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Exploring the stimulation of the agri-food system of South Africa through the enhancement of entrepreneurship in agriculture.

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A research project proposal submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration

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ABSTRACT

In order to feed its growing population and avoid national food insecurity, South Africa will need to greatly increase the amount of food it produces by 2050. There are, however, many issues and challenges facing the agri-food system of South Africa that could make this feat difficult. Namely: an economy in recession; climate change; uncertain land reform policies; a high crime rate; rising input costs such as fuel, fertiliser and electricity; poor infrastructure; increased foreign competition; insufficient access to funding and markets resulting in a high failure rate in agricultural entrepreneurship; and a depreciating and fluctuating exchange rate.

This study aims to explore and contribute to the understanding of how the stakeholders of the agri-food system of South Africa could double food production by 2050. More specifically, the objective of this study was to establish whether the stimulation of the agri-food system of South Africa, resulting in increased food production, could be achieved by the enhancement of agricultural entrepreneurship through the development of efficient and effective organised agricultural groups participating in innovative multi-stakeholder agri-food ecosystems.

Through a qualitative exploratory study with thirteen (13) agricultural entrepreneurs and three (3) agri-food system experts, this research study established that, the agri-food system of South Africa could be stimulated through enhanced agricultural entrepreneurship. Furthermore, this study found that agricultural entrepreneurship is enhanced when the agricultural entrepreneurs are a part of efficient and effective organised agricultural groups. It was also established that the issues and challenges facing the agri-food system of South Africa could be overcome if the stakeholders of the agri-food system established and participated in innovative multi-stakeholder agri-food ecosystems.

KEYWORDS

Agribusiness, agriculture, agri-food system, Black African agricultural entrepreneurs, cooperatives, entrepreneurship, business ecosystems, entrepreneurial ecosystems, innovation ecosystems, innovative multi-stakeholder ecosystems, stakeholder theory, stakeholder management.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Buchule Jack

11 March 2020

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM 1

1.1 INTRODUCTION 1
1.2 BACKGROUND OF THE RESEARCH PROBLEM 3
1.3 PURPOSE OF THE RESEARCH 6
1.4 RESEARCH PROBLEM 7
1.5 THEORETICAL IMPLICATIONS OF THE RESEARCH 7

CHAPTER 2: LITERATURE REVIEW 8

2.1 INTRODUCTION 8
2.2 THE AGRICULTURAL SECTOR OF SOUTH AFRICA 8
2.2.1 Dual agricultural sectors 8
2.2.2 The agricultural sector post-1994 9
2.2.4 Black African agricultural entrepreneurs 13
2.3 AGRICULTURAL ENTREPRENEURSHIP 14
2.3.1 The need for entrepreneurship in the agri-food system of South Africa 14
2.3.2 Definition of Entrepreneurship 15
2.3.3 Definition of Agricultural Entrepreneurship 16
2.4 COOPERATIVE MODEL 18
2.4.1 Cooperative History 18
2.4.2 Cooperative definition and principles 19
2.4.3 The role of cooperatives 20
2.4.4 Cooperatives in South Africa 21
2.5 INNOVATIVE AGRI-FOOD ECOSYSTEMS 25
2.5.1 Business ecosystems 25
2.5.2 Innovation ecosystems 28
2.5.3 Entrepreneurial ecosystems 29
2.6 STAKEHOLDER MANAGEMENT 30
2.6.1 Stakeholder Theory 30
2.6.2 Multi-stakeholder partnerships 31
2.6.3 Stakeholders Engagement 32
2.6.4 Multi-Stakeholder Management 34
2.7 CONCLUSION 35

CHAPTER THREE: RESEARCH QUESTIONS 36

3.1 INTRODUCTION 36
3.2 PRIMARY RESEARCH QUESTION 36
3.3 RESEARCH SUB-QUESTION 1: 37
3.4 RESEARCH SUB-QUESTION 2: 37
3.5 RESEARCH SUB-QUESTION 3: 37
3.6 RESEARCH SUB-QUESTION 4: 38
3.7 RESEARCH SUB-QUESTION 5: 38

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN 39

4.1 INTRODUCTION 39
4.2 RESEARCH METHODOLOGY AND DESIGN 39
4.2.1 Philosophy 39
4.2.2 Research Approach 40
4.2.3 Choice of Methodology 41
4.2.4 Purpose of research design 42
4.2.5 Strategy 42
4.2.6 Time horizon 43
4.2.7 Techniques and procedures 43
4.3 POPULATION 43
4.4 UNIT OF ANALYSIS 44

4.5 Sampling method and size 44
4.6 MEASUREMENT INSTRUMENT 45
4.7 DATA VALIDITY AND RELIABILITY 46
4.8 DATA GATHERING PROCESS 46
4.9 ANALYSIS APPROACH 47
4.10 RESEARCH ETHICS 47
4.11 LIMITATIONS 48

CHAPTER 5: RESULTS 49

5.1 INTRODUCTION 49
5.2 SUMMARY OF RESPONDENTS 49
5.3 RESEARCH SUB-QUESTION 1: WHAT IS THE PROFILE OF BLACK AFRICAN AGRICULTURAL ENTREPRENEURS IN THE AGRI-FOOD SYSTEM OF SOUTH AFRICA? 50
5.4 RESEARCH SUB-QUESTION 2: WHAT ARE THE ADVANTAGES AND DISADVANTAGES OF BELONGING TO AN ORGANISED AGRICULTURAL GROUP? 55
5.5 RESEARCH SUB-QUESTION 3: WHAT REASONS DO AGRICULTURAL ENTREPRENEURS HAVE FOR NOT JOINING ORGANISED AGRICULTURAL GROUPS? 62
5.6 RESEARCH SUB-QUESTION 4: HOW CAN THE STAKEHOLDERS OF THE AGRI-FOOD SYSTEM OF SOUTH AFRICA STIMULATE AND ENHANCE ORGANISED AGRICULTURAL GROUPS? 67
5.7 RESEARCH SUB-QUESTION 5: WHICH STAKEHOLDERS NEED TO BE A PART OF THE INNOVATIVE MULTI-STAKEHOLDER AGRIBUSINESS ECOSYSTEM? 71

