resources today for the sake of the future generation'. Literature is stumpy with the elements that promote true sustainable citrus farming. What is really discouraging is that, sustainability in the citrus industry is generally perceived as yet another restrictive compliance the industry must adhere to (JoF, 2011:34).

In Mpumalanga Province, the sustainability of CPA's, state owned and family orientated citrus farms as compared to their counterparts both in commercial cooperatives and sole proprietorships farms has created many questions. These farms are operating in the same area with similar natural conditions and challenges. But how do commercial cooperatives and sole proprietorships farmers are able to deal with current challenges and shocks and prepare for future risks and promote their farms growth while their counterparts are tumbled-down by the same challenges? Are the managers of commercial cooperatives and sole proprietorships farms just fortunate or do they have some secret elements? Even so, what are the elements that promote true sustainable citrus farming in Mpumalanga?

In its attempts to answer the above question and identify elements that promote true sustainable citrus farming in Mpumalanga, This study assessed the performance and sustainability of commercial cooperatives, sole proprietorships, Community Property Associations (CPA's), state owned and family orientated citrus farms in Mpumalanga. Thus, this paper examined elements that promote true sustainable citrus farming in

Mpumalanga Province and identified elements that citrus industry and key stakeholders can use in preparing and becoming more resilient to face future shocks and challenges.

Thus, this paper examined elements that promote true sustainable citrus farming in Mpumalanga Province and identified elements that citrus industry and key stakeholders can use in preparing and becoming more resilient to face future shocks and challenges.

7.2. Methodology

The study was carried out in a form of case study using CPA's, state owned and family orientated citrus farms. This method has proven to do well and has brought the researcher to a better understanding of complex issues within the selected CPA's, state owned and family orientated citrus farms and extends experience and add strength to what is already known through previous research. This method has been used by scholars such as Terblanche, Stevens & Sekgoka (2014) in their comparisons of land reform farm management models. This study has opted to use quantitative research approach but with a strong support of qualitative methodology.

The combination of these two methods went beyond to the establishment of how severe is the problem at hand. The other strength has enabled the study to use both primary and secondary data. In Mpumalanga Province, there were 20 citrus producing CPA's with a total number of 186 managers, 10 family orientated citrus farms with 10 managers and 06 state owned citrus farms with 06 managers.

A proportionate simple sampling approach was adopted in this study which meant that each element of the survey population had a known and equal chance of being selected (Illowsky and Dean, 2013:27). There was one stratum representing CPA's and simple random sampling was applied. A total of 134 respondents were reached from a survey population of the managers of 186 land reform farmers who farms citrus under study in the 2017/18 season. There presented 72% of the entire population of these farmers. In a case of state owned and small subsistence family orientated farms,

it was decided to include all 10 households and 06 farms in the study area. This small number made sampling unnecessary.

7.2.1. Data collection tools and unit of analysis

In Mpumalanga, there about 186 land reform citrus farms managers, 10 small subsistence family orientated citrus farms with 10 managers and 06 state owned farms with 06 managers. A proportionate simple sampling approach was adopted in this study which meant that each element of the survey population had a known and equal chance of being selected (Illowsky and Dean, 2013:27). One stratum representing CPA's and simple random sampling was applied.

A total of 134 respondents were reached from a survey population of the managers of 186 land reform farmers who farms citrus under study in the 2017/18 season. These presented 72% of the entire population of the farmers. In a case of state owned and small subsistence family orientated farms, it was decided to include all 10 households and 06 farms in the study area. This small number made sampling unnecessary.

A range of methods were used to gather data; being structured and semi-structured questionnaires, participant and observations and focus group discussions. The study used the combination of closed-ended and open-ended questions. These methods complement each other as recommended by Matunhu (2011). The advantages of structured questions were that; they were more efficient of their ease of analysis. The collected data was captured and manipulated using Statistical Package for Social sciences (SPSS). With regarding to ethical consideration, the respondents were assured that confidentiality would be assured and that they were not forced to participate in the study.

7.3. Results and discussions

7.3.1. The sustainability rate of the citrus farms

The major citrus production areas in Mpumalanga are Onderberg, Nelspruit and Senwes. According to CGA (2015:33) and CGA (2018:46) citrus production in

hectares has declined in Mpumalanga from 9 375ha in 2015 to 5 393 ha in 2016 after a decline in the land under production. Elsewhere, DAFF (2017:95) has observed that production has also went down due to factors such as the rising costs of production, legislative requirements, global harmonization of standards, global warming and emerging farmers.

The participants were asked to describe the nature and extent of their understanding of the problem. The participant's revelations are depicted in Table 7.1, indicating the number of times each element being; executive composition, farm's operation and weaknesses and opportunities were mentioned during the interviews.

Table 7 1: Categories of elements promoting true sustainability

Conditions	Frequency	Total number of Focus Groups
Executive composition (Internal elements)		
- Farm's executive composition	109	13
- Managers age	110	13
- Education	121	13
Farm's operation		
- Sound business planning	144	13
- Farm management model	117	13
- Transfer of ownership	110	13
Weaknesses & Opportunities (External elements)		
- Farm's opportunities	107	13
- Farm's threats	76	13

According to the results in Table 7.1 above, most of the elements promoting true sustainability fall under farm's operation, which are critical in view of this study's concerns about the rate of sustainability of land reform farmers in Mpumalanga. The farm operation is of particular relevance to this study.

The other contributing elements were composition of the executive structure. The farms with smaller composition structure as stated by DRDLR (2013:4); Terblanche *et al* (2014:82) and Lahiff *et al* (2012:1) are most likely to have less complicated social issues and conflicts than the one with a larger structure. Other factors that promote true sustainability are the ability to exploit opportunities and handle new farming

threats. This is encouraging because these farmers have knowledge about the situation inside and outside their farms (Woods, 2013:25).

7.3.2. Comprehensive business planning

The business planning should be realistic and involve farmers when preparing the plans. It is a key plan that shows where business wants to go in future and provides the challenges and shocks that the farm might face and provide strategies that a farmer must apply in mitigate the shocks (SBASA, 2013:91). Table 7.2 below lists the elements related to the business planning that were perceived by managers as contributing to sustainability of citrus farms.

Table 7 2: Elements of a business plan

Elements	Frequency	Description
Operational and product plan	109	Farmer must own farm in title ownership. Number of executive management must be manageable
Risk planning	69	Manager must be able to identified possible risks. Manager must have risks mitigation strategies at place (to lessen the negative impact of theory stop it from occurring)
Staffing plan/sourcing of staff	48	The manager must have experience in farming of at least more than 5 years The farm must hire local community members (to reduce poverty and instil sense of ownership of the farm (socially acceptance)

The major element identified within the business plan was an operational and product plan. Majority (109) participants raised this element as a key element that promotes true sustainability of citrus farms. This element was echoed by DAFF (2017:95) as one of the elements that will enable farmers to know and project production costs early, legislative requirements, and global harmonization standards for the product.

Second element relates to risk planning. The farmer must design an action plan that will enable the manager to cope with risk. The risk action plan should enable the manager to mitigate risk and deliver the produce at the right time. The manager, as stated by SBASA (2013:125) and Van Reenen and Marais (2013: 142-143), must have efficient risks management tools at hand to ensure that the standard of living of those who depend on the farm is preserved, strengthened and provide support to the environment that supports the investment in the farm. Likewise, such manager must also be prepared to implement risk management actions. He/she must also be swift in identifying risks that might cripple the production and hamper farm's sustainability.

The last element raised was staffing plan or sourcing of the staff. Farm manager must have experience in managing a farm. The manager must at least have managed a farming enterprise for a minimum of five years. Further, a farmer should try by all cost to employ the people from the surrounding areas. By so doing, the farmer will create jobs and alleviates poverty in the surrounding villages and safeguard the environment. This is in line with what the National Development Plan (NDP) (2012:219) has suggested, it suggested the following strategy, "a successful agricultural development based on a successful land reform, will create employment and strong environmental safeguards". The writer's sentiments are that, this will also ensure the farmers is accepted by the members of the society and they will safeguard the farm in the event of social unrests or natural disasters, since they will view the farm as their source of income.

7.3.2. Farmer manager's level of education

The importance of manager's education and age is perceived to contribute to the sustainability of the farm. The managers were asked their age to determine if it will contribute to sustainability of the farms. The results are illustrated in Table 7.3.

Table 7 3: Manager's level of literacy

Elements	Frequency	Description
Post matric qualification	80	Obtain post matric (tertiary) qualifications Youth must participate in farming activities
Secondary school education	86	Attended and completed secondary school

The results in Table 7.3 above illustrates, that majority of farm managers has attended and completed secondary school (matric). These highlights that these managers are capable of being able to read and write (understand and interpret the business plan). These indicate a serious strength and a positive implication to the sustainability of a farm.

It was also encouraging to see that other managers have obtained tertiary qualification (Table 7.3). These means that managers have integrity, sense of responsibility, practical experience, technical knowledge, business acumen and information (Van Reenen & Marais, 2013:13).

7.3.3. Principal activities in farm management tasks

Farming is a dynamic business that is always affected in different ways, including changes in the climate, technology, consumer's attitudes, and economy and government policies. Therefore, little in farming remains unchanged for long: markets conditions change year to year. Likewise, weather conditions change, as do the governments agricultural and development policies (more particularly when a new government takes office). Thus, those who are in charge of managing the farms must keep abreast of these changes and developments and become aware of global influences that could have an impact on the sustainability of their farms.

Manager should be generally cohering not only of the environmental friendliness, societal acceptance and economic viability for taking care of the natural resources (DAFF, 2017:102; NDP, 2012:219), but also, as pointed out by SBASA (2013:10-11) and Van Reenen and Marais (2013:3-4) to be able to follow principal activities and tasks of a particular farm management tasks; such as coordinate, control performance

and provide corrective deviations from unfortunate situation. Table 7.4 below illustrates farm management process that managers interviewed indicated that they follow in their respective farms.

Table 7 4: Farm management tasks

Principles and activities	Frequency	Description of the principles and tasks
Coordination/control	109	The systems for measuring overall performance are in place Actual recorded results are kept and compared to planning standards Corrective actions are taken from expected behaviour to ensure that plans are carried out
Planning	98	Determined the future activities that are required to attain the farm's Identify the requirements such as accreditation and protectionisms from the host countries
Organization/ Implementation	85	Access to the required infrastructure Sound communication with stakeholders Choose the potential markets and eliminate inaccessible or inappropriate markets

Table 7.4 illustrates that in citrus farms within Mpumalanga, high activities revolve around coordination and control; this could be due to global harmonization standard on plant health and import arrangements. This is not surprising, as farmer's that are export driven are obliged to always ensure that plant health is in line with the required GLOBALGAP certification and standard, while the agent must be able to find alternative and reasonable market should the shipped produce be banned (CGA, 2018:26). Further, managers reported that they have systems of measuring the overall performance in place and as a result, actual recorded results are kept and compared to the actual planning standards.

Secondly, manager outlined that they also spent time in planning to determine future activities needed to attain the farm's objectives (Table 7.4). It is the writer's observation

that a framework must be created for the future implementation and control of different production elements (farm/product accreditation and protectionisms from the targeted markets) to achieve farm sustainability. Further, as soon as planning exercise is completed, the manager should start to priorities various tasks, draw up schedule, wraps up markets access deals, resuscitates a relationship with key stakeholders and select possible and lucrative markets and avoid the markets that are inaccessible and inappropriate (Woods, 2013:67).

Lastly, managers in the farms under the study also indicated that the export infrastructure is available for their produce (Table 7.4). They have good communication with key stakeholders and segment their market and do away from those that are not profitable. For instances, Citrus International research (CIR) has conducted research in this issue and the results provided that South Africa should pursue export to markets such as China market due to more favourable conditions for access CGA (2018:36), likewise, Woods (2013:67) also raised the same advises.

7.3.4. The right to use land

The farm’s sustainability analysis concluded that certain ways of obtaining rights to use the land for farming purposes are more prone to sustainability than others. Likewise, in its report titled “Land Audit Report” the DRDLR (2017:7) echoed the following revelations, “majority of the sustainable farms are owned in Title Deeds”. The participants were asked to describe their type of ownership. Table 7.5 shows the rights identified by participants.

Table 7 5: Rights to use land for farming

Land ownership	Frequency	Description of ownership
Owning land in Title Deed	110	Land parcels are owns in title deeds (registered in the Deeds Office
Farming on tribal/communal	42	Access land for farming by communal tenure Rights to farm the land are obtained through "Permission To Occupy" from the local Tribal Authority
Leasing land	38	Obtain ownership through a fixed cash lease per size of land

The farmers pays the lessor/owner a fixed amount of cash area that is hired

According to Table 7.5, majority of the farmer's farms on the land that is owned in Title Deeds. The right to use land by means of a communal tenure is also highlighted as one of the method that encourages farmer to till and manage the land sustainability, because the granted consent to use such land is through permission to occupy (PTO) provided by the Local Tribal Authorities. The advantage of communal tenure is that it provides benefits of free, or relatively cheap, access to land and provides a social safety net for some of the poorest South Africans. Though, this system is gender insensitive and the land use rights are not legally recognized.

The problem of communal tenure and gender requires serious attention. The following measures are the writer's suggestions that there is also a need to transfer title deed of communal land to farmers, either as groups or individually since this will give farmers full ownership of the land they till. Furthermore, there should also be systems in place to undo existing customary laws and practices that discriminate women against access to land and involvement in community governance; instead this skewedness's should be reversed.

Farmers can also gain access to use land by leasing. In Mpumalanga today, this is predominantly in the farms that were transferred to the new owners through land reform programmes, more particularly restitution farms. Land reform beneficiaries are farming less and less on their own land, and prefer leasing it to someone else who can farm the land for his own account. The land owner and lessor enters in one of the following types of lease agreements; (i) fixed cash, (ii) share-cropping, (iii) stock-sharing, (iv) fluctuating cash lease or (v) all of the above.

The DRDLR the official repository of land reform in the country, currently does not register land rights by race and does not compel landowners to disclose land use changes for the sustainability of land reform projects (DRDLR, 2017:20). The result is that there are land reform farms that have been leased but the revenue and success of such farms are regarded as a success of the owners (beneficiaries); thereby losing the true reflection.