CHAPTER 6: DISCUSSION OF RESULTS 77

6.1 INTRODUCTION 77
6.2 WHY AGRICULTURAL ENTREPRENEURSHIPS ARE NOT SUCCEEDING IN SOUTH AFRICA 77
6.2.1 Access to finance 77
6.2.2 Access to market 78
6.2.3 Competition from big commercial farmers and foreign imports 79
6.2.4 Stringent regulations and requirements 80
6.2.5 Poor business management and technical skills 80
6.2.6 Assistance from the government 81
6.3 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 1 81
6.4 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 2 84
6.5 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 3 87
6.6 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 4 88
6.7 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 5 90

CHAPTER 7: CONCLUSION 92

7.1 INTRODUCTION 92
7.2 PRINCIPAL FINDINGS 92
7.2.1 The profile of Black African agricultural entrepreneurs in the agribusiness sector 92
7.2.2 The advantages and benefits associated with being a member of an organised group 93
7.2.3 Reasons for agricultural entrepreneurs not joining organised agricultural groups 94
7.2.4 The stimulation of the agri-food system of South Africa by the stakeholders using innovative multi-stakeholder agri-food ecosystems 94
7.3 IMPLICATIONS FOR MANAGEMENT AND OTHER RELEVANT STAKEHOLDERS 95
7.10 LIMITATIONS OF THE RESEARCH 99
7.11 SUGGESTION FOR FUTURE RESEARCH 100

REFERENCES 101

APPENDIX ONE: CONSISTENCY MATRIX 117

APPENDIX TWO: INTERVIEW GUIDE 121

APPENDIX THREE: CODE LIST 125

APPENDIX FOUR: ETHICAL CLEARANCE APPROVAL 136

APPENDIX FIVE: TURNITIN SUBMISSION 137

LIST OF FIGURES

Figure 1.1: Agri-food system of South Africa
Figure 1.2: Relationship between Zero Hunger and other SDGs
Figure 2.1: Agricultural land ownership in 1994
Figure 2.2: Agricultural land ownership in 2016
Figure 2.3: Current South African drought status
Figure 6.1: The process to be followed by the government when dealing with organised agricultural groups
Figure 6.2: Stakeholders of the agri-food system
Figure 7.1: Innovative multi-stakeholder agribusiness ecosystems

LIST OF TABLES

Table 1.1: Existing concepts, theories and research used in this study
Table 2.1: Summary of the main objectives of the newly elected government
Table 2.2: Summary of the type of black farmers in South Africa
Table 2.3: Objectives of the Cooperative Development Policy for South Africa
Table 2.4: Measures taken by the Bangladesh government
Table 5.1: Summary of respondents interviewed

APPENDICES

Appendix 1: Consistency Matrix
Appendix 2: Interview Guide
Appendix 3: Code List
Appendix 4: Ethical Clearance Approval

CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

1.1 Introduction

This study used an exploratory approach to investigate how stakeholders of the agri-food system of South Africa could double food production by the year 2050 in order to avoid national food insecurity. The agri-food system of South Africa, shown in Figure 1.1, is facing many complex issues and challenges (Pereira, 2014). There are macroeconomic issues such as unemployment, inequality, poverty, food insecurity, and low economic growth. South Africa has a 29.1% unemployment rate and a staggering 55.2% youth unemployment rate (Statistics South Africa, 2019a, p. 1). South Africa has a per-capita expenditure Gini coefficient of 0.65, making it one of the most inequal countries in the world (Statistics South Africa, 2019b, p. 33). As stated by the national upper bound poverty line of R992.00 (USD 70.00) per person per month, approximately 55% of South Africans are considered poor and living in poverty (Hurlbut, 2018). Food insecurity is a prevalent issue with a reported 6.8 million South Africans being food insecure in 2017 (Statistics South Africa, 2019c, p. 8). These issues and challenges have been exacerbated by the country's low economic growth rates of 1.3% in 2017, 0.8% in 2018, and 1.3% in 2019 (Trading Economics, 2019).

Figure 1.1: Agri-food system of South Africa

Source: Adapted from "Agri-food Systems," by Von Bormann, 2019.

The agri-food system of South Africa also faces microeconomic issues and challenges such as climate change, poor infrastructure, rising input costs (fuel, fertiliser and electricity), increased foreign competition, failed government intervention, a high crime rate, insufficient access to funding and markets resulting in a high failure rate in agricultural entrepreneurship, and a depreciating and fluctuating exchange rate (Bureau for Food and Agricultural Policy, 2018, Von Loeper, Drimie, & Blignaut, 2018).

In 2015/2016, South Africa experienced a severe drought that resulted in approximately eight million tonnes of crop failures that depleted food supplies and resulted in rising food prices (Kilimani, Van Heerden, Bohlmann, & Roos, 2018). Both the Eastern and Northern Cape are experiencing an ongoing drought at the time of writing, although some parts of the country have enjoyed good rainfall. Van der Merwe (2019) describes the situation as critical in four of South Africa's provinces. These issues and challenges, which set the context for the research problem, highlight the important need to find ways to double food production by the year 2050 in order to avoid national food insecurity.

This research study proposes the formation of innovative multi-stakeholder agri-food ecosystems based on existing: entrepreneurship theories and research; agricultural cooperative models and research, business, innovation, and entrepreneurial ecosystem models and research; and stakeholder and multi-stakeholder theories and research found in Table 1.1.