7.3.5. Managers integrity and sense of responsibility

Sustainability is improved by key elements such as farmer's knowledge not only of the modern techniques for raising crops and farm animals, but also of operating a farm business accordingly (SBASA, 2013:3). The farmers were asked to indicate their sense of integrity and responsibility. Their findings are depicted in Table 7.6.

Table 7 6: Operational and technical knowledge

Element	Frequency	Description of the element
Technical knowledge	129	Farmer must learn prerequisites related to growing crops from their parents and siblings, often from very young age Access to modern farming technology must be exposed at young age
Practical experience	52	Practical farming experience of more than 8 years

Based on the results in Table 7.6, a farm will be sustainable as long as the person who manages it has both technical knowledge and practical experience. A manager must have the technical skills to manage the product (be it a crop or livestock) to a level where it appeals to the market. Those who have learned these skills from their parents and siblings from a very young age as pointed out by Olwagen (2017) and Mtshweni (2017), are more likely to surpass their counterparts. Manager who has practical experience of more than eight years is likely to have experience in a variety of areas including crop production, agricultural chemicals, farm management, horticulture, or something completely different (Oladele, 2011).

7.3.6. Making the most from the new opportunities

The assessments of performance, sustainability, and success and failures analysis indicated that certain farms are more capable of making most of their new

opportunities than others. Farmers were asked to highlight the opportunities that their farms can exploit to improve level of sustainability. Figure 1 shows the new opportunities identified by the participants.

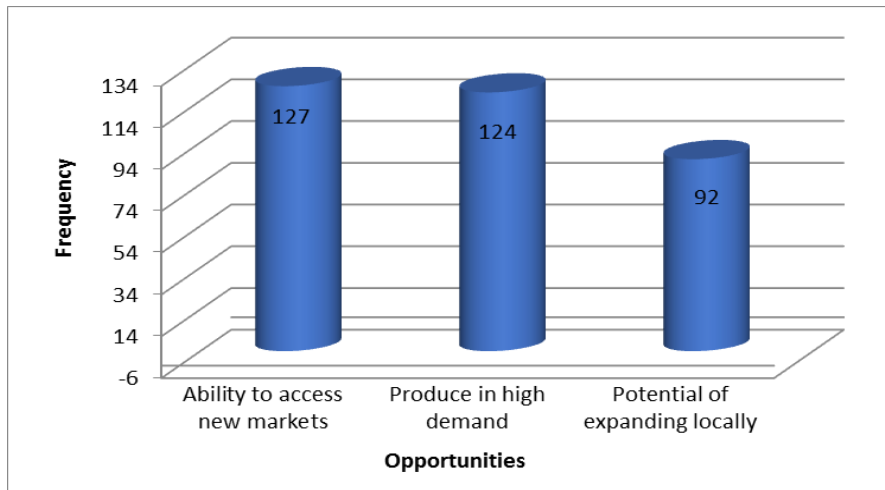


Figure 7 1: New opportunities

In the results in Figure 7.1 above, the participants stated that their farms have an opportunity of accessing new markets and indicated that their produce is in high demand. This is encouraging because South African citrus are export driven. CGA (2017:18) in its “annual report” indicated that South African citrus export volume has grown and there are more markets that the industry can focus on gaining access to. However, there is also a need for DAFF to provide technical/scientific information to amend the quarantine status of some pests that are retained on the importing countries lists. The researcher’s sentiments are that, the formation of Brazil, Russia, India, China and South Africa block, better known as “BRICS” may have opened new opportunities that have led to increased volumes of citrus demand.

7.3.7. The ‘New’ threats handling

The way farms are operated has changed to such an extent that ‘new’ threats handling strategies are needed (DAFF, 2018:102; CGA, 2018:35). In this so called new threats handling, the researcher’s argument is that, attention should be given to the

management of the farming entity and introduce new strategies for successful threat handling. Likewise, participants were asked to indicate the new threats in their industry. The results are shown in Figure 7.2.

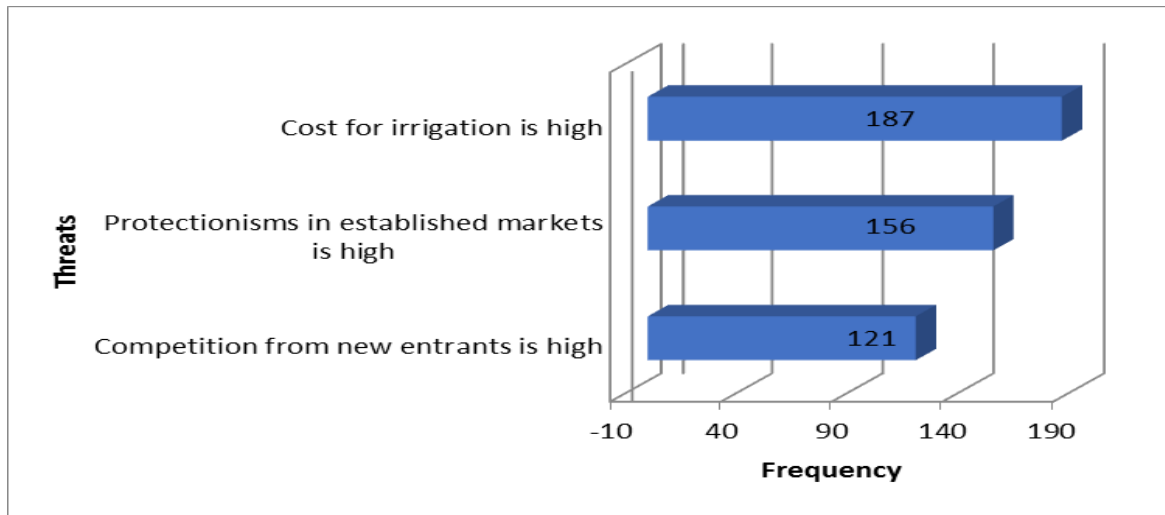


Figure 7 2: New threats in citrus farming

According to the participants Figure 7.2, the time to pay much attention only on production aspects is long gone and managers are now forced to produce more with little that they have, e.g. they have to take care of the environment, be socially acceptable and economically viable. Thus, competent farm manager as pointed out by Woods (2013:67), DAFF (2017:102), Makhura et al. (2011:19) now demands sound interpersonal skills to increase productivity of per unit of water (being more crops per drop) and scan the external environment (be it their customers, suppliers, partners, market shares and technical standards, customer preferences, the industry and competition).

7.4. Conclusion

This paper set out to provide information on elements that promotes true sustainable citrus farming in Mpumalanga. In Mpumalanga on average, the gross value of production (GVP) for citrus has been decreasing over the past eight years. The industry experienced three successive poor years starting from 2014 to 2017. The

decrease was mainly due to amongst others unsustainable land reform farms, decreased exports volumes and the weakening of the Rand against the major currencies of South Africa's trading partners.

On the whole, this paper revealed, the need to have a comprehensive business plan with more emphasis on certain areas, such as operational/product plan, organization and staffing plan as well as risk planning to ensure true sustainable citrus farming. It revealed the need to improve education more particularly by acquiring at least secondary or tertiary education and farm management hierarchy must include youth.

This study indicated areas of management, more particularly the principal activities of every farm management tasks that managers has to adhere, such as control, coordination and organizational/implementation.

The study also raised land tenure or right to use land systems that need urgent attention. Title of communal land must be transferred to farmers, either as groups or individually.

Those who are appointed to manage farming enterprises must have both technical knowledge and practical experience. Technical skills may include product management (be it a crop or livestock) to a level where it appeals to the market. The farmers must be exposed to these skills at a very young age. Farm managers should at least have more than eight in farming.

Managers must be more capable of making most of the new opportunities by employing good technics in exploiting those opportunities and be able to handle new threats that would have been brought by changes in climate, technology, the economic climate, new legislation protecting the consumer.

7.5. Recommendation

Arising from this study's findings, the following recommendations are offered to government and various parties involved: Efforts should be made to develop inclusive whole farming business planning for land reform farms.

The Title Deeds of communal land must be transferred to farmers, either as groups or individually. The shareholders must appoint persons with both technical knowledge and practical experience to manage their farms.

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CHAPTER 8: A PROPOSED FARM MANAGEMENT MODEL FOR A SUSTAINABLE LAND REFORM IN MPUMALANGA

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Abstract

The sustainability of the land reform farms relies heavily on a farm operational plan for the successful operation of a farm, identifying sources of revenue, knowing the intended customer base, products, and detailed financial plan. A land reform farm that is not viable and is not well managed cannot maintain a profitable existence over the long term. Maintaining a farm's sustainability requires firstly, good investment and good model. Without a model on how to intelligently operate and grow a farm business, a farmer will surely fail or, at the very least, not grow a farm. This study used the findings from the main elements that improves performance and sustainability of commercial cooperatives and commercial family citrus farms, the elements of success and failure in the CPA's, state farms and small subsistence family orientated farms and those that promote true sustainable land reform in Mpumalanga Province. The results show that, the land must be transferred to the beneficiaries rapidly and without distorting the land market and business confidence, baseline study must be done to determine the key needs of the beneficiaries, the executive on the management structure must be provided with clear job descriptions, senior management of PDoA must sign the MoU on extension and CGA, the whole farm business planning must be done and farmers must have direct access to a professional extension services.

Keywords: Farm management, model, sustainable, land reform, opportunities, threats

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8.1. Introduction

The sustainability of the land reform farms depends on a plan for the successful operation of a farm, identifying sources of funding, segmented customer base, products planning, and details of financing. A land reform farm that is not viable and is not well managed cannot make progress. According to Lahiff (2007:1), the vast majority of restitution farms, in particular, have not achieved their developmental aims. The former employees of the restituted farms blame the community for letting the farm to fall into ruins while the community blamed the CPA executives for theft and mismanagement; on the other side the CPA executive is blaming the managers for being white and sabotaging government's effort and squandering the funds while the managers are blaming the government for taking too long to release the funds (Zvomuya 2005: 62).

Lahiff (2007:1) also found that productive farms transferred to the land reform beneficiaries across all types of land reform were generally failing to deliver significant benefits of any sort to the members of the community especially those who have claims. However, Van Reenen, Marais and Nel (2013) even stated that, "to maintain a farm's sustainability, a farmer firstly requires a good investment and a good model. Without a model on how to intelligently operate and grow a farm business, a farmer will surely fail or, at the very least, not grow a farm".

In South Africa, the majority of the land claim communities find it important and necessary to employ knowledgeable and skillful farm managers to assist them to manage the farms on their behalf. However, it does not seem to be so much helpful (Terblanché, Stevens & Sekgota, 2014: 83). Although, they did not advance any reason why the employment of skilled managers it is not so helpful. Other authors have come up with the reason for example it is argued that there are farms that were bought and handed over to the communities but three years after transferring of land and rights the farms were none operational and none productive (Zvomuya, 2005).

This chapter identify the main elements that improves performance and sustainability of commercial cooperatives and commercial family citrus farms, the elements of success and failure in the CPA's, state farms and small subsistence family orientated

farms and those that promotes true sustainable land reform in Mpumalanga Province to avoid repetition of previous failures. This chapter uses the findings from the main elements that improves performance and sustainability of commercial cooperatives and commercial family citrus farms, the elements of success and failure in the CPA's, state farms and small subsistence family orientated farms and those that promotes true sustainable land reform in Mpumalanga Province to develop a farm management that will ensure sustainability of land reform farms.

8.2. Research methodology

The study employed a case study approach using the four types of project ownership line namely, the independent cooperatives, sole proprietorship, CPA's, state owned and family orientated citrus farms. This method has proven to do well in a study conducted by Lahiff, Nerhene and Manenzhe (2012) and has brought the researcher to a better understanding of complex issues within the selected CPA's, state owned and family orientated citrus farms and extends experience and add strength to what is already known through previous research. A case study method has been used by scholars such as Terblanche, Stevens & Sekgoka (2014) in their comparisons of land reform farm management models. This study has opted to use quantitative research approach but with a strong support of qualitative methodology.

A proportionate simple sampling method was employed in this study whereby stratum and simple random samplings representing CPA's, independent cooperatives and sole proprietorship were applied. A total of 134 CPA's 20 independent cooperatives and 20 sole proprietorships respondents were reached. In a case of state owned and small subsistence family orientated farms, it was decided to include all 10 households and 06 farms in the study area. This small number made sampling unnecessary. The total number of the respondents represented 70% of the entire population of these farmers, which means that, as stated by Illowsky and Dean (2013:27), the entire population of farmers were mostly likely to have an opportunity to participate in this study.

8.2.1. Data collection techniques

The study used closed-ended and open-ended questionnaires, participant and observations and focus group discussions. The study used the combination of closed-ended and open-ended questions. These methods complement each other as recommended by (Matunhu, 2011). However, in the study, closed-ended questions were structured. The advantages of structured questions were that; they were more efficient of their ease of analysis. The collected data was captured and manipulated using statistical software. SPSS was then employed for the statistical analyses. With regarding to ethical consideration, the respondents were assured that confidentiality would be assured and that they were not forced to participate in the study.

8.3. The role of a farm management model

A model is a framework to facilitate understanding by eliminating unnecessary components to assist in farming objectives and rational decision making to achieve those objectives, which are goal-orientated. It further assists in stimulating “what if” scenarios by explaining, controlling and providing reasons of why and as to how decisions are to be made and it also serves as a guide for current and future decisions (SBASA, 2013:91; Van Reenen & Marais, 2013; 2).

Farm Management is also regarded as the process whereby a farmer plans, organizes, coordinates and controls all the production factors of a farm business, namely land, labour and capital, in order to attain certain objectives such as maximum profit growth, sustainability and an improved standard of living (Terblanché, *et al*, 2014: 83; SBASA, 2013: 5). Furthermore, a farm management is deemed as a science, an art form or a profession that involves systematized knowledge SBASA (2013), in this case of management tasks (planning, implementation, coordination and control) and management resources information, techniques and principles). Farm management as a science can be acquired through learning, while an art relies on natural talent and is linked to personality traits such as motivation, the ability to communicate and negotiate self-discipline and leadership (SBASA, 2013).

The above sentiments offered an excellent guide on the role of farm management model and both the concepts model and farm management. The writer's views are that, the role of farm management model is to, provide a clear guidance to the manager or the person in charge of the farm to understand the farm management tasks and management of the resources to ensure that the manager is able to eliminate unnecessary components but make sure that rational decisions are made to achieve the objectives of the farm.

8.4. Current land reform farm management model's efforts

Before discussing the current farm management strengths and weaknesses, it is pertinent to identify the types of farm management models for South Africa's farming context. According to Lahiff (2007:3) and Terblanché, et al. (2014: 83), there are a variety of land reform farm management models in South Africa. Some of them include the following; individual production, group access to land for large scale agriculture, joint venture/strategic partnership and contractual agreements. However, the type of the land reform programme and the size of the beneficiary group involved in the land reform programme determine the management model. For the purposes of this study, the discussion is centered on all the farm management models but limited to the restoration or other transfer of farms which are used for citrus farming.

One of the most promising model is called 'inclusive business models' in agriculture. There is a renewed interest in this model as it can contribute towards growing agricultural investment in lower income countries. It is argued that this has been witnessed in recent years especially in places where this model has helped to jerk up poor people into value chains as producers, employees or consumers, in ways that are both equitable and sustainable (UNDP, 2010: 3).

These inclusive business models in the agricultural sector are widely seen as a means of providing access to capital, information and markets for smallholders and communities who may otherwise be marginalized from the economic mainstream and are therefore seen by many as an effective means of rural development. Such initiatives can see resource-poor producers and communities partnering with multi-national companies, large domestic companies, small or medium sized enterprise, or

non-profit organizations. Joint ventures between companies and local communities have received considerable attention in recent debates about inclusive models in agriculture (Lahiff, Nerhene, Manenzhe, 2012:3).

Terblanché, et al. (2014) who conducted a comparative analysis of two models using the land reform group based farm management model and the strategic partnership model, in two separate areas with the same levels of support services, measured performance in terms of management structure and post settlement support. The authors revealed that the farmers in these two models were performing poorly due to lack of a well-defined management structure and where there is a management structure, there is no authority to approve requests by the farm managers for purchasing farm inputs and this causes unnecessary delay.

It is argued that farmers should appoint knowledgeable, skilled and experienced partner/managers. With regard to post settlement support, it was argued that, the management does not have direct access to a professional extension advisory service. It was further pointed out that farmers are not part of farmers' study groups which is regarded as a valuable source of information, skills and knowledge and one project has received support from Citrus Growers association (CGA) (Terblanché, *et al*, 2014).

The study by Lahiff et al. (2012) examining the experience with joint ventures between companies and communities in South Africa's agricultural sector, focused on two case studies, all but one of the first rounds of strategic partnerships collapsed, some with spectacular losses. The benefits to communities to date have been negligible and it would appear that the farms in question have experienced considerable decline in terms of employment, assets, profitability and contribution to the local and national economy. Nonetheless, some communities, with support from a few private-sector operators, are in the process of restoring productivity on the farms and developing alternative business models that can replace the now-discredited strategic partnerships (Lahiff *et al*, 2012: 61).

In this study, the researcher has observed that in Mpumalanga, majority of farmers embrace individual production, group access to land for large scale agriculture and

joint venture/strategic partnership. For example, land reform farmers who accessed land through a group access model tend to have insufficient capital and knowledge to be able to carry on with farming independently. As a result, they farm temporarily with an established farmer until sufficient capital and experience is built up to become independent.

Likewise, majority of CPA's farm manager's indicated that their farms were previously in the brink of collapse due to the usage of the group access to land management model, but the combination of both group access to land and joint venture/strategic partnership has since improved the farm's performance and sustainability. This is not a surprise as Van Reenen et al. (2013), even stated that majority of farmers tends to combine more than two models and this has proven to be an added advantage, more particularly in the present period of high land prices, scarcity of capital, high interest rates and advanced technological development.

8.5. Vibrant, equitable and sustainable land reform farms

In pursuing to achieve vibrant, equitable and sustainable farms to improve the livelihoods of the previously disadvantaged communities, it all started during the so called "first phase (1994-1999)", followed by "second phase (1999-2007)" better known as Mbeki era, and then later followed by "third phase called post Polokwane era (2007 to present)". The third phase was launched with an acknowledgement of the failures of land reform, with new Rural Development and Land Reform Minister Gugile Nkwinti being widely quoted as saying "more than 90% of (land reform projects) are not functional, they are not productive. That land has been given to people and they are not using it (Greenberg, 2013:13).

Following from the Land Summit, the ANC's 52nd National Conference in 2007 (ANC, 2007) called for the pursuit of a land reform farmer strategy and a need to sustain the land reform farms. Several strategies such as Proactive Land Acquisition Strategy (PLAS) and Comprehensive Rural Development Programme (CRDP) were introduced. However, today land reform is much more central to CRDP than it was in the earlier rural development frameworks. It emphasizes that those who acquired land

through any land reform programme should be provided with appropriate support for productive use of land and promotion of agricultural co-ops throughout value chains.

The design of land reform farm management models has not facilitated the development of vibrant, equitable and sustainable land reform, despite the rhetoric favouring this model. Farms are not sustainable enough and appropriate support for the productive use of the transferred farms has not been forthcoming. For instances, the Minister of Rural Development and Land Reform Maite-Nkoana Mashabane concurred with arguments that little development has been made in land reform. The Minister has indicated that, “the department is putting measures in place to ensure sustainable production on redistributed farms and improve intutional support systems” (Nkoana-Mashabane, 2018:9). In part this is the product of contradictory and competing conceptions of the role of land reform (more particularly group access model) farm managers.

However, Mabuza (2016:59) in the study assessing the socio-economic impacts of land reform projects benefiting from the RECAP has observed that majority of farmers experienced improvement in their economic well-being as a result of RECAP. In terms of production, the results by Mabuza shows that the production and jobs created within the farms under RECAP are continuously increasing, but the sustainability of the programme is questionable. The reason could be the fact that the amount spend on the project is still low and the Department’s turnaround time for grant approval. The participants in this study echoed that majority of cooperatives and sole proprietorship’s farms are sustainable. The reasons given are that these farms are given to people with skills, knowledge and experience to use and manage them.

8.6. A sustainable farm management model for land reform farms

Chapter 5 analyzed the main elements that improves performance and sustainability of commercial cooperatives and commercial family citrus farms, the elements of success and failure in the CPA’s, state farms and small subsistence family orientated farms and those that promotes true sustainable land reform. This section focuses on the development of a sustainable farm management model that will ensure

sustainability of land reform farms and help these farmers. Truly, the current management style of land reform farms is confronted with many challenges. The attention should be given to the management of these farms and the development of a new model for a successful land reform farms. The flowchart in Figure 8.1 summarizes the farm management process according to the proposed farm management model, while Table 8.1 represents the important activities to successfully implement the farm management model.

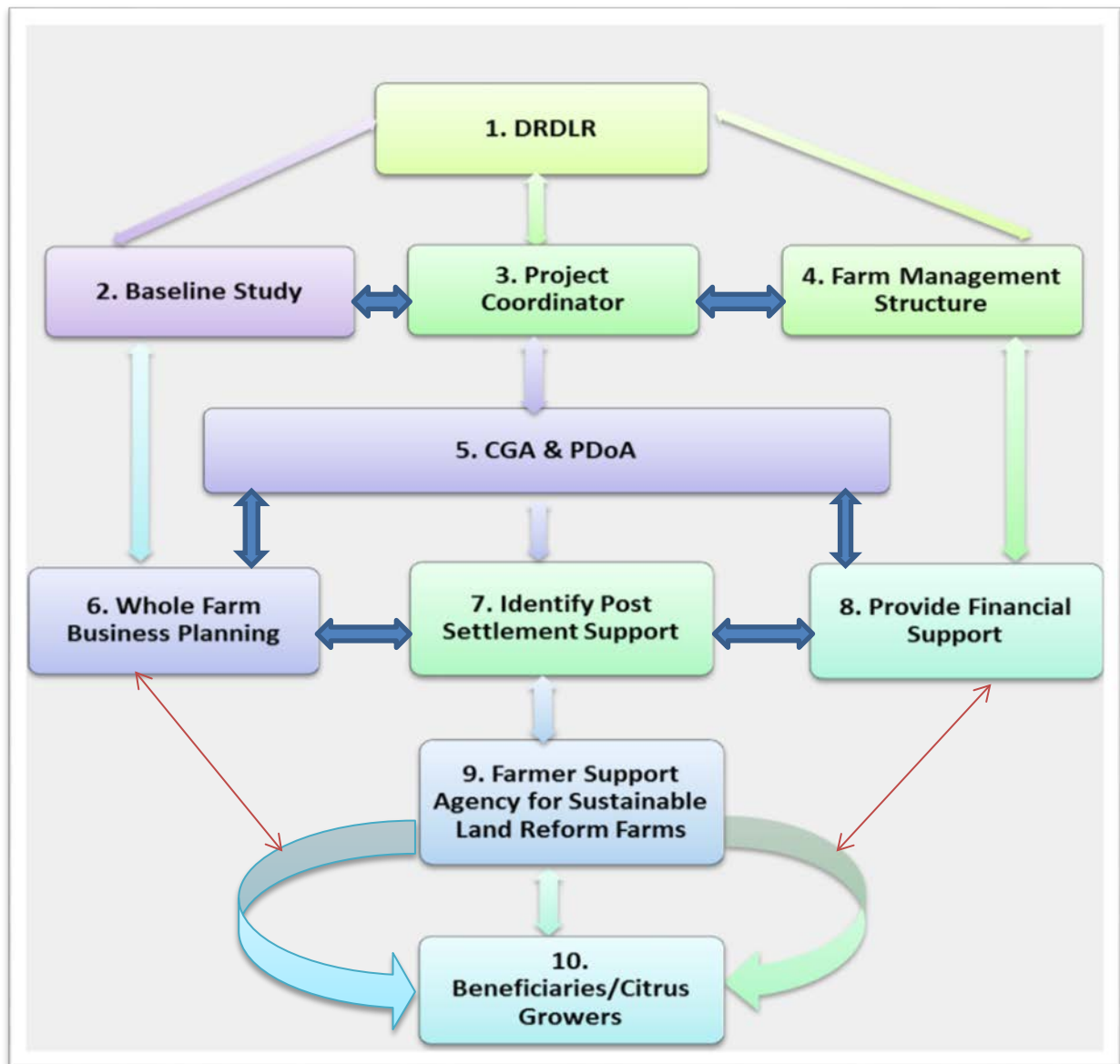


Figure 8. 1: Flowchart of a proposed farm management model

After an immense research on the issues affecting both success and sustainability of land reform farms and privately owned farms, this study has developed a model as illustrated by a flow chart in Figure 8.1 that can be used by the DRDLR, PDoA and CGA in providing support to the land reform farmers to speed up the service delivery and ensure sustainability in the agricultural sector as a whole. However, Table 8.1 below presents principal steps and tasks that the stakeholders have to follow to ensure that the essential activities of a flow chart of a sustainable land reform farm management are implemented accordingly.

Table 8 1: Principal activities of implementing farm management model for land reform

Elements	Activities
DRDLR	<ol style="list-style-type: none"> 1. Transfer land to farmers 2. Enhance opportunities 3. Provide financial support/grants
Baseline study	<ol style="list-style-type: none"> 1. Determine socio-economic situation. 2. Identify relevant stakeholders
Project coordinator	<ol style="list-style-type: none"> 1. Appointing project coordinator 2. Negotiate project coordinator's contract 3. Assess farmers strength and weaknesses
Farm Management structure	<ol style="list-style-type: none"> 1. Establish management structure 2. Determine authority to approve requests 3. Develop a structure 4. Appoint manager or partner 5. Manager or partner must sign agreement or contract
CGA & PDoA	<ol style="list-style-type: none"> 1. Sign Memorandum of understanding (MoU) 2. Establish strategy on financial support 3. Determine capacity building strategies 4. Look at government strategic planning
Whole Farm Business Plan	<ol style="list-style-type: none"> 1. Description of the farm 2. Strategic plan 3. Operational - product plan 4. Marketing plan 5. Organization and staffing plan 6. Financial plan 7. Risk planning 8. Implementation and monitoring
Post settlement support	<ol style="list-style-type: none"> 1. Access to professional extension advisory services 2. Determine needs for extension advisory services
Financial support	<ol style="list-style-type: none"> 1. Determine need for financial support 2. Establish strage 2. Liaise with government
Farmer support	<ol style="list-style-type: none"> 1. Assist emerging farmers in preparing all documentation 2. Provide mentorship 3. Address socio-economic issues
Beneficiaries	<ol style="list-style-type: none"> 1. Regard a farm as a Community Based Organization (CBO) 2. To be bona fide members of the community 3. Identify channels of communication 4. Sustain production 5. Improve food security

According to Table 8.1 DRDLR must rapidly transfer the farms to the beneficiaries without distorting the land market or business confidence, enhances opportunities for commercial farmers and organised industry to contribute through mentorship, training, strategic partnerships, commodity chain integration and preferential procurement and provide financial assistance to ensure sustainable production.

The execution of a baseline study as indicated in Table 8.1 above is also inevitable since it will assist in determining the socio-economic situation in the community (beneficiaries). This task is the responsibility of the Provincial Department of Agriculture, CGA and the extension advisory service. While, DRDLR should seriously consider appointment of a Project facilitator/coordinator to assess farmers opportunities and weaknesses as well as support the management and community. Project coordinator must at least be appointed for a minimum period of two (2) years.

A well-defined management structure needs to be established with clear job descriptions. The farm managers must have authority to approve requests by the executive committee for purchasing farm inputs without unnecessary delay. A well-defined management structure needs to be in place. The farmers must appoint knowledgeable, skilful and experienced partner/managers. Furthermore, the farmers and Strategic Partner (SP) must sign an agreement as contract. There should be a strategy to develop service suppliers especially from the beneficiaries, more particularly when some of the services (building construction and servicing machinery) could be provided by members of the beneficiary community.