Table 1.1: Existing concepts, theories and research used in this study

ENTREPRENEURSHIP RESEARCH
(Dias, Rodrigues, & Ferreira, 2019; Doran, McCarthy, & O'Connor, 2018; Eisenmann, 2013; Fitz-Koch, Nordqvist, Carter, & Hunter, 2018; Galindo & Méndez, 2014; Gries & Naudé, 2011; Hussain, Bhuiyan, & Bakar, 2014; Ireland, Hitt, & Sirmon, 2001; Juma, 2015; Kahan, 2013; Korent, Vuković, & Brčić, 2015; Lans, Seuneke, & Klerkx, 2017; Njegomir, Pejanović, & Keković, 2017; Schumpeter, 1934; Shane & Venkataraman, 2000; Stevens, 2017; Van Stel, Carree, & Thurik, 2005);
AGRICULTURAL COOPERATIVE RESEARCH
(Abate, Francesconi, & Getnet, 2014; Chaddad & Cook, 2004; Chagwiza, Muradian, & Ruben, 2016; Clarysse, Wright, Bruneel & Mahajan, 2014; Department of Trade and Industry, 2012; Eum & Terrasi, 2017; Giagnocavo, Bienvenido, Ming, Yurong, Sanchez-Molina, & Xinting, 2017; Grace, 2014; Hasen & Mekonnen, 2017; Iliopoulos, Cook, & Chaddad, 2016; Ingalsbe & Groves, 1989; International Cooperative Alliance, 2006; Jara & Satgar, 2009; Karantininis & Nilsson, 2007; Kurimoto, Draperi, Bancel, Novkovic, Shaw, Wilson, & Cracogna, 2015; Lutz, Smetschka & Grima, 2017; Mojo, Fischer, & Degefa, 2017; Ortmann & King, 2007; Perdomo, Farrow, Trienekens, & Omta, 2016; Poocharoen & Ting, 2015; Thaba & Mbohwa, 2015; Wanyama, Develtere, & Pollet, 2009; Zeuli, Cropp, & Schaars, 2004);
BUSINESS, INNOVATION AND ENTREPRENEURIAL ECOSYSTEM RESEARCH
(Adner, 2017; Adner, 2006; Alvedalen & Boschma, 2017; Audretsch, Cunningham, Kuratko, Lehmann, & Menter, 2019; Blum & Worth, 2019; Cohen, 2006; Eisenhardt & Galunic, 2000; FAO, 2018; Faria & Mixon, 2016; Gaffney, Challender, Califf, & Harden, 2019; Iansiti & Levien, 2004; Jacobides, Cennamo, & Gawer, 2018; Kelly, 2015; Li, 2013; Lyman, Ref, & Wright, 2018; Mason & Brown, 2014; Moore, 1996; Peltoniemi & Vuori, 2004; Prager, 2015; Scaringella & Radziwon, 2018; Spigel & Harrison, 2018; Spigel, 2017; Stam, 2015; Stam & Spigel, 2017; Teece, 2016; Van der Borgh, Cloodt, & Romme, 2012; Wulf & Butel, 2017); and
STAKEHOLDER AND MULTI-STAKEHOLDER RESEARCH
(Andriof & Waddock, 2017; Breeman, Dijkman, & Termeer, 2015; Buchholtz & Carroll, 2012; Carroll & Buchholtz, 1989; Crane & Ruebottom, 2011; Dentoni, Bitzer, & Pascucci, 2016; Dentoni & Peterson, 2011; Fassin, 2009; Freeman, 1984; Freeman, Harrison, Wicks, Parmar, & De Colle, 2010; Gilbert & Rasche, 2008; Harrison, Bosse, & Phillips, 2010; Harrison & Wicks, 2013; High Level Panel of Experts, 2018; Hillman & Keim, 2001; Jones, 1995; Kaler, 2002; Kilelu, Klerkx, Omore, Baltenweck, Leeuwis, & Githinji, 2017; Lu, Rong, You, & Shi, 2014; Miles, 2017; Mitchell, Agle, & Wood, 1997; Post, Preston, & Sauter-Sachs, 2002; Stoney & Winstanley, 2001; Verbeke & Tung, 2013; Von Bormann, 2019; World Economic Forum, 2016).

Source: Author's own.

This study focused on Black African small-to-medium-scale commercial farmers, emerging commercial farmers, and market-orientated smallholder farmers as defined by Cousins (2015) and Cousins & Chikazunga (2013). These groups of farmers were combined and grouped as agricultural entrepreneurs. Subsistence farmers were not considered for this research study as they do not grow food specifically for the market.

1.2 Background of the Research Problem

Issues relating to food security have received marked attention worldwide since the United Nations published its Sustainable Development Goals (SDGs) (International Council for Science, 2015). SDG Number 2, Zero Hunger, is one of the most critical SDGs for the African continent as it aims to eliminate hunger, realise food security, enhance nutrition in food produced, and encourage sustainable agriculture (Von Bormann, 2019). In 2017, it was estimated that, globally, some 821 million people were undernourished, or one out of every nine people, with the majority of these individuals found in developing countries (FAO, IFAD, UNICEF, WFP, & WHO, 2018, p. 2). In Sub-Saharan Africa, some 237 million people are food insecure (FAO & UNECA, 2018, p. 4).

In South Africa, one in four people, or 22% of all households, face daily food challenges (FAO & UNECA, 2018; Von Bormann, 2019). In 2017, it was reported that almost seven million South Africans experienced hunger and approximately ten million had inadequate access to food (Statistics South Africa, 2019c, p. 6). It was also reported that many South African children go to bed hungry with more than half a million households with children younger than the age of five experiencing hunger (Statistics South Africa, 2019c, p. 20).

Swaminathan (2014) observed that the successful economic development of any country burdened with extreme hunger and malnutrition is difficult, as such citizens are likely to be less productive and more prone to diseases, making them less able to contribute meaningfully to the economy. Thus, the elimination of food insecurity in a country will have a ripple effect on other sustainable development goals as depicted in Figure 1.2.

Figure 1.2: Relationship between Zero Hunger and other SDGs

Source: Adapted from "Goal 2: Zero Hunger," by United Nations Development Programme. (n.d.).

The South African national government has identified food and nutrition security as fundamental drivers in the reduction of poverty, unemployment and inequality (World Bank, 2018a). For example, the government produced the National Development Plan (NDP) 2030, a document that outlines the objectives, strategies, and implementation processes for the elimination of poverty, unemployment and inequality in South Africa. Investment in agriculture will not only reduce food insecurity, but also reduce unemployment (FAO, 2017). This is because agriculture is labour intensive, employing over 40% of the world's population (United Nations Development Programme, n.d.). Furthermore, agriculture contributes to approximately 32% of Africa's Gross Domestic Product (GDP) and absorbs 65% of its labour force. Thus, the agricultural sector plays a significant role in the growth of the economy and the creation of employment.