Once farm management structure is established, the PDoA senior management of the province must sign the Memorandum of Understanding (MoU) on extension and Citrus Growers Association (CGA). They must also be available and be involved in the provincial land reform farms that seek support. Likewise, the whole farm business planning must provide purpose of farming and a context background, vision, mission and goals, determine factors influencing the farm (PESTeLE; Political, Economic, Social, Technological, Legal and Environment). The plan must also clearly depict the type of ownership and organizational structure, farm map, land use, sourcing of staff

and identify possible risks and provide risk mitigation strategy and keep records (Table 8.1).

The management must have direct access to a professional extension advisory service. If the service is not available, the appointment of a mentor is recommended. Where possible and available, the farm management should join farmers' study groups as a valuable source of information, skills and knowledge. It will be necessary for the farmers that in conjunction with the Strategic Partners (SP) determines his/her need for settlement support such as professional extension advisor, a consultant or a mentor. Table 8.1 further shows that the financial support to manage the farm is again non-negotiable. The business plan will indicate clearly what the financial requirements are in order to manage the farm. It is the responsibility of the Government departments to ensure that grants are made available on time and that a program such as Recapitalization and Development Programme (RECAP) and Comprehensive Agricultural Support Programme (CASP) be available for every land reform farm.

Table 8.1 above also illustrates that CGA and PDoA will further assist farmers in preparing all the documentation that the financial institution and DRDLR need in order to approve the application for financial support for the farmers. In the case of citrus farmer, CGA should be allowed to implement farmer support on behalf of land reform farmers and work closely together with the State Own Business (SOB) enterprises that deal with agriculture, being; National Agricultural Marketing Council (NAMC), Perishable Product Export Control Board (PPECB) and Agriculture Sector Training Authority (AgriSETA). Not leaving out the financial institutions such as Independent Development Cooperation (IDC) and various banks.

Likewise, the farmers should regard their farm as a Community Based Organization (CBO) in its nature and as such it requires that it should be formed by bona fide members of the community. They should also identify specific channels of communication and develop a communication policy that will outline the communication strategy. The farmers should establish and maintain good relationship between partners while encouraging very strong collaboration and cooperation between the beneficiaries. The community should be given feedback on progress especially on hiring/sourcing of staff and contract matters that the company might be

engaged with. They should also organise regular community meetings to report on finance to avoid speculations and misconceptions about farm management. The needs of the community should be catered for to avoid division among the community members. The farming business must be treated as a commercial business in order to maximize outputs through effective agricultural practices, which maximize income.

8.7. Conclusions

The aim of the study was to create a comprehensive and appropriate farm management model for land reform citrus farmers to ensure sustainability of these farms. To accomplish this aim, 134 CPA farmers, 10 small subsistence farmers, 20 farmers representing independent cooperatives, 20 farmers for sole proprietorship farms and 6 representing states owned farms were interviewed and participated in the study.

The study provided extensive theoretical reviews regarding the farm management models and land reform farms both in South Africa and globally. A particular attention was also given to elements that improves performance and sustainability of commercial cooperatives and commercial family citrus farms, the elements of success and failure in the CPA's, state farms and small subsistence family orientated farms and those that promotes true sustainable land reform. On the basis of this, key elements that will promote sustainable citrus farming in Mpumalanga were identified in consultation with various participants. The study concludes with the following key issues:

- The land must be transferred to the beneficiaries rapidly and without distorting the land market and business confidence.
- The baseline study must be done to determine the key needs of the beneficiaries,
- The executive members on the management structure of the farm entity must be provided clear job descriptions.
- Senior management of PDoA must sign the MoU on extension and CGA.
- The whole farm business planning must be done.
- The farmers must have direct access to a professional extension services.

The model above is developed as a balanced package to ensure sustainability by balancing gains and losses from different subsectors. It will be easy for the model to gain approval since various stakeholders stand to gain from it. For example, it is packaged with other role players in such a way that those who stand to lose from one role may perceive enough benefits in the entire package that they will support it. The surrounding communities will see potential benefits from the farms, and accordingly they will become willing to abandon the tactics of land invasions which, in any case, sometimes rebounded to their detriment. The fundamental thrust of the model is the creation of a level of a playing field and elimination of special economic privileges.

It will even ensure that a consensus to promote sustainability is achieved on the uniform treatment of all socio-economic actors when various interests are brought together to implement the model, instead of leaving the other role players to negotiate individually with government and financial lending institutions. When a broad range of issues are discussed in a farmer's study groups/forums with many various farmers, each farmer then can see that eliminating privileges for other requires reciprocity. In final conclusions, this model can be one of the more effective ways to promote sustainability in land reform farming farms and repeal entrenched and speculated privileges, or at least reduce them.

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CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS

9.1 Introduction

This chapter provides the conclusion of the study. It should be remembered that the study has examined the elements that promote true sustainable citrus farming to the following entities; commercial cooperatives, commercial sole proprietorships, Communal Properties Associations (CPA's), state farms and small subsistence family orientated farms in Mpumalanga. The conclusions drawn and recommendations developed from the analysis are summarized in the sections that follow next. These sections cover areas such as farm management structure, whole farm business planning, farm's strengths, weaknesses, opportunities and threats (SWOT).

9.2. Conclusions

The question to be asked is what the originality of this study is. It can be concluded that this study has developed a model to promote farming as a business on a sustainable basis and has also identified different collaborators with responsibilities. The model should serve as new approach which should be seen as an original contribution to the body of knowledge operationalizing the model.

This study was not just about the development of a sustainable farm management model for land reform. But it was also a study about the sustainable management of citrus farms. Creating a sustainable farm management model for land reform, instead of farming in general, is the main contribution to the body of knowledge. The model relates to and applies to land reform citrus growers only. These reside in rural areas. Although the model may be replicated to the land reform farmers in other commodities in the agricultural sector in rural areas, these findings cannot be replicated in urban farming.

9.2.1 Farm management structure

There is no doubt that both independent commercial cooperatives and sole proprietorship farms are continuing to perform better and sustainably. The main factors enhancing their performance and sustainability are farm structure and operating

characteristics (i.e. manageable number of farming members, adequate level of education, and recruitment of experienced and skilled managers, farm management systems and detailed business planning).

It can be inferred that independent commercial cooperatives has a common goal, which is to achieve economic viability and societal acceptance in a collective manner by all members. The structure ensures that all farming members benefit from the cooperative and maximize profits for themselves and cooperative. While in sole proprietorships, the small farm structure allows the decision making process relatively short and the owner is entitled to majority of profit. Both cooperatives and sole proprietorship farms has kept their performing and sustainable models.

In contrary, CPA's farms are failing as a result of the current farm management model, while a farming support and employee's satisfactions were not perceived as a major contributor to farm failures, which contrasts with the widely held belief that land reform farms are not getting necessary post settlement support. However, small subsistence farmers and state owned farmers perceived the manner in which farming support is ushered to them as the main cause of failure, current farm management model and employee's satisfaction. The DRDLR has kept a non-performing model of emerging land reform farmers since the early-2000s, yet it was not fully equipped to provide the necessary balanced package. DRDLR policies and systems were not meeting the needs of emerging farmers. As a result, the turnaround time was too long, to the detriment of both farmers and the department.

Land reform farms will be sustainable once current farm management structure is rearranged to be responsive to the needs of the beneficiaries. The government inadequacy in developing an effective and inclusive farm management was pointed out by Edward Lahiff, a researcher at Programme for Land and Agrarian Studies (PLAS), School of Government in the University of Western Cape in the year 2007 and Makhura et al in their Land Bank Report of 2011. The land reform farmer manages the farms on their own during incubator stages, instead of soliciting the participation of the experiences and supporting organizations. There is a need for DRDLR to assess

and adjust the land reform management model to cater for the needs of land reform farmers.

The model above is developed as a balanced package to ensure sustainability by balancing gains and losses from different subsectors. It will be easy for the model to gain approval since various stakeholders stand to gain from it. It is packaged with other role players in such a way that those who stand to lose from one role may perceive enough benefits in the entire package that they will support it. The surrounding communities will see potential benefits from the farms, and accordingly they will become willing to abandon the tactics of land invasions which, in any case, sometimes rebounded to their detriment. The fundamental thrust of the model is the creation of a level of a playing field and elimination of special economic privileges.

It will even ensure that a consensus to promote sustainability is achieved on the uniform treatment of all socio-economic actors when various interests are brought together to implement the model, instead of leaving the other role players to negotiate individually with government and financial lending institutions. When a broad range of issues are discussed in a farmer's study groups/forums with many various farmers, each farmer then can see that eliminating privileges for other requires reciprocity. The proposed model can be one of the more effective ways to promote sustainability in land reform farming farms and repeal entrenched and speculated privileges, or at least reduce them.

9.2.2 Whole farming business planning

Appropriate whole farm business planning is needed to ensure the sustainability of farmers. In this respect, land reform business planning has at times been non-comprehensive. The tendency of compiling business plans in order for government to release funds has created many challenges. Specific challenges include the lack of participation by management structure on the preparation of the business planning, listing of farming risks without a possible risk management strategy, lack of interests

on portions that are not under production and lack of the skilled farm managers to monitor the implementation of the whole farming business planning.

Business plan should be designed according to the needs and circumstances of farmers. The assumption that everyone can be a farmer has caused more attention to be focused on providing support programmes for emerging farmers. The definition of a land reform farmer's needs to be reviewed to design sustainable support programmes. Cooperation among institutions dealing with land reform farmers must be encouraged.

9.2.3 Findings pertaining to Strengths, weaknesses, opportunities and threats (SWOT)

9.2.3.1. CPAs, land reform households and state owned farms

These empirical findings emanate from survey results as well as the results of focus group discussions. Out of the total of 190 respondents, 79% were from the CPAs, land reform households and state owned farms category.

The main strengths according to CPAs farm managers were: (i) the availability of a well-established export infrastructure (78%); (ii) access to export infrastructure facilities (76%); (iii) sufficient technology within the farm's pack-houses (63%); and (iv) meeting of accreditation standards such as Good Agricultural Practice (GAP) certification (63%). Land reform households' farms were faced by many weaknesses and threats than strengths. These category of farmers reported that they don't have strengths. Although, the main strength for state owned farms were: (i) the availability of a well-established export infrastructure (67%); (ii) access by farmers to export infrastructure facilities (67%); (iii) sufficient technology within the farm's pack-houses, good quality of the produce, and meeting of accreditation standards such as GLOBAL GAP certification (50%).

All the farms under the study were failing due to high costs of farming inputs. At least 100% households' land reform farms, 94% of CPAs, and 67% of the state owned farms

were not sustainable as a result of inability to graduate from emergent to a commercial level. Moreover, the majority of CPAs (83%) and household farms (60%) were not equipped with the farming skills and farming knowledge. In terms of communication with stakeholders, majority of CPAs (73%), land reform household's farms (90%) and state owned farms (67%) had a poor communication with key project sponsors.

It was interesting to note that the respondents across all the categories had common weaknesses. One of the most discouraging findings was that, land reforms households were faced with many challenges than CPAs and State owned farms combined. About 80% of the farms had no access to export infrastructure, while 90% of these farms produces citrus of a poor quality as compared to their counterparts. Only 10% had access to pack-house with modern technology and meets the accreditations standards.

Regarding the opportunities, it was disheartening to find that only CPAs from all the three categories of farming enterprises have opportunities. From the opportunities perspective, it was discovered that a significant percentage (46%) have access to new export markets. Furthermore, majority (59%) of the product is in high demand. It can be concluded that land reform households and state owned farms are not sustainable due to external conditions or factors beyond their control, more particularly relating to marketplace.

The main threat facing farmers across all the three categories was cost and availability of water for irrigation. The threat was analysed as follows: households (100%), CPAs (99%), and state owned farms (83%). Of the CPA's and land reform households' farms respondents, 60% of CPAs and 100% of land reform households' farms were confronted with competition from new entrants. In addition, 84% of CPAs, as well as 100% of household farms were choking with high protectionisms from external or international markets.

9.2.3.2. Commercial cooperatives and sole proprietorships citrus farms

A total of 40 respondents were reached from a survey population of 40 farms. Out of the total of 40 respondents, 20 were from the commercial cooperatives and the other 20 from sole proprietorships citrus farms.

In terms of farms strengths, all (100%) cooperatives and sole proprietor farms have access to export infrastructure and the quality of their product is good. Of these farms, 90% cooperatives and 100% sole proprietors had good relation with the suppliers and customers. At least 80% of cooperatives and 100% of sole proprietors were meeting the required standards for operating a successfully farming enterprise. All managers, 100% of cooperatives and 100% of sole proprietors were found to have farming skills and knowledge.

Regarding the weaknesses that can render a potential disadvantage to the enterprises, the findings revealed that of the farms that participated in the study, 100% of cooperatives and 85% of sole proprietors perceived overreliance on traditional markets as the main threat. Of these farms, 100% cooperatives and 100% sole proprietors were confronted by high input costs.

Results also showed that most respondents are of the view that their farms possess enough opportunities about markets and this was a good finding from the sustainability of citrus production point of view. The results showed that all cooperatives (100%) and sole proprietors (100%) have access to new local and export markets because their product is in high demand.

Concerning the threats that can stem from the external factors, it was discovered that, 100% of cooperatives and 100% sole proprietors perceived a shortage of water for irrigation as a serious threat. About 55% of cooperatives and 85% of sole proprietors pointed the finger at the ever increasing protectionism standards from the established international markets. In conclusion the results show that the farmers were troubled by natural factors (water shortage), marketplace and government negotiations (bilateral agreements).

The conclusion is that the cooperatives and sole proprietors are sustainable and the chances of ensuring that CPAs, land reform farms and state owned farms are

sustainable were most favourable for farmers who has responsive farm management model; would develop model that would properly influence the whole farm business planning to ensure sustainability of farms and shy away from the tendency of compiling business plans for government to release funds, but to represent the roadmap for the future. And those in executive positions would participate in the drafting of business plan; listing of farming risks with possible risk management strategies and recruitment of skilled and knowledgeable managers.

The CPAs, land reform households and state owned farms would also be sustainable if they can conduct a SWOT analysis of current or potential issues that can hamper their sustainability. This will help them to clarify the situation and leverage the internal strength and bolster internal weaknesses. In conclusion the findings, in the context of sustainable citrus farming showed that the CPAs, land reform households and state owned farms are predominantly not sustainable.