In South Africa, the agricultural sector currently employs approximately 849,000 people (Department of Agriculture, Forestry and Fisheries (DAFF), 2018, p. 36), with the NDP 2030 anticipating that this number could reach one million jobs by 2030 (National Planning Commission, 2012, p. 219). Importantly, agriculture is one of the few sectors that can absorb unskilled workers at a significantly high rate (Nolte, & Ostermeier, 2017). Therefore, the agriculture sector has been identified as a key strategy to assist people by lifting them out of poverty (Rice & Asoluka, 2016).

The agriculture sector also contributed 2,4% to the country's GDP in the 2017/2018 financial year, and the total value of agricultural production was R277,6 billion in 2017. The trade balance of agricultural products remains positive, and the export value reached R127 billion in 2017 (DAFF, 2018, pp. 10-11). Thus, it is imperative that the country grows the sector and agri-food system.

The agri-food system of South Africa also faces social and political problems (Bureau for Food and Agricultural Policy, 2018). There has been a significant decline in the recorded number of commercial farms and commercial farmers. According to Statistics South Africa (2009, p. 10) in 1993, there were approximately 58,000 commercial farms, but this number had declined to approximately 40,000 (-45%) by 2007. This data coincides with the decline in the number of commercial farmers, from 66 000 in 1990 to approximately 35 000 in 2018 (-47%) (De Vos, 2018, para. 12). In related research, Shackleton (2019) reports that over half a million rural people in the former homelands (areas created by the apartheid government for the Black African population to live in order to remove them from urban areas) had disengaged from farming between 2011 and 2016. This disengagement is attributed to insufficient funds to buy inputs; environmental and climatic change, declining soil fertility; inadequate government support; and a reduction of interest in agriculture by women and younger people. It is crucial to reverse the decline of commercial farms and commercial farmers in South Africa if the target of doubling food production by 2050 is to be achieved.

In order to improve the agri-food system and greatly increase food production, the national government of South Africa has developed several initiatives, guided by the NDP 2030's vision. The stimulation of the agri-food system of South Africa requires a financial services sector that supports the required investment and infrastructure needs (FAO, 2017). For this reason, DAFF introduced initiatives like the Comprehensive Agricultural Support Programme (CASP) programme. In the 2017/2018 financial year, R1.6 billion (USD 106 million) was made available to implement CASP (DAFF, 2018, p. 11). Funding is also provided by developmental finance agencies such as the Land Bank, the Industrial Development Corporation (IDC), the Independent Development Trust (IDT), the Development Bank of Southern Africa (DBSA), the National Empowerment Fund (NEF), and the Micro-Agricultural Financial Institution of South Africa (MAFISA) (DAFF, 2018).

Major commercial banks also have dedicated departments that concentrate on agricultural developmental finance. Banks reportedly provide 56% of credit and financial assistance to farmers, with the Land Bank providing 30%, agricultural cooperatives and agribusinesses providing 9%, and the remainder provided by other financial institutions (Department of Government Communication and Information System, 2019, p. 44). The World Bank (2018b), however, observes that, financial institutions remain sceptical about funding agricultural enterprises due to agribusiness being defined as high risk. Thus, the banking sector needs tailor made financial models catering to the agricultural sector.

It is posited here that for South Africa to double its food production by 2050, the stakeholders of the agri-food system of South Africa need to stimulate the agri-food system by enhancing agricultural entrepreneurship through the development of efficient and effective organised agricultural groups participating in innovative multi-stakeholder agri-food ecosystems. According to Vellema and van Wijk (2015), good partnerships combine the unique core competencies, capabilities and resources of each party to achieve an outcome not easily achieved when working in isolation. It has also been argued by Baregheh, Rowley, and Sambrook (2009) that for businesses to survive and thrive in today's globalised, interconnected environment, they must be willing to embrace collaboration as opposed to competition.

1.3 Purpose of the research

The purpose of this research study was to contribute to the exploration and understanding of how the stakeholders of the agri-food system of South Africa could double food production by 2050. More specifically, the aim of the research study was to establish whether stimulation of the agri-food system of South Africa, resulting in increased food production, could be achieved by enhancing agricultural entrepreneurship through the development of efficient and effective organised agricultural groups participating in innovative multi-stakeholder agri-food ecosystems. The study was conducted with agricultural entrepreneurs who belonged to organised agricultural groups as well as those who did not belong to any form of organised agricultural groups as well as experts of the agri-food system of South Africa. The study expected to yield rich insights on the advantages and disadvantages experienced by agricultural entrepreneurs that belong to organised agricultural groups. Additionally, the experiences and perceptions of agricultural entrepreneurs not belonging to any form of organised agricultural group are presented.

1.4 Research Problem

The majority of the food in South Africa is produced by only a few commercial farmers. Approximately 80% of the total food produced by the agri-food system comes from 20% of the country's commercial farmers (Hendriks, 2014, p. 6). Due to past inequalities, the majority of these farmers are white. Overall, there are approximately 37,000 white commercial farmers in South Africa and two million Black African smallholder and emerging farmers (Von Bormann, 2019, p. 14). Van Zyl (2015, para. 4) reports that there are only 5,000 Black African commercial farmers in South Africa. Efforts by the stakeholders of the agri-food system of South Africa to commercialise Black African emerging farmers have proven to be unsuccessful (Von Bormann, 2019). The shrinking numbers of commercial farmers and farming units in the country, coupled with the failure of the commercialisation of the country's Black African emerging farmers, indicate that the target of doubling South Africa's food production by 2050 could be difficult to meet. Thus, South Africa needs new commercial farmers to meaningfully contribute to the agri-food system.

1.5 Theoretical Implications of the Research

The theory and practice of entrepreneurship has amassed an extensive body of literature. However, there have been increasing calls for entrepreneurship research to develop a more contextualised approach (Fitz-Koch et al., 2018; Lans et al., 2017). Welter et al. (2016) concurred and posited that a contextualised and inclusive approach could open up unforeseen and useful perspectives for future research. The authors mention that most entrepreneurial studies, theories and research questions are focused on rare high-growth, technology-enabled, venture capital-backed start-up firms that create value through innovative products and services as opposed to "everyday entrepreneurship" (Welter et al., 2016, p. 313).

Agriculture has been pronounced as one of the world's biggest sectors and its meaningful inclusion in entrepreneurial theory and practice could benefit the entrepreneurial field of study (Fitz-Koch et al., 2018). This research study contributes to the academic research of the entrepreneurial field by contextualising entrepreneurship to include not only agricultural entrepreneurship, but cooperative, business ecosystem, entrepreneurial ecosystem, innovation ecosystem, stakeholder and multi-stakeholder constructs.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The literature review focused on the agricultural sector of South Africa, entrepreneurship in agriculture, the cooperative model, business ecosystems, innovation ecosystems, entrepreneurial ecosystems, and stakeholder and multi-stakeholder concepts. The literature review presented below is based on academic and research articles, relevant theories, concepts and models. Onwuegbuzie, Leech, and Collins (2012) state that, in the research process, the literature review is an essential and fundamental component. Boote and Beile (2005) also shared these sentiments when they wrote: “A thorough, sophisticated literature review is the foundation and inspiration for substantial, useful research. The complex nature of education research demands such thorough, sophisticated reviews” (p. 3). In order to advance the collective understanding of researchers in a particular subject area, what has been done previously needs to be first understood by the researcher (Boote & Beile, 2005).

2.2 The agricultural sector of South Africa

2.2.1 Dual agricultural sectors

Prior to 1994, South Africa’s agricultural sector was modelled on two vastly contrasting landscapes (Greyling, Vink, & Mabaya, 2015). One thriving large-scale, white-dominated, technologically advanced commercial agricultural sector, and one small-scale, Black African-dominated, labour intensive subsistent agricultural sector. These two very different landscapes were the result of apartheid policies (Greyling et al., 2015).

In the late nineteenth century, both Black African and white farmers were flourishing due to demand caused by new mining settlements (Hendriks, 2014). However, the Natives Land Act (No. 27 of 1913) changed this by limiting Black Africans to approximately 8% of the country’s farmland, and effectively eliminating competition from Black African farmers. The creation of Bantu Homelands in 1951 (land set aside for the Black African population to complement the apartheid government’s segregation policies), further solidified the inequality within the agricultural sector (Hendriks, 2014).

During the 1950s and 1960s, white commercial farmers were a key constituency of the apartheid government and therefore enjoyed substantial financial endowments in infrastructure development, agricultural research and technology development, agricultural technical support services and land distribution (Hendriks, 2014; Tregurtha, Vink, & Kirsten, 2010). Guaranteed markets and prices by the government for these commercial farmers assisted with their exponential growth. This growth continued into the 1970s, supported by the rising gold price and high agricultural growth. When the oil crisis threatened to negatively impact this growth, the apartheid government intervened with increased support in the form of direct payments and increased prices to the white commercial farmers (Tregurtha et al., 2010).

The apartheid government did not extend the same support to the Black African farmers of South Africa who were confined to poor and under-developed areas. Many had their lands dispossessed without compensation (Hendriks, 2014; Tregurtha et al., 2010). The combination of the discriminatory laws and lack of support from the apartheid government, made becoming a commercial farmer for Black South Africans extremely difficult.

2.2.2 The agricultural sector post-1994

The post-apartheid government introduced various policy reforms and support instruments that aimed to eliminate inefficiencies in the sector caused by the apartheid government (Tregurtha et al., 2010). This included the abolition of the policies that secured privileges and subsidies to white commercial farmers and the development of previously disadvantaged Black African farmers. This was done in an effort to level the playing field between Black African and white farmers (Binswanger-Mkhize, 2014).

South Africa's general agricultural strategy post-1994 was shaped by a number of policy documents and strategies based on the national government's vision and objectives for the country. These policy documents and strategies included: The White Paper on Agriculture (1995); the Marketing of Agricultural Products (1996); the White Paper on Land Policy (1997); the Agricultural Policy Discussion Document (1998); the Land Redistribution for Agricultural Development (2000); the Strategic Plan for South African Agriculture (2001); and the Comprehensive Agricultural Support Programme (2004; Tregurtha et al., 2010; Vojtech, 2006). Table 2.1 summarises the main objectives of these agricultural policy documents.

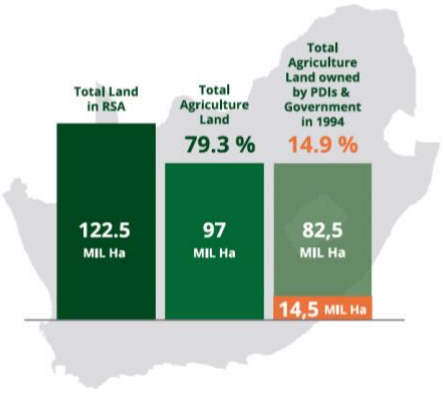
Table 2.1: Summary of the main objectives of the newly elected government

Agricutural Policy Framework Objectives post 1994
• The development of commercial farmers that will meaningfully contribute to the market;
• Increased access to land via agriculture via land reform;
• The provision of financial systems to subsistence, smallholder and emerging farmers;
• Greater domestic and foreign investment in the agri-food system of South Africa;
• Increased access to markets for smallholder and emerging farmers;
• Agricultural production based on the sustainable use of natural agricultural and water resources;
• Developing and enhancing agriculture's role in the regional development of Southern Africa and other African countries;
• Enhancing equitable access to resources for all participants of the agri-food system;
• Increased wealth creation in agriculture and rural areas;
• Reduced poverty and inequalities in agriculture and rural areas;
• Increased sustainable employment in agriculture;
• Improved farming efficiency; and
• Improved national and household food security

Source: Adapted from "Review of Agricultural Policies and Support Instruments in South Africa 1994-2009," by Tregurtha et al, 2010, p. 1-3).

Thus, the South African agri-food system must not only provide food for its citizens, but it also had to deal with the social, political and environmental issues left behind by apartheid (Von Bormann, 2019). Instead of focusing on global competition and expansion, the newly elected government had to first deal with the transformation of the agricultural sector in order to appease the majority of the country (Tregurtha et al, 2010). A large social and political contention was land ownership. Prior to the 1994 elections it was reported that white people owned over 85% of land in South Africa whilst only making up 13% of the population (Pringle, 2013, p. 37). Binswanger-Mkhize (2014, p. 255) reported that, in South Africa, white commercial farmers owned approximately 82.5 million hectares of land. This is depicted in Figure 2.1.