In a nutshell these farmers like being involved in farming but not necessarily as passive owners. It is for this reason that they would rather be described as unskilled and inexperience farmers instead of becoming spectators, yet the same farmers are involved in other farm activities such as facilitating meetings, coordinating harvesting and supervising farm workers. The conclusion is that the farmers will take farming seriously as a career and full time engagement if they will be provided with support and enable them to fulfil their social and economic aspirations.

The following contributions were made by this thesis to the body of knowledge:

- Confirmed that the main cause of failure of majority of CPAs, land reform households and state owned farms is lack of effective project management of the entire settlement planning and implementation process
- Validated that these farmers fail to manage their products (be it a crop or livestock) to a level where it appeals to the market.

- Confirmed that in Mpumalanga province, most of land reform beneficiary's groups has secured access to good agricultural enterprises, but these enterprises were later found not to be sustainable.
- The findings that the CPAs, land reform households and state owned farms have strength, positive perceptions and attitudes and this augurs well for the future of citrus farming.
- Water scarcity within the entire citrus farming sector is a serious threat and that the chances of becoming sustainable in future are getting less.
- Confirmed that the phytosanitary requirement posed by export markets carries a threat to the sustainability CPAs, land reform households and state owned farms.
- Indicates that there is a need for a paradigm shift in the manner in which CPAs, land reform households and state owned farms are currently managed.

9.3. Recommendations

Arising from this study, the following recommendations are offered to the various parties involved:

- The government needs to review functionality, as it serves as the foundation from which most of the factors hindering performance and sustainability need to be resolved. Additionally, the government support is needed to boost existing citrus farmers as well as to motivate the establishment of new initiatives to address current and emerging problems in order to enhance the performance and sustainability of the sector in provincial, national and global markets.
- Comprehensive business plan with more emphasis on certain areas, such as operational/product plan, organization and staffing plan as well as risk planning to ensure true sustainable citrus farming should be put in place.

- Farmer's education need to be improved, more particularly by acquiring at least secondary or tertiary education and farm management hierarchy should include youth.
- Department of Rural Development and Land Reform (DRDLR) should rapidly transfer the farms to the beneficiaries without distorting the land market or business confidence.

DRDLR should further enhance opportunities for commercial farmers and organised industry to contribute through mentorship, training, strategic partnerships, commodity chain integration, preferential procurement, and provide financial assistance to ensure sustainable production.

- The execution of a baseline study should be prioritized to assist in determining the socio-economic situation in the community (beneficiaries). This task should be assigned to the Provincial Department of Agriculture, CGA and the extension advisory service. While, DRDLR should seriously consider appointment of a Project facilitator/coordinator to assess farmers opportunities and weaknesses as well as support the management and community. Project coordinator should be appointed for a minimum period of at least two (2) years.
- A well-defined management structure needs to be established with clear job descriptions. The farm management structure should have authority to approve requests by the farm managers for purchasing farm inputs without unnecessary delay. A well-defined management structure needs to be in place. The farmers should appoint knowledgeable, skilful and experienced partner/managers. Furthermore, the farmers and Strategic Partner (SP) should sign an agreement as contract. There should be a strategy to develop service suppliers especially from the beneficiaries, more particularly when some of the services (building construction and servicing machinery) could be provided by members of the beneficiary community.

- Once farm management structure is established, the PDoA senior management of the province must sign the Memorandum of Understanding (MoU) on extension and Citrus Growers Association (CGA) must also be available and involved in the provincial land reform farms that seek support. Likewise, the whole farm business planning must provide purpose of farming and a context background, vision, mission and goals, determine factors influencing the farm (PESTLE; Political, Economic, Social, Technological, Legal and Environment). The plan must also clearly depict the type of ownership and organizational structure, farm map, land use, sourcing of staff and identify possible risks and provide risk mitigation strategy and keep records.
- The management must have direct access to a professional extension advisory service. If the service is not available, the appointment of a mentor is recommended. Where possible and available, the farm management should join farmers' study groups as a valuable source of information, skills and knowledge. It will be necessary for the farmers that in conjunction with the Strategic Partner (SP) determines his/her need for settlement support such as professional extension advisor, a consultant or a mentor.
- The financial support to manage the farm is again non-negotiable. The business plan should indicate clearly what the financial requirements are to manage the farm. It is the responsibility of the Government departments to ensure that grants are made available on time and that a program such as Recapitalization and Development Programme (RECAP) and Comprehensive Agricultural Support Programme (CASP) should be available for every land reform farm.
- CGA and PDoA should further assist farmers in preparing all the documentation that the financial institution and DRDLR need in order to approve the application for financial support for the farmers. In the case of citrus farmer, CGA should be allowed to implement farmer support on behalf of land reform farmers and the government at large, and in so doing, it should work closely together with the State Own Business (SOB) enterprises that deal with agriculture, being; National Agricultural Marketing Council (NAMC), Perishable Product Export

Control Board (PPECB) and AgriSETA. Not leaving out the financial institutions such as Independent Development Cooperation (IDC) and various banks.

- Likewise, farmers should regard their farm as a Community Based Organization (CBO) in its nature and as such it requires that it should be formed by bona fide members of the community. They should also identify specific channels of communication and develop a communication policy that will outline the communication strategy. The farmers must establish and maintain good relationship between partners while encouraging very strong collaboration and cooperation between the beneficiaries.
- The community should be given feedback on progress especially on hiring/sourcing of staff and contract matters that the company might be engaged with. Organise regular community meetings to report on finance to avoid speculations and misconceptions about farm management. The needs of the community should be catered for to avoid division among the community members.

Finally, it is recommended that the farming business must be treated as a commercial business in order to maximize outputs through effective agricultural practices that maximize income.

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Appendices

Appendix A: Research Guides for CPAs

COMMUNAL PROPERTY ASSOCIATIONS (CPAs)		
Dear participant, please be assured that all your personal information will be treated confidentially and will only be used for this study		
Instructions		For office use only
Mark the appropriate block with X or write your answer on the space provided		<input type="text"/> <input type="text"/> <input type="text"/> 1-3
Date which questionnaire is completed (dd/mm/yy)/...../.....		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
A. CPA STRUCTURE		
1. Indicate your gender as a member of the CPA	<input type="checkbox"/> Male (1) <input type="checkbox"/> Female (2)	<input type="checkbox"/> 10
1.1. Indicate your age as a member of the CPA		<input type="checkbox"/> 11
1.1. Between 18 and 25	<input type="checkbox"/> 1	
1.2. Between 26 and 35	<input type="checkbox"/> 2	
1.3. between 36 and 45	<input type="checkbox"/> 3	
1.4. Between 46 and 55	<input type="checkbox"/> 4	
1.5. Between 56 and 65	<input type="checkbox"/> 5	
1.6. Older than 65 yrs	<input type="checkbox"/> 6	
2. How many members in your CPA?		<input type="checkbox"/> 12
2.1. Between 2 and 5	<input type="checkbox"/> 1	
2.2. Between 6 and 10	<input type="checkbox"/> 2	
2.3. between 11 and 15	<input type="checkbox"/> 3	
2.4. Between 16 and 20	<input type="checkbox"/> 4	
3. How many women in your CPA?		<input type="checkbox"/> 13
3.1. One	<input type="checkbox"/> 1	

3.2. Two	<input type="text" value="2"/>	
3.3. Three	<input type="text" value="3"/>	
3.4. Four	<input type="text" value="4"/>	
3.5. If more (specify).....	<input type="text" value="5"/>	
3.6. None	<input type="text" value="6"/>	
4. Are you employed elsewhere?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 14
5. If yes, what type of employment?		<input type="text"/> 15
5.1. Permanent	<input type="text" value="1"/>	
5.2. Contract	<input type="text" value="2"/>	
5.3. Temporary	<input type="text" value="3"/>	
6. What is your highest level of education?		<input type="text"/> 16
6.1. No schooling	<input type="text" value="1"/>	
6.2. Attended primary education but not completed	<input type="text" value="2"/>	
6.3. Completed primary education	<input type="text" value="3"/>	
6.4. Attended secondary school but not completed	<input type="text" value="4"/>	
6.5. Completed secondary education/matric	<input type="text" value="5"/>	
6.6. Post matric education	<input type="text" value="6"/>	
7. Have you attended any training?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 17
7.1. If yes, what training was received?		<input type="text"/> 18
7.1.1. Farm management	<input type="text" value="1"/>	
7.1.2. Citrus Management	<input type="text" value="2"/>	
7.1.2. Marketing	<input type="text" value="3"/>	
7.1.3. Administration	<input type="text" value="4"/>	
8. Was the training received before or after acquiring the enterprise?		<input type="text"/> 19
8.1. Before	<input type="text" value="1"/>	

- 8.2. After 2
- 8.3. Not sure 3

B. FARMING OPERATION

9. Have you ever managed a farming enterprise before? Yes (1) No (2) 20

9.1. If yes, for how long? 21

- 9.1.1. Between 6 and 12 months 1
- 9.1.2. Between 1 and 3 yrs 2
- 9.1.3. Between 3 and 5 yrs 3
- 9.1.4. Between 5 and 8 yrs 4
- 9.1.5. More than 8 yrs 5

10. How was this enterprise managed before you acquire it? 22

- 10.1. Managed by individual household 1
- 10.2. Managed collectively by more than two households 2
- 10.3. Managed by state 3

11. Was the enterprise sustainable before you acquire it? Yes (1) No (2) 23

12. If yes, do you think the following factors sustains it? 24

- 12.1. Management style applied 1
- 12.2. Farming support received 2
- 12.3. Human resource 3
- 12.2. Application of relevant technology 4

13. What was the labour practice in this enterprise before your acquire it? 25

- 13.1. Immediate family 1
- 13.2. Extended family 2
- 13.3. Local community members 3

13.4. If other (specify)	<input type="text" value="4"/>	
14. How many members are in this farming entity currently?		<input type="text"/> 26
14.1. (2-50)	<input type="text" value="1"/>	
14.2. (51- 100)	<input type="text" value="2"/>	
14.3. (101 -150)	<input type="text" value="3"/>	
14.4. (151- 200)	<input type="text" value="4"/>	
14.5. More (specify)	<input type="text" value="5"/>	
15. How many members are actively involved?		<input type="text"/> 27
15.1. (2-10)	<input type="text" value="1"/>	
15.2. (11-20)	<input type="text" value="2"/>	
15.3. (21-30)	<input type="text" value="3"/>	
15.4. (31- 40)	<input type="text" value="4"/>	
15.5. More (specify)	<input type="text" value="5"/>	
16. The members that are actively involved, are involved in what capacity?		<input type="text"/> 28
16.1. Owner	<input type="text" value="1"/>	
16.2. Manager	<input type="text" value="2"/>	
16.3. Laboures	<input type="text" value="3"/>	
17. Which of the following presents your labour practice?		<input type="text"/> 29
17.1. Immediate beneficiary labour	<input type="text" value="1"/>	
17.2. Extended beneficiary labour	<input type="text" value="2"/>	
17.3. Contracted workesr	<input type="text" value="3"/>	
17.4. Other (specify).....	<input type="text" value="4"/>	
18. Do you have a succession plan?	<input type="text" value="Yes (1) No (2)"/>	<input type="text"/> 30
19. If yes to 18, do you adhere to it?	<input type="text" value="Yes (1) No (2) Sometimes (3)"/>	<input type="text"/> 31

20. Do you have a business plan?	Yes (1) No (2)	<input type="checkbox"/> 32
21. If yes, which one of the following institutions below compiled the plan?	<input type="checkbox"/> 33	
21.1. CPA	<input type="checkbox"/> 1	
21.2. Outsourced external service provider	<input type="checkbox"/> 2	
21.3. Government department	<input type="checkbox"/> 3	
22. If it was compiled by an agency at 21.2 or 21.3, were you part of the drafting team?	Yes (1) No (2)	<input type="checkbox"/> 34
23. If no to 19, why?		<input type="checkbox"/> 35
23.1. Not consulted	<input type="checkbox"/> 1	
23.2. Not interested in the process	<input type="checkbox"/> 2	
23.3. I don't know	<input type="checkbox"/> 3	
24. What is the extent of your farm?		<input type="checkbox"/> 36
24.1. Between 100 - 200 ha	<input type="checkbox"/> 1	
24.2. Between 201 - 300 ha	<input type="checkbox"/> 2	
24.3. Between 301 - 400 ha	<input type="checkbox"/> 3	
24.4. Between 401 - 500 ha	<input type="checkbox"/> 4	
24.5. More (specify).....	<input type="checkbox"/> 5	
25. How many heacters are under irrigation?		<input type="checkbox"/> 37
25.1. Less than 100 ha	<input type="checkbox"/> 1	
25.2. More than 101 but less than 200 ha	<input type="checkbox"/> 2	
25.3. More than 201 but less than 300 ha	<input type="checkbox"/> 3	
25.4. More (specify).....	<input type="checkbox"/> 4	
26. If not all the heacters are under irrigation, which of one of the activities takes place on the remaining heacters?		<input type="checkbox"/> 38

26.1. Fallow	<input type="text" value="1"/>	
26.2. Servitudes	<input type="text" value="2"/>	
26.3. Other enterprises	<input type="text" value="3"/>	
26.4. All of the above	<input type="text" value="4"/>	
27. What is the land ownership or rights?		<input type="text"/> 39
27.1. Tribal/communal	<input type="text" value="1"/>	
27.2. Government lease	<input type="text" value="2"/>	
27.3. Private lease	<input type="text" value="3"/>	
27.4. Title deed	<input type="text" value="4"/>	
C. STRENGTH, WEAKNESS, OPPORTUNITY AND THREATS (SWOT)		
28. Strength		
28.1. Is your export operations well established?	<input type="text" value="Yes (1) No (2)"/>	<input type="text"/> 39
28.2. Do you have access to efficient export infrastructure?	<input type="text" value="Yes (1) No (2)"/>	<input type="text"/> 40
28.3. What is the overall quality of your produce?		<input type="text"/> 41
28.3.1. Good	<input type="text" value="1"/>	
28.3.2. Average	<input type="text" value="2"/>	
28.3.3. Poor	<input type="text" value="3"/>	
28.4. Is your communication mechanism to your stakeholders sound?	<input type="text" value="Yes (1) No (2)"/>	<input type="text"/> 42
28.5. Is the investment in current technology within the packhouse enough?	<input type="text" value="Yes (1) No (2)"/>	<input type="text"/> 43
28.6. Is your enterprise meeting the required accreditation protocols?	<input type="text" value="Yes (1) No (2)"/>	<input type="text"/> 44
29. Weaknesses		

29.1. Are you experiencing saturation in your traditional market?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 45
29.2. Are you relying on traditional markets?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 46
29.3. If no, why ?		<input type="checkbox"/> 47
29.3.1. High tariffs	<input type="checkbox"/> 1	
29.3.2. High competition	<input type="checkbox"/> 2	
29.3.3. Weaker exchange rate R/\$	<input type="checkbox"/> 3	
29.3.4. Complex safety standards	<input type="checkbox"/> 4	
29.3.5. Lack of access	<input type="checkbox"/> 5	
29.4. Are you experiencing a high input and capital costs?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 48
29.5 Is poor skills and knowledge one of your weaknesses?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 49
29.5. Do you experience commercial and other barriers?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 50
30. Threats		
30.1. Are you experiencing competition from other new entrants?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 51
30.2. Are you experiencing oversupply of into established markets?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 52
30.3. Is the cost and availability of irrigation water a threat to your business?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 53
30.4. Is the increased protectionism in the established markets a threat?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 54
31. Opportunities		
31.1. Do you have access to any new markets?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2)	<input type="checkbox"/> 55

31.2. Is your produce currently in high demand?

56

31.2.1. Yes

1

31.2.2. Not sure

2

31.2.3. No

3

31.3. Do you have a potential of increasing local markets?

57

31.3.1. Yes

1

31.3.2. Not sure

2

31.3.3. No

3

THANK YOU FOR YOUR TIME AND PARTICIPATION

Appendix B: Research Guides for Land Reform Households

LAND REFORM HOUSEHOLD FARMS

Dear participant, please be assured that all your personal information will be treated confidentially and will only be used for this study

Instructions

Mark the appropriate block with X or write your answer on the space provided

Date which questionnaire is completed (dd/mm/yy)/...../.....

A. HOUSEHOLD STRUCTURE

1. Indicate your gender as the main member of the household: Male (1) Female (2)

1.1. Indicate your age as the main member of the household:

- 1.1.1. Between 18 and 25 1
- 1.1.2. Between 26 and 35 2
- 1.1.3. between 36 and 45 3
- 1.1.4. Between 46 and 55 4
- 1.1.5. Between 56 and 65 5
- 1.1.6. Older than 65 yrs 6

2. How many members in your household?

- 2.1. Only 1 1
- 2.2. Between 2 and 5 2
- 2.3. Between 6 and 10 3
- 2.4. between 11 and 15 4
- 2.5. Between 16 and 20 5

3. Do you have any employed member in your household? Yes (1) No (2)

4. If yes to 3, how many members are employed?

For office use only

1-3

4-9
d d m m y y

10

11

12

13

14

- 4.1. One
- 4.2. Two
- 4.3. Three
- 4.4. Four
- 4.5. If more (specify).....
- 4.6. None

1
2
3
4
5
6

5. Is the employed member/s employed in the agricultural sector?

Yes (1)	No (2)
---------	--------

 15

6. What is your highest level of education?

 16

- 6.1. No schooling
- 6.2. Attended primary education but not completed
- 6.3. Completed primary education
- 6.4. Attended secondary school but not completed
- 6.5. Completed secondary education/matric
- 6.6. Post matric education

1
2
3
4
5
6

B. FARMING OPERATION

7. Have you attended any training programme?

Yes (1)	No (2)
---------	--------

 17

8. If yes, what training was provided?

 18

- 8.1.1. Farm management
- 8.1.2. Citrus Management
- 8.1.3. Marketing
- 8.1.4. Administration
- 8.1.5. All of the above

1
2
3
4
5

9. Was the training provided before or after acquiring the enterprise?

 19

9.1. Before

1

9.2. After	<input type="text" value="2"/>	
9.3. Not sure	<input type="text" value="3"/>	
10. Have you ever managed a farming enterprise before?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="20"/>
11. If yes, for how long?		<input type="text" value="21"/>
11.1. Between 6 and 12 months	<input type="text" value="1"/>	
11.2. Between 1 and 3 yrs	<input type="text" value="2"/>	
11.3. Between 3 and 5 yrs	<input type="text" value="3"/>	
11.4. Between 5 and 8 yrs	<input type="text" value="4"/>	
11.5. More than 8 yrs	<input type="text" value="5"/>	
12. How was this enterprise managed before you acquire it?		<input type="text" value="22"/>
12.1. Managed by Individual household	<input type="text" value="1"/>	
12.2. Managed collectively by more that two households	<input type="text" value="2"/>	
12.3. Managed by state	<input type="text" value="3"/>	
13. Was the sustainability level of the enterprise satisfactory before you acquire it?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="23"/>
14. If yes, do you think the following factors sustains it?		<input type="text" value="24"/>
14.1. Management style applied	<input type="text" value="1"/>	
14.2. Farming support received	<input type="text" value="2"/>	
14.3. Human resource	<input type="text" value="3"/>	
14.4. Application of relevant technology	<input type="text" value="4"/>	
14.5. All of the above	<input type="text" value="5"/>	
15. How was the labour practice in this enterprise arranged before your acquire it?		<input type="text" value="25"/>
15.1. Immediate family	<input type="text" value="1"/>	
15.2. Extended family	<input type="text" value="2"/>	
15.3. Local community members	<input type="text" value="3"/>	
15.4. If other (specify)	<input type="text" value="4"/>	

16. How many members are in this farming entity currently?		<input type="text"/> 26
16.1. One	<input type="text"/> 1	
16.2. Two	<input type="text"/> 2	
16.3. Three	<input type="text"/> 3	
16.4. Four	<input type="text"/> 4	
16.5. More (specify)	<input type="text"/> 5	
17. How many members are actively involved?		<input type="text"/> 27
17.1. One	<input type="text"/> 1	
17.2. Two	<input type="text"/> 2	
17.3. Three	<input type="text"/> 3	
17.4. Four	<input type="text"/> 4	
17.5. More (specify)	<input type="text"/> 5	
18. Members that are actively involved, are involved in what capacity?		<input type="text"/> 28
18.1. Owners	<input type="text"/> 1	
18.2. Manager	<input type="text"/> 2	
18.3. Labours	<input type="text"/> 3	
18.4. All of the above		
19. Which of the following presents your labour practice arrangements?		<input type="text"/> 29
19.1. Immediate beneficiary labour	<input type="text"/> 1	
19.2. Extended beneficiary labour	<input type="text"/> 2	
19.3. Contracted workesr	<input type="text"/> 3	
19.4. Other (specify).....	<input type="text"/> 4	
20. Do you have a succession plan?	<input type="text"/> Yes (1) <input type="text"/> No (2)	<input type="text"/> 30
21. If yes to 21, do you adhere to it?	<input type="text"/> Yes (1) <input type="text"/> No (2) <input type="text"/> Sometimes (3)	<input type="text"/> 31
22. Do you have a business plan?	<input type="text"/> Yes (1) <input type="text"/> No (2)	<input type="text"/> 32

<p>23. If yes, which one of the following institutions below compiled the plan?</p> <p>23.1. Self 23.2. Outsourced external service provider 23.3. Government department</p>	<input type="checkbox"/> 33
<p>24. If it was compiled by an agency at 23.2 or 23.3, were you part of this team?</p>	<input type="checkbox"/> 34
<p>25. If no to 24, why?</p> <p>25.1. Not consulted 25.2. Not interested in the process 25.3. I don't know 25.4. I was not here when it was drafted</p>	<input type="checkbox"/> 35
<p>26. What is the extent of your farm?</p> <p>26.1. Less than 100 ha 26.2. Between 101 - 200 ha 26.3. Between 201 - 300 ha 26.4. Between 301 - 400 ha 26.5. More (specify).....</p>	<input type="checkbox"/> 36
<p>27. How many heacters are under irrigation?</p> <p>27.1. Less than 100 ha 27.2. More than 101 but less than 200 ha 27.3. More than 201 but less than 300 ha 27.4. More (specify).....</p>	<input type="checkbox"/> 37
<p>28. If not all the heacters are under irrigation, which one of the activities takes place on the remaining heacters?</p> <p>28.1. Fallow 28.2. Servitudes</p>	<input type="checkbox"/> 38

28.3. Other enterprises	<input type="text" value="3"/>	
28.4. All of the above	<input type="text" value="4"/>	
29. What is the land ownership or rights?		<input type="text" value="39"/>
29.1. Tribal/communal	<input type="text" value="1"/>	
29.2. Government lease	<input type="text" value="2"/>	
29.3. Private lease	<input type="text" value="3"/>	
29.4. Title deed	<input type="text" value="4"/>	
C. STRENGTH, WEAKNESS, OPPORTUNITY AND THREATS		
30. Strengths		
30.1. Do you have international market for export?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="40"/>
30.2. If yes to 28.1., do you have access to efficient export infrastructure?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="41"/>
30.3. How do you rate the overall quality of your produce?		<input type="text" value="42"/>
30.3.1. Good	<input type="text" value="1"/>	
30.3.2. Average	<input type="text" value="2"/>	
30.3.3. Poor	<input type="text" value="3"/>	
30.4. Do you have a sound communication mechanism with your major stakeholders?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="43"/>
30.5. Do you have enough investment in current technology within the packhouse that you utilize?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="44"/>
30.6. Is your enterprise meeting the required accreditation protocols?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="45"/>
30.7. If no what must be done?.....		<input type="text" value="46"/>
31. Weaknesses		
31.1. Is your traditional market saturated?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value="47"/>

31.2. Are you heavily relying on traditional markets?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 48
31.3. Are you experiencing a high input and capital costs?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 49
31.4. Is poor skills and knowledge one of your weaknesses?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 50
31.5. Do you experience commercial and other barriers?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 51
32. Threats		
32.1. Are you experiencing competition from other new entrants?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 52
32.2. Is the supply into your established market saturated?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 53
32.3. Is the cost and availability of irrigation water a threat to your business?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 54
32.4. Are experiencing increased protectionism in the established markets?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 55
33. Opportunities		
33.1. Do you have access to any new markets?	Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/>	<input type="checkbox"/> 56
33.2. Is your produce currently in high demand?		<input type="checkbox"/> 57
33.2.1. Yes	<input type="checkbox"/> 1	
33.2.2. Not sure	<input type="checkbox"/> 2	
33.2.3. No	<input type="checkbox"/> 3	
33.3. Do you have a potential of expanding in local markets?		<input type="checkbox"/> 58
33.3.1. Yes	<input type="checkbox"/> 1	
33.3.2. Not sure	<input type="checkbox"/> 2	
33.3.3. No	<input type="checkbox"/> 3	
THANK YOU FOR YOUR TIME AND PARTICIPATION		

Appendix C: Research Guides for Commercial Cooperatives

PRIVATE COOPERATIVES FARMS																									
Dear participant, please be assured that all your personal information will be treated confidentially and will only be used for this study																									
<p>Instructions Mark the appropriate block with X or write your answer on the space provided</p> <p>Date which questionnaire is completed (dd/mm/yy)/...../.....</p> <p>A. COOPERATE STRUCTURE</p> <p>1. Indicate your gender as a member of the management <input type="checkbox"/> Male (1) <input type="checkbox"/> Female (2)</p> <hr/> <p>1.1. Indicate your age as a member of the manager</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1.1. Between 18 and 25</td> <td style="width: 20%; text-align: center;"><input type="checkbox"/> 1</td> </tr> <tr> <td>1.2. Between 26 and 35</td> <td style="text-align: center;"><input type="checkbox"/> 2</td> </tr> <tr> <td>1.3. between 36 and 45</td> <td style="text-align: center;"><input type="checkbox"/> 3</td> </tr> <tr> <td>1.4. Between 46 and 55</td> <td style="text-align: center;"><input type="checkbox"/> 4</td> </tr> <tr> <td>1.5. Between 56 and 65</td> <td style="text-align: center;"><input type="checkbox"/> 5</td> </tr> <tr> <td>1.6. Older than 65 yrs</td> <td style="text-align: center;"><input type="checkbox"/> 6</td> </tr> </table> <p>2. How many partners are invlove in this enterprise?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">2.1. Between 2 and 5</td> <td style="width: 20%; text-align: center;"><input type="checkbox"/> 1</td> </tr> <tr> <td>2.2. Between 6 and 10</td> <td style="text-align: center;"><input type="checkbox"/> 2</td> </tr> <tr> <td>2.3. between 11 and 15</td> <td style="text-align: center;"><input type="checkbox"/> 3</td> </tr> <tr> <td>2.4. Between 16 and 20</td> <td style="text-align: center;"><input type="checkbox"/> 4</td> </tr> </table> <p>3. How many women are in executive positions in your enterprise?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">3.1. One</td> <td style="width: 20%; text-align: center;"><input type="checkbox"/> 1</td> </tr> <tr> <td>3.2. Two</td> <td style="text-align: center;"><input type="checkbox"/> 2</td> </tr> </table>	1.1. Between 18 and 25	<input type="checkbox"/> 1	1.2. Between 26 and 35	<input type="checkbox"/> 2	1.3. between 36 and 45	<input type="checkbox"/> 3	1.4. Between 46 and 55	<input type="checkbox"/> 4	1.5. Between 56 and 65	<input type="checkbox"/> 5	1.6. Older than 65 yrs	<input type="checkbox"/> 6	2.1. Between 2 and 5	<input type="checkbox"/> 1	2.2. Between 6 and 10	<input type="checkbox"/> 2	2.3. between 11 and 15	<input type="checkbox"/> 3	2.4. Between 16 and 20	<input type="checkbox"/> 4	3.1. One	<input type="checkbox"/> 1	3.2. Two	<input type="checkbox"/> 2	<p style="text-align: center;">For office use only</p> <p style="text-align: center;"><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1-3</p> <p style="text-align: center;"><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 4-9</p> <hr/> <p style="text-align: center;"><input type="checkbox"/> 10</p> <hr/> <p style="text-align: center;"><input type="checkbox"/> 11</p> <hr/> <p style="text-align: center;"><input type="checkbox"/> 12</p> <hr/> <p style="text-align: center;"><input type="checkbox"/> 13</p>
1.1. Between 18 and 25	<input type="checkbox"/> 1																								
1.2. Between 26 and 35	<input type="checkbox"/> 2																								
1.3. between 36 and 45	<input type="checkbox"/> 3																								
1.4. Between 46 and 55	<input type="checkbox"/> 4																								
1.5. Between 56 and 65	<input type="checkbox"/> 5																								
1.6. Older than 65 yrs	<input type="checkbox"/> 6																								
2.1. Between 2 and 5	<input type="checkbox"/> 1																								
2.2. Between 6 and 10	<input type="checkbox"/> 2																								
2.3. between 11 and 15	<input type="checkbox"/> 3																								
2.4. Between 16 and 20	<input type="checkbox"/> 4																								
3.1. One	<input type="checkbox"/> 1																								
3.2. Two	<input type="checkbox"/> 2																								