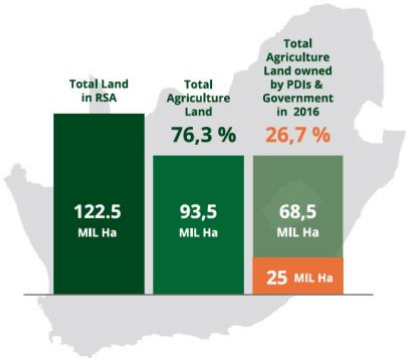
Figure 2.1: Agricultural land ownership in 1994



Source: "Land Audit: A Transactions Approach," Agri South Africa, 2017).

The post 1994 government has promised to redistribute 30% (24.5 million hectares) of this white owned land to Black African farmers. To date, the government has only redistributed 10% of land to Black African farmers, which equates to 7.95 million hectares (Binswanger-Mkhize, 2014, p. 255). This is depicted in Figure 2.2.

Figure 2.2: Agricultural land ownership in 2016



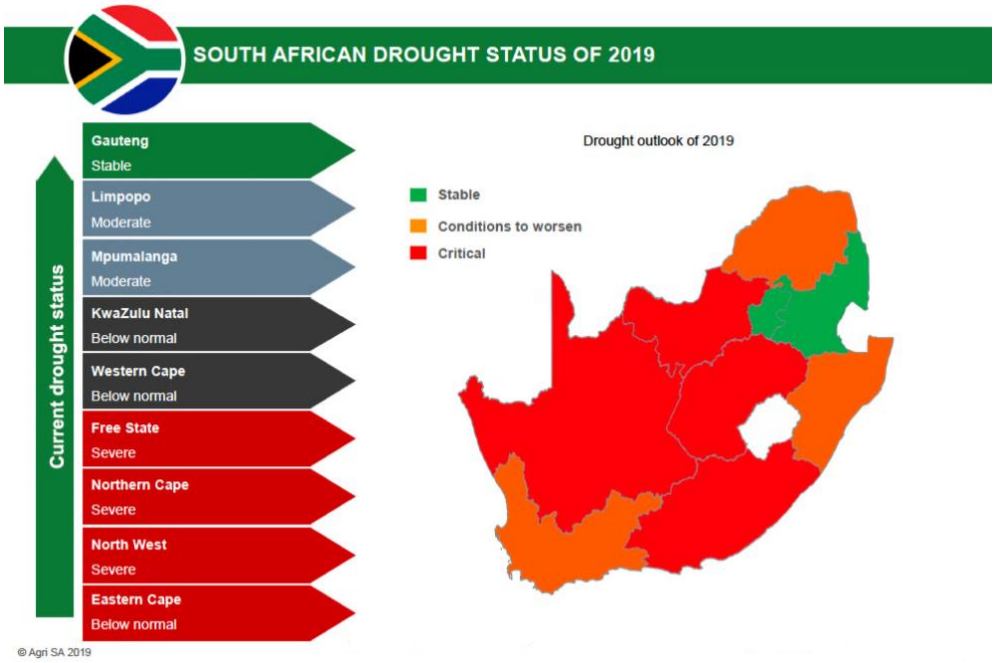
Source: "Land Audit: A Transactions Approach," Agri South Africa, 2017).

These social and political issues are compounded by significant environmental challenges. Being a semi-arid country with low and erratic rainfall, South Africa has limited agricultural potential (Von Bormann, 2019). Only 13% of agricultural land in South Africa is suitable for rain-fed production, and of that land, only 3% is considered fertile land (Von Bormann, 2019, p. 19). The amount of fertile land available is decreasing due to the negative impact of fertiliser, pesticide, and herbicide overuse. Costs of production are also relatively high compared to other agricultural nations. Thus, the stakeholders of the agri-food system of South Africa need to become more sustainable.

2.2.3 Climate change

South Africa has been affected by issues and challenges associated with climate change for many years (Calzadilla, Zhu, Rehdanz, Tol, & Ringler, 2014). Severe droughts, extremely high and low temperatures, and declining water resources have had devastating effects on the country's agri-food system (Agri South Africa, 2019; Calzadilla et al., 2014). The agriculture sector has lost an estimated 31,000 jobs and approximately R7 billion since January 2018 because of the drought (Agri South Africa, 2019, p. 2). This has had an impact on the production of various crops and animals, an increase in farm worker retrenchments, depression and other health issues amongst the affected farmers, and a huge disruption in the water supply system of the country. It is also estimated that the effects of the drought will increase food prices in the near future (Agri South Africa, 2019). Rising temperatures and erratic rainfall has caused chaos in harvesting and planting schedules of farmers and has increased water evaporation from dams and rivers supplying farmers with irrigation water. Agri South Africa (2019) and Calzadilla et al., (2014) both agree that climate change will continue to worsen for the next couple of decades. Figure 2.3 illustrates the status of the drought situation in South Africa.

Figure 2.3: Current South African drought status



Source: Agri South Africa (2019).

2.2.4 Black African agricultural entrepreneurs

The 1994 government believed that increasing the number of Black African farmers would help to reduce poverty, unemployment, inequality and food insecurity (Pienaar & Traub, 2015). There are four different types of Black African farmers operating in the agri-food system. First is the subsistence farmer, the most common type of Black African farmer, of which there are approximately 2,0 - 2,5 million in the agri-food system of South Africa (Cousins & Chikazunga, 2013). This number is corroborated by Statistics South Africa (2016, p. 15), who recorded a total of 2,329,043 agricultural households in South Africa, of which 2,116,281 were Black African. Second are the market-orientated smallholder farmers. There are approximately 250,000 market-orientated smallholder farmers operating in loose agri-food systems and between 5,000 – 10,000 market-orientated smallholder farmers operating in tight agri-food systems (Cousins & Chikazunga, 2013). Finally, there are approximately 5,000 – 10,000 emerging commercial farmers and small-to-medium-scale commercial farmers (see Table 2.2).

Table 2.2: Summary of the type of black farmers in South Africa

Category	Numbers	Features
Large-scale commercial farmers	7,000	Mostly white, sophisticated, specialised, farm for export and agro-processing, capital intensive.
Medium-to-large-scale commercial farmers	9,000	Mostly white, specialised, sophisticated.
Small-to-medium-scale commercial farmers	19,000	Mostly white, some black. Less specialised and sophisticated.
Emerging commercial farmers	5,000- 10,000	Mostly black, all produce is sold to the market, production is profit driven, mechanisation and capital intensity high.
Market-oriented smallholder farmers in tight value chains	5,000 – 10,000	Mostly black, many grow fresh produce under irrigation, others are livestock producers, and a few engage in dryland cropping. 75% of produce is sold to market, medium mechanisation and capital intensity.
Market-oriented smallholder farmers in loose value chains	250,000	Mostly black, many grow fresh produce under irrigation, and others are livestock producers. Few depend wholly on farming. 50% or more is sold to market. Low mechanisation and capital intensity.
Subsistence	2,5 million	Mostly black, growing food for themselves in homestead gardens.

Source: Adapted from Cousins (2015) and Cousins & Chikazunga (2013).

Binswanger-Mkhize (2014), Cousins (2015) and Okunlola, Ngubane, Cousins, & Du Toit (2016) have found that there was insufficient reliable information on the profiles of Black African farmers in South Africa. Therefore, statistics on gender, age, academic qualifications are few and far between and uncorroborated (Binswanger-Mkhize, 2014; Cousins, 2015; Okunlola et al., 2016). However, there have been studies done by a number of researchers, that, when aggregated, form a narrative.

Van den Berg (2013) conducted a research study in the Limpopo Province of South Africa. Of the 367 black small-scale farmers interviewed, over 70% were older than 51 years old and a large portion older than 61 years old, 71% were female, and 32% had less than 5 years farming experience (Van den Berg, 2013, p. 3). Swanepoel, Van Niekerk, and D'Haese (2017) investigated black farmers in the Western Cape of South Africa. The average age was 50 years and the sample consisted of 55% females. Only 4% held post-qualification degrees (Swanepoel, Van Niekerk, & D'Haese, 2017, p. 133). A community survey by Statistics South Africa (2016, p. 16) found that 62% of farmers in South Africa were above the age of 45 years and only 8,5% had a tertiary education. Research by (Agwu, Nwankwo & Anyanwu, 2014; Ahaibwe, Mbowa & Lwanga, 2013; Bezu & Holden, 2014; McMillan & Harttgen, 2014; Sumberg et al., 2014) found that there is youth disengagement in the agricultural sector of many African countries due to large-scale urbanisation, lack of interest, and a lack of access to land and finance.

2.3 Agricultural Entrepreneurship

2.3.1 The need for entrepreneurship in the agri-food system of South Africa

The global agri-food system evolved from the concept of economic value and is driven by the economic principles of demand and supply (Pengue, Gemmill-Herren, Balázs, Ortega, Viglizzo, Acevedo, Diaz, Westhoek, 2018). The global agri-food system has evolved to include all stages of the value chain, such as; preparation, production, harvesting, processing, packaging, distribution, marketing and consumption (Njegomir, Pejanović, & Keković, 2017). This evolution has resulted in increased complexity characterised by intricate linkages with other systems such as water, soil, health, education, energy, entrepreneurship, and ecosystems (Pengue et al., 2018). This complexity has brought about unique issues and challenges.

It is projected by the World Bank that agriculture and agribusiness in Africa will become a USD one trillion industry (Juma, 2015, p. 184). In order to capture some of this economic value, Stevens (2017) argued that it was important for the agricultural sector of South Africa to shift its focus from production to agribusiness driven by agricultural entrepreneurship. The development of new innovative multi-stakeholder agri-food ecosystems and the enhancement of agricultural entrepreneurship is an effective method to fuel economic and rural development (Juma, 2015). An opportunity exists for the stakeholders of the agri-food system of South Africa to drive economic development, reduce unemployment, poverty, inequality and food insecurity.

2.3.2 Definition of Entrepreneurship

Schumpeter's (1934) early seminal work presented the following definition of entrepreneurship:

> The function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on (p. 132).

Derived from the works of Venkataraman (1997), Shane and Venkataraman (2000) later defined entrepreneurship as: "an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organising, markets, processes and raw materials through organising efforts that previously had not existed" (p. 4).

Ireland, Hitt, and Sirmon (2001) defined entrepreneurship as: "a context dependent social process through which individuals and teams create wealth by bringing together unique packages of resources to exploit marketplace opportunities" (p. 51). Gries and Naudé (2011) defined entrepreneurship as: "the resource, process and state of being through and in which individuals utilize positive opportunities in the market by creating and growing new business firms" (p. 217). Eisenmann (2013) calls entrepreneurship "the pursuit of opportunity beyond resources controlled" (p. 1).

The common principles and concepts derived from the definitions above are resources, innovation, discovery, exploitation of opportunities, and the establishment of innovative goods, services and techniques of doing things. The researcher has used these definitions to incrementally create a definition for this research study. Thus, for the purposes of this research study, entrepreneurship is defined as follows: *Entrepreneurship is the use of unique resources to discover and subsequently exploit existing opportunities in a sector in order to introduce innovative methods of implementation that will result in a competitive advantage and profits*.

Traditionally, agriculture has been seen as a low-tech sector largely dominated by uneducated, small family firms with no emphasis on technology adoption or desire for innovation (Lans, Seuneke, & Klerkx, 2013). In recent years, there have been huge changes in the agricultural sector due to economic liberalisation leading to reduced government interference, less stringent regulations and interventions placed on agricultural markets and a more environmentally educated consumer. The sector has had to adapt to market changes, increasingly complex consumer preferences, climate change, more stringent regulations on quality, the need for complete supply chain management, macroeconomic conditions, sustainability, and so on (Lans et al., 2013). These changes have paved the way for a new type of farmer, namely the agricultural entrepreneur.