3.3. Three	<input type="checkbox"/>	3	
3.4. Four	<input type="checkbox"/>	4	
3.5. If more (specify).....	<input type="checkbox"/>	5	
3.6. None	<input type="checkbox"/>	6	
4. Are you employed elsewhere?	<input type="checkbox"/> Yes (1)	<input type="checkbox"/> No (2)	<input type="checkbox"/> 14
5. If yes, what type of employment?			<input type="checkbox"/> 15
5.1. Permanent			
5.2. Contract			
5.3. Temporary			
6. What is your highest level of education?			<input type="checkbox"/> 16
6.1. No schooling	<input type="checkbox"/>	1	
6.2. Attended primary education but not completed	<input type="checkbox"/>	2	
6.3. Completed primary education	<input type="checkbox"/>	3	
6.4. Attended secondary school but not completed	<input type="checkbox"/>	4	
6.5. Completed secondary education/matric	<input type="checkbox"/>	5	
6.6. Post matric education	<input type="checkbox"/>	6	
7. Have you attended any training?	<input type="checkbox"/> Yes (1)	<input type="checkbox"/> No (2)	<input type="checkbox"/> 17
7.1. If yes, what training was received?			<input type="checkbox"/> 18
7.1.1. Farm management	<input type="checkbox"/>	1	
7.1.2. Citrus Management	<input type="checkbox"/>	2	
7.1.2. Marketing	<input type="checkbox"/>	3	
7.1.3. Administration	<input type="checkbox"/>	4	
8. Was the training received before or after you were employed here?			<input type="checkbox"/> 19
8.1. Before	<input type="checkbox"/>	1	
8.2. After	<input type="checkbox"/>	2	
8.3. Not sure	<input type="checkbox"/>	3	

B. FARMING OPERATION

9. Have you ever managed a farming enterprise before? Yes (1) No (2) 20

9.1. If yes, for how long? 21

- 9.1.1. Between 6 and 12 months 1
- 9.1.2. Between 1 and 3 yrs 2
- 9.1.3. Between 3 and 5 yrs 3
- 9.1.4. Between 5 and 8 yrs 4
- 9.1.5. More than 8 yrs 5

10. How was this enterprise managed before you came? 22

- 10.1. Managed by Individual household 1
- 10.2. Managed collectively by more that two households 2
- 10.3. Managed by state 3

11. Was the enteprise sustainable before you came in it? Yes (1) No (2) 23

12. If yes, do you think the following factors sustains it? 24

- 12.1. Management style applied 1
- 12.2. Farming support received 2
- 12.3. Human resource 3
- 12.4. Application of relevant technology 4
- 12.5. Ability to managing change and innovation 5
- 12.6. Adherence to business plan 6

13. What was the labour practice in this enterprise before you came in? 25

- 13.1. Immediate family 1
- 13.2. Extended family 2
- 13.3. Local community members 3
- 13.4. If other (specify) 4

14. How many direct family members are in this farming entity currently? 26

14.1. (2-50)	<input type="text" value="1"/>	
14.2. (51- 100)	<input type="text" value="2"/>	
14.3. (101 -150)	<input type="text" value="3"/>	
14.4. (151- 200)	<input type="text" value="4"/>	
14.5. More (specify)	<input type="text" value="5"/>	
14.6. Not sure	<input type="text" value="6"/>	
15. How many direct family members are actively involved?		<input type="text" value="27"/>
15.1. (2-10)	<input type="text" value="1"/>	
15.2. (11-20)	<input type="text" value="2"/>	
15.3. (21-30)	<input type="text" value="3"/>	
15.4. (31- 40)	<input type="text" value="4"/>	
15.5. More (specify)	<input type="text" value="5"/>	
16. The members that are actively involved, are involved in what capacity?		<input type="text" value="28"/>
16.1. Owner	<input type="text" value="1"/>	
16.2. Manager	<input type="text" value="2"/>	
16.3. Laboures	<input type="text" value="3"/>	
17. Which of the following presents your labour practice		<input type="text" value="29"/>
17.1. Immediate beneficiary labour	<input type="text" value="1"/>	
17.2. Extended beneficiary labour	<input type="text" value="2"/>	
17.3. Contracted workesr	<input type="text" value="3"/>	
17.4. Other (specify).....	<input type="text" value="4"/>	
18. Do you have a succession plan?	<input type="text" value="Yes (1) No (2)"/>	<input type="text" value="30"/>
19. If yes to 18, do you adhere to it?	<input type="text" value="Yes (1) No (2) Sometimes (3)"/>	<input type="text" value="31"/>
20. Do you have a business plan?	<input type="text" value="Yes (1) No (2)"/>	<input type="text" value="32"/>
21. If yes, which one of the following institutions below compiled the plan?		<input type="text" value="33"/>

21.1. Self		
21.2. Outsourced external service provider		
21.3. Government department		
22. If it was compiled by an agency at 21.2 or 21.3, were you part of the drafting team?	Yes (1) No (2)	<input type="checkbox"/> 34
23. If no to 19, why?		<input type="checkbox"/> 35
23.1. Not consulted	<input type="checkbox"/> 1	
23.2. Not interested in the process	<input type="checkbox"/> 2	
23.3. I don't know	<input type="checkbox"/> 3	
24. What is the extent of your farm?		<input type="checkbox"/> 36
24.1. Between 100 - 200 ha	<input type="checkbox"/> 1	
24.2. Between 201 - 300 ha	<input type="checkbox"/> 2	
24.3. Between 301 - 400 ha	<input type="checkbox"/> 3	
24.4. Between 401 - 500 ha	<input type="checkbox"/> 4	
24.5. More (specify).....	<input type="checkbox"/> 5	
25. How many heacters are under irrigation?		<input type="checkbox"/> 37
25.1. Less than 100 ha	<input type="checkbox"/> 1	
25.2. More than 101 but less than 200 ha	<input type="checkbox"/> 2	
25.3. More than 201 but less than 300 ha	<input type="checkbox"/> 3	
25.4. More (specify).....	<input type="checkbox"/> 4	
26. If not all the heacters are under irrigation, which of one of the activities takes place on the remaining heacters?		<input type="checkbox"/> 38
26.1. Fallow	<input type="checkbox"/> 1	
26.2. Servitudes	<input type="checkbox"/> 2	
26.3. Other enterprises	<input type="checkbox"/> 3	
26.4. All of the above	<input type="checkbox"/> 4	
27. What is the land ownership or rights?		<input type="checkbox"/> 39

27.1. Tribal/communal	1
27.2. Government lease	2
27.3. Private lease	3
27.4. Title deed	4

C. STRENGTH, WEAKNESS, OPPORTUNITY AND THREATS (SWOT)

28. Strength

28.1. Is the export operations that you use well established? Yes (1) No (2) 39

28.2. Is your enterprise having access to efficient export infrastructure? Yes (1) No (2) 40

28.3. What is the overall quality of your produce? 41

28.3.1. Good	1
28.3.2. Average	2
28.3.3. Poor	3

28.4. Is the communication mechanism between your enterprise and key stakeholders sound? Yes (1) No (2) 42

28.5. Is the investment in current technology within the packhouse enough? Yes (1) No (2) 43

28.6. Is your enterprise meeting the required accreditation protocols? Yes (1) No (2) 44

29. Weaknesses

29.1. Is your enterprise experiencing saturation in its traditional market? Yes (1) No (2) 45

29.2. Is this business heavily relying on its traditional markets? Yes (1) No (2) 46

29.3. Are high input and capital costs a challenge to this entity? Yes (1) No (2) 47

29.4. Does this entity concerns about poor skills and knowledge as one of its weaknesses?	Yes (1) No (2)	<input type="checkbox"/>	48
29.5. Does this enterprise experience export barriers?	Yes (1) No (2)	<input type="checkbox"/>	49
30. Threats			
30.1. How can this enterprise rate competition from other new entrants?		<input type="checkbox"/>	50
30.1.1. Good	<input type="checkbox"/>	1	
30.1.1. Normal	<input type="checkbox"/>	2	
30.1.2. Bad	<input type="checkbox"/>	3	
30.2. Is your enterprise experiencing oversupply into its established markets?	Yes (1) No (2)	<input type="checkbox"/>	51
30.3. Is the cost and availability of irrigation water a threat to your business?	Yes (1) No (2)	<input type="checkbox"/>	52
30.4. Is the increased protectionism in the established markets a threat to your business?	Yes (1) No (2)	<input type="checkbox"/>	53
31. Opportunities			
31.1. Is this enterprise able to access to any new markets?	Yes (1) No (2)	<input type="checkbox"/>	54
31.2. Is the produce of your farming enterprise currently in high demand?		<input type="checkbox"/>	55
31.2.1. Yes	<input type="checkbox"/>	1	
31.2.2. Not sure	<input type="checkbox"/>	2	
31.2.3. No	<input type="checkbox"/>	3	
31.3. Does your enterprsie has a potential of increasing local markets?		<input type="checkbox"/>	56
31.3.1. Yes	<input type="checkbox"/>	1	
31.3.2. Not sure	<input type="checkbox"/>	2	

31.3.3. No

3

THANK YOU FOR YOUR TIME AND PARTICIPATION

Appendix D: Research Guides for Sole Proprietor Families

SOLE PROPRIETORSHIP FAMILY FARMERS

Dear participant, please be assured that all your personal information will be treated confidential and will only be used for this study

Instructions

Mark the appropriate block with X or write your answer on the space provided

Date which questionnaire is completed (dd/mm/yy)/...../.....

For office use only

1-3

4-9
d d m m y y

A. FARM OPERATING STRUCTURE

1. What is your gender?

Male (1) Female (2)

10

1.1. What is your age?

11

- 1.1. Between 18 and 25
- 1.2. Between 26 and 35
- 1.3. between 36 and 45
- 1.4. Between 46 and 55
- 1.5. Between 56 and 65
- 1.6. Older than 65 yrs

1
2
3
4
5
6

2. How many families are involved in this enterprise?

12

- 2.1. Only 1
- 2.2. Between 2 and 5
- 2.3. Between 6 and 10
- 2.4. between 11 and 15

1
2
3

3. What is your highest level of education?

13

3.1. No schooling	<input type="text" value="1"/>	
3.2. Attended primary education but not completed	<input type="text" value="2"/>	
3.3. Completed primary education	<input type="text" value="3"/>	
3.4. Attended secondary school but not completed	<input type="text" value="4"/>	
3.5. Completed secondary education/matric	<input type="text" value="5"/>	
3.6. Post matric education	<input type="text" value="6"/>	
B. FARMING OPERATION		
4. Have you attended any training programme?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 14
5. If yes, what training was provided?		<input type="text"/> 15
5.1.1. Farm management	<input type="text" value="1"/>	
5.1.2. Citrus Management	<input type="text" value="2"/>	
5.1.3. Marketing	<input type="text" value="3"/>	
5.1.4. Administration	<input type="text" value="4"/>	
5.1.5. If Other (specify).....	<input type="text" value="5"/>	
5.1.6. All of the above	<input type="text" value="6"/>	
6. How long have you been managing this enterprise?		<input type="text"/> 16
6.1. Less than 1 year	<input type="text" value="1"/>	
6.2. Between 1 and 3 years	<input type="text" value="2"/>	
6.3. Between 3 and 5 years	<input type="text" value="3"/>	
6.4. Between 5 and 8 years	<input type="text" value="4"/>	
6.5. More than 8 years	<input type="text" value="5"/>	
7. Have you ever managed a farming enterprise before?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 17
8. If yes, for how long?		<input type="text"/> 18
8.1. Between 6 and 12 months	<input type="text" value="1"/>	
8.2. Between 1 and 3 yrs	<input type="text" value="2"/>	

8.3. Between 3 and 5 yrs	<input type="text" value="3"/>	
8.4. Between 5 and 8 yrs	<input type="text" value="4"/>	
8.5. More than 8 yrs	<input type="text" value="5"/>	
9. Is this enterprise sustainable?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value=""/> 19
10. If yes, do you think the following factors sustains it?		<input type="text" value=""/> 20
10.1. Management style applied	<input type="text" value="1"/>	
10.2. Farming support received	<input type="text" value="2"/>	
10.3. Human resource	<input type="text" value="3"/>	
10.4. Application of relevant technology	<input type="text" value="4"/>	
10.5. All of the above	<input type="text" value="5"/>	
11. Which of the following presents your labour practice arrangements?		<input type="text" value=""/> 21
11.1. Immediate beneficiary labour	<input type="text" value="1"/>	
11.2. Extended beneficiary labour	<input type="text" value="2"/>	
11.3. Contracted workers	<input type="text" value="3"/>	
11.4. Other (specify).....	<input type="text" value="4"/>	
12. Do you have a succession plan?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value=""/> 22
13. If yes to 12, do you adhere to it?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value=""/> 23
14. Do you have a business plan?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text" value=""/> 24
15. If yes, which one of the following institutions below compiled the plan?		<input type="text" value=""/> 25
15.1. Self	<input type="text" value="1"/>	
15.2. Outsourced external service provider	<input type="text" value="2"/>	
15.3. Strategic partner	<input type="text" value="3"/>	

16. What is the extent of your farm?	<input type="text"/>	26
16.1. Less than 100 ha	<input type="text"/>	
16.2. Between 101 - 200 ha	<input type="text"/>	
16.3. Between 201 - 300 ha	<input type="text"/>	
16.4. Between 301 - 400 ha	<input type="text"/>	
16.5. More (specify).....	<input type="text"/>	
17. How many heacters are under irrigation?	<input type="text"/>	27
17.1. Less than 100 ha	<input type="text"/>	
17.2. More than 100 but less than 200 ha	<input type="text"/>	
17.3. More than 200 but less than 300 ha	<input type="text"/>	
17.4. More (specify).....	<input type="text"/>	
18. If not all the heacters are under irrigation, which one of the activities takes place on the remaining heacters?	<input type="text"/>	28
18.1. Fallow	<input type="text"/>	
18.2. Servitudes	<input type="text"/>	
18.3. Other enterprises	<input type="text"/>	
18.4. All of the above	<input type="text"/>	
19. What is the land ownership or rights?	<input type="text"/>	29
19.1. Tribal/communal	<input type="text"/>	
19.2. Government lease	<input type="text"/>	
19.3. Private lease	<input type="text"/>	
19.4. Title deed	<input type="text"/>	
C. STRENGTH, WEAKNESS, OPPORTUNITY AND THREATS		
20. Strengths		
20.1. Do you have international market for export?	Yes (1) No (2)	<input type="text"/>
		30

20.2. If yes to 21.1, do you have access to efficient export infrastructure?	Yes (1) No (2)	<input type="checkbox"/> 31
20.3. How do you rate the overall quality of your produce?		<input type="checkbox"/> 32
20.3.1. Good	<input type="checkbox"/> 1	
20.3.2. Average	<input type="checkbox"/> 2	
20.3.3. Poor	<input type="checkbox"/> 3	
20.4. How will you rate the communication mechanisms with your major stakeholders?		<input type="checkbox"/> 33
20.4.1. Very good	<input type="checkbox"/> 1	
20.4.2. Good	<input type="checkbox"/> 2	
20.4.3. Average	<input type="checkbox"/> 3	
20.4.4. Very poor	<input type="checkbox"/> 4	
20.4.5. Poor	<input type="checkbox"/> 5	
20.5. Do you have enough investment in current technology within the packhouse that you utilize?	Yes (1) No (2)	<input type="checkbox"/> 34
20.6. Is your enterprise meeting the required accreditation protocols?	Yes (1) No (2)	<input type="checkbox"/> 35
20.7. Do you have water rights?	Yes (1) No (2)	<input type="checkbox"/> 36
21. Weaknesses		
21.1. Is your traditional market saturated?	Yes (1) No (2)	<input type="checkbox"/> 37
21.2. Are you heavily relying on traditional markets?	Yes (1) No (2)	<input type="checkbox"/> 38
21.3. Are you experiencing a high input and capital costs?	Yes (1) No (2)	<input type="checkbox"/> 39

21.4. Is poor skills and knowledge one of your weaknesses?	Yes (1) No (2)	<input type="checkbox"/> 40
21.5. Do you experience commercial and other barriers?	Yes (1) No (2)	<input type="checkbox"/> 41
22. Threats		
22.1. Are you experiencing competition from new entrants?	Yes (1) No (2)	<input type="checkbox"/> 42
22.2. Is the supply into your established market saturated?	Yes (1) No (2)	<input type="checkbox"/> 43
22.3. Is the cost and availability of irrigation water a threat to your business?	Yes (1) No (2)	<input type="checkbox"/> 44
22.4. Are you experiencing increased protectionism in the established markets?	Yes (1) No (2)	<input type="checkbox"/> 45
23. Opportunities		
23.1. Are you able to establish any new markets?	Yes (1) No (2)	<input type="checkbox"/> 46
23.2. Is your produce currently in high demand?		<input type="checkbox"/> 47
23.2.1. Yes	<input type="checkbox"/> 1	
23.2.2. Not sure	<input type="checkbox"/> 2	
23.2.3. No	<input type="checkbox"/> 3	
23.3. Do you have a potential of penetrating a new market segmentation?		<input type="checkbox"/> 48
23.3.1. Yes	<input type="checkbox"/> 1	
23.3.2. Not sure	<input type="checkbox"/> 2	
23.3.3. No	<input type="checkbox"/> 3	
THANK YOU FOR YOUR TIME AND PARTICIPATION		

Appendix E: Research Guides for CPAs State Owned Farms

STATE OWNED FARMS																															
Dear participant, please be assured that all your personal information will be treated confidentially and will only be used for this study																															
<p>Instructions Mark the appropriate block with X or write your answer on the space provided</p> <p>Date which questionnaire is completed (dd/mm/yy)/...../.....</p> <p>A. STATE OWNED FARM STRUCTURE</p> <p>1. What is your gender? Male (1) Female (2)</p> <hr/> <p>1.1. What is your age?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">1.1. Between 18 and 25</td> <td style="width: 5%; text-align: center; border: 1px solid black;">1</td> <td style="width: 15%;"></td> </tr> <tr> <td>1.2. Between 26 and 35</td> <td style="text-align: center; border: 1px solid black;">2</td> <td></td> </tr> <tr> <td>1.3. between 36 and 45</td> <td style="text-align: center; border: 1px solid black;">3</td> <td></td> </tr> <tr> <td>1.4. Between 46 and 55</td> <td style="text-align: center; border: 1px solid black;">4</td> <td></td> </tr> <tr> <td>1.5. Between 56 and 65</td> <td style="text-align: center; border: 1px solid black;">5</td> <td></td> </tr> <tr> <td>1.6. Older than 65 yrs</td> <td style="text-align: center; border: 1px solid black;">6</td> <td></td> </tr> </table> <p>2. How many state entities are involved in this enterprise?</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">2.1. Only 1</td> <td style="width: 5%; text-align: center; border: 1px solid black;">1</td> <td style="width: 15%;"></td> </tr> <tr> <td>2.2. Between 2 and 5</td> <td style="text-align: center; border: 1px solid black;">2</td> <td></td> </tr> <tr> <td>2.3. Between 6 and 10</td> <td style="text-align: center; border: 1px solid black;">3</td> <td></td> </tr> <tr> <td>2.4. between 11 and 15</td> <td style="text-align: center; border: 1px solid black;"></td> <td></td> </tr> </table> <p>3. What is your highest level of education?</p>	1.1. Between 18 and 25	1		1.2. Between 26 and 35	2		1.3. between 36 and 45	3		1.4. Between 46 and 55	4		1.5. Between 56 and 65	5		1.6. Older than 65 yrs	6		2.1. Only 1	1		2.2. Between 2 and 5	2		2.3. Between 6 and 10	3		2.4. between 11 and 15			<p style="text-align: center;">For office use only</p> <p style="text-align: center;"> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> 1-3 </p> <p style="text-align: center;"> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> <input style="width: 20px; height: 15px;" type="text"/> 4-9 <small>d d m m y y</small> </p> <p style="text-align: center;"> <input style="width: 20px; height: 15px;" type="text"/> 10 </p> <p style="text-align: center;"> <input style="width: 20px; height: 15px;" type="text"/> 11 </p> <p style="text-align: center;"> <input style="width: 20px; height: 15px;" type="text"/> 12 </p> <p style="text-align: center;"> <input style="width: 20px; height: 15px;" type="text"/> 13 </p>
1.1. Between 18 and 25	1																														
1.2. Between 26 and 35	2																														
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- 3.1. No schooling 1
- 3.2. Attended primary education but not completed 2
- 3.3. Completed primary education 3
- 3.4. Attended secondary school but not completed 4
- 3.5. Completed secondary education/matric 5
- 3.6. Post matric education 6

B. FARMING OPERATION

4. Have you attended any training programme? Yes (1) No (2) 14

5. If yes, what training was provided? 15

- 5.1.1. Farm management 1
- 5.1.2. Citrus Management 2
- 5.1.2. Marketing 3
- 5.1.3. Administration 4
- 5.1.4. If Other (specify)..... 5

6. How long have you been managing this enterprise? 16

- 6.1. Less than 1 year 1
- 6.2. Between 1 and 3 years 2
- 6.3. Between 4 and 6 years 3
- 6.4. Between 7 and 9 years 4
- 6.5. More than 9 years 5

7. Have you ever managed a farming enterprise before? Yes (1) No (2) 17

8. If yes, for how long? 18

- 8.1. Between 6 and 12 months 1
- 8.2. Between 1 and 3 yrs 2
- 8.3. Between 4 and 6 yrs 3

8.4. Between 7 and 9 yrs	<input type="text" value="4"/>	
8.5. More than 9 yrs	<input type="text" value="5"/>	
9. Is this enterprise sustainable?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 19
10. If yes, do you think the following factors sustains it?		<input type="text"/> 20
10.1. Management style applied	<input type="text" value="1"/>	
10.2. Farming support received	<input type="text" value="2"/>	
10.3. Human resource	<input type="text" value="3"/>	
10.4. Application of relevant technology	<input type="text" value="4"/>	
10.5 Don't know	<input type="text" value="5"/>	
11. Which of the following presents your labour practice arrangements?		<input type="text"/> 21
11.1. Immediate beneficiary labour	<input type="text" value="1"/>	
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11.3. Contracted workers	<input type="text" value="3"/>	
11.4. Other (specify).....	<input type="text" value="4"/>	
11.5 None of the above	<input type="text" value="5"/>	
12. Do you have a succession plan?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 22
13. If yes to 13, do you adhere to it?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 23
14. Do you have a business plan?	<input type="text" value="Yes (1)"/> <input type="text" value="No (2)"/>	<input type="text"/> 24
15. If yes, which one of the following institutions below compiled the plan?		<input type="text"/> 25
15.1. State agency	<input type="text" value="1"/>	
15.2. Outsorced external service provider	<input type="text" value="2"/>	
15.3. Strategic partner	<input type="text" value="3"/>	

16. What is the extent of your farm?	<input type="checkbox"/> 26
16.1. Less than 100 ha	<input type="checkbox"/> 1
16.2. Between 101 - 200 ha	<input type="checkbox"/> 2
16.3. Between 201 - 300 ha	<input type="checkbox"/> 3
16.4. Between 301 - 400 ha	<input type="checkbox"/> 4
16.5. More (specify).....	<input type="checkbox"/> 5
17. How many hectares are under irrigation?	<input type="checkbox"/> 27
17.1. Less than 100 ha	<input type="checkbox"/> 1
17.2. More than 101 but less than 200 ha	<input type="checkbox"/> 2
17.3. More than 201 but less than 300 ha	<input type="checkbox"/> 3
17.4. More (specify).....	<input type="checkbox"/> 4
18. If not all the hectares are under irrigation, which of one of the activities takes place on the remaining hectares?	<input type="checkbox"/> 28
18.1. Fallow	<input type="checkbox"/> 1
18.2. Servitudes	<input type="checkbox"/> 2
18.3. Other enterprises	<input type="checkbox"/> 3
18.4. All of the above	<input type="checkbox"/> 4
19. What is the land ownership or rights	<input type="checkbox"/> 29
19.1. Tribal/communal	<input type="checkbox"/> 1
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19.4. Title deed	<input type="checkbox"/> 4
C. STRENGTH, WEAKNESS, OPPORTUNITY AND THREATS	
20. Strengths	
20.1. Do you have international market for export?	<input type="checkbox"/> Yes (1) <input type="checkbox"/> No (2) <input type="checkbox"/> 30

20.2. If yes to 21.1, do you have access to efficient export infrastructure?	Yes (1) No (2)	<input type="checkbox"/> 31
20.3. How do you rate the overall quality of your produce?		<input type="checkbox"/> 32
20.3.1. Good 20.3.2. Average 20.3.3. Poor	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
20.4. How will you rate the communication mechanisms with your major stakeholders?		<input type="checkbox"/> 33
20.4.1. Very good 20.4.2. Good 20.4.3. Average 20.4.4. Very poor 20.4.5. Poor	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5	
20.5. Do you have enough investment in current technology within the packhouse that you utilize?	Yes (1) No (2)	<input type="checkbox"/> 34
20.6. Is your enterprise meeting the required accreditation protocols?	Yes (1) No (2)	<input type="checkbox"/> 35
20.7. If No, what must be done?		<input type="checkbox"/> 36
20.7.1. Apply 20.7.2. Nothing 20.7.3. Don't know	<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3	
20.8. Do you have water rights?	Yes (1) No (2)	<input type="checkbox"/> 37
21. Weaknesses		

21.1. Is your traditional market saturated?	Yes (1) No (2)	<input type="checkbox"/>	38
21.2. Are you heavily relying on traditional markets?	Yes (1) No (2)	<input type="checkbox"/>	39
21.3. Are you experiencing a high input and capital costs?	Yes (1) No (2)	<input type="checkbox"/>	40
21.4. Is poor skills and knowledge one of your weaknesses?	Yes (1) No (2)	<input type="checkbox"/>	41
21.5. Do you experience commercial and other barriers?	Yes (1) No (2)	<input type="checkbox"/>	42
22. Threats			
22.1. Are you experiencing competition from new entrants?	Yes (1) No (2)	<input type="checkbox"/>	43
22.2. Is the supply into your established market saturated?	Yes (1) No (2)	<input type="checkbox"/>	44
22.3. Is the cost and availability of irrigation water a threat to your business?	Yes (1) No (2)	<input type="checkbox"/>	45
22.4. Are you experiencing increased protectionism in the established markets?	Yes (1) No (2)	<input type="checkbox"/>	46
23. Opportunities			
23.1. Are you able to establish any new markets?	Yes (1) No (2)	<input type="checkbox"/>	47
23.2. Is your produce currently in high demand?		<input type="checkbox"/>	48
23.2.1. Yes	<input type="checkbox"/>	1	
23.2.2. Not sure	<input type="checkbox"/>	2	
23.2.3. No	<input type="checkbox"/>	3	
23.3. Do you have a potential of penetrating a new market segmentation?		<input type="checkbox"/>	49

23.3.1. Yes
23.3.2. Not sure
23.3.3. No

1
2
3

THANK YOU FOR YOUR TIME AND PARTICIPATION