2.3.3 Definition of Agricultural Entrepreneurship

Complexity, multi-stakeholder partnerships, ecosystems, integrated value chains, market linkages, and entrepreneurship are terms that are increasingly being used together (Kahan, 2013). A review by Fitz-Koch et al. (2018) exposed that there has not been extensive entrepreneurship research focusing on the agricultural sector and therefore no suitable definition of agricultural entrepreneurship exists. This is unexpected as the founding figures of entrepreneurship, Richard Cantillon and Jean-Baptiste Say developed entrepreneurship theory using the agricultural sector as inspiration (Dias et al., 2019). The term entrepreneur comes from the French word *entreprende* which described a person that took risks (Njegomir et al., 2017). This encompasses agricultural entrepreneurs as they often take risks in order to achieve profits and create value. Lans et al. (2017) found that agricultural entrepreneurship and non-specific entrepreneurship shared many of the same characteristics. Agricultural entrepreneurship is the amalgamation of innovation,

skills, exploration and exploitation of scarce resources, profitability, risk management and stakeholder management, akin to generic entrepreneurship (Njegomir et al., 2017).

A number of scholars agree that there is a strong positive relationship between entrepreneurial activity and the stimulation of economic growth (Galindo & Méndez, 2014; Van Stel, Carree, & Thurik, 2005). Schumpeter (1934) argued that entrepreneurs are in fact the most important stakeholder of initiating economic change and development. Schumpeter (1934) also posited that entrepreneurs are the main engines of economic change in the market and are able to facilitate economic development within a system. The author placed the entrepreneur at the centre of economic development and argued that without the entrepreneur's use of unique resources and willingness to innovate there would be no identification and exploitation of opportunities.

Korent et al. (2015) reiterated this theory on economic development and agree that it is widely accepted that the entrepreneurial activity of a nation considerably impacts the development of the economy and society as a whole. Korent et al. (2015) defined entrepreneurial activity as: "a dynamic process in which new firms are starting up, existing firms are growing, and unsuccessful ones are restructuring or closing-down" (p. 4). Hussain, Bhuiyan, and Bakar (2014) held similar sentiments, stating that economic development and growth can be achieved through the shifting of entrepreneurial activity from low to high intensity and through the establishment of new goods, services, skills and information. However, Doran, McCarthy and O'Connor (2018) found that entrepreneurial activity only stimulated economic growth in high-income countries and had a negative effect on middle-to-low-income countries.

Stevens (2017), defined entrepreneurs as: "individuals who identify creative business opportunities, take the risk of establishing a business, and have talent and skills to manage and grow a business – in the process creating wealth and employment" (p. 87). This definition also describes a modern-day farmer: in order to make significant profit from farming activities, a farmer needs to participate and be efficient in almost the entire food supply value chain. This participation requires the identification of creative and new business opportunities, which have not been previously associated with farming. In order to be successful in the agribusiness sector, farmers must use their unique talents and skills to create a competitive advantage. Thus, the researcher contends that it is evident that farmers are in fact entrepreneurs. Agricultural entrepreneurs are better equipped to

tackle the issues and challenges facing the agricultural sector than the more traditional farmers, as entrepreneurs usually operate in complex and dynamic environments and form linkages throughout the agri-food system, identify opportunities, take risks, and use innovation to create value, profits and employment (Stevens, 2017).

2.4 Cooperative Model

2.4.1 Cooperative History

The current issues facing the agri-food system of South Africa require an understanding of not only technical aspects of farming, but also economic, social, organisational and business aspects (Giagnocavo et al., 2017). Partnerships, coalitions and strategic alliances are needed to deal with these challenges successfully (Chaddad & Cook, 2004; Poocharoen & Ting, 2015). This view is shared by Perdomo et al. (2016) who argue that the multiple complex challenges facing agricultural entrepreneurs could be overcome with collective action. It is often proposed that by introducing more organised agricultural groups such as cooperatives, agricultural industry associations, farmers associations, commodity organisations, and informal local associations, there would be an enhancement in agricultural entrepreneurship in the sector (Karantininis & Nilsson, 2007). Iliopoulos, Cook, and Chaddad (2016) concluded that every country in the world that has a first-class agricultural sector, had organised agricultural groups play a major role in its agri-food system.

The concept of cooperatives and cooperation is not a new one. Before the formalisation of the modern-day cooperatives, cooperatives were created and used in Europe and North America during the seventeenth and eighteenth centuries (Zeuli et al., 2004). The modern cooperative model was originally formed in Europe during the late nineteenth century to counter extreme poverty (Ortmann, & King, 2007). In 1844 a group of workers formed the Rochdale Society of Equitable Pioneers Ltd, the first modern cooperative model, with its unique operating principles, laws, and values. After being dissatisfied with their living, social and working conditions, this group studied the workings of many cooperatives for two years to ascertain what worked and what did not (Zeuli et al., 2004). In 1864, Friedrich Wilhelm Raiffeisen established the first savings and credit cooperative that provided savings and credit services to individuals living urban and rural areas (Ortmann, & King, 2007). The cooperative model has since been shaped by various governmental policies,

wars, technologies, agricultural organisations, legislative initiatives, and judicial interpretations (Ingalsbe & Groves, 1989).

2.4.2 Cooperative definition and principles

The International Co-operative Alliance (ICA), a non-governmental organisation (NGO) with more than 230 member organisations from over 100 countries, is considered an authoritative body in cooperative definitions, models and values (Zeuli et al., 2004). Cooperatives are defined as “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise” (Kurimoto et al., 2015, p. 2). This definition has been widely accepted by Hasen and Mekonnen (2017), Lutz, Smetschka and Grima (2017), Ortmann and King (2007), Thaba and Mbohwa (2015), Wanyama et al. (2009), and Zeuli et al. (2004). It clearly states and outlines cooperative values and principles. Cooperative values are what differentiate cooperatives from traditional business entities.

Cooperatives are developed on the values of “self-help, self-responsibility, democracy, equality, equity and solidarity” and cooperative members ought to believe in “honesty, openness, social responsibility and caring for others” (Kurimoto et al., 2015, p. 2). Above and beyond these values, cooperatives are governed by seven internationally recognised principles, namely: “voluntary and open membership; democratic member control; member economic participation; autonomy and independence; provision of education, training and information; cooperation among cooperatives; and concern for the community” (Ortmann & King, 2007, p. 41).

The seven principles of cooperatives highlight their important aspects, the most important being that membership is voluntary and open to all regardless of their gender, social, racial, religious and political identities. Also, members should not be coerced or forced to join a cooperative as they will not see the need to fully participate and cooperate in its activities. Moreover, members should be permitted to leave the cooperative anytime they wish to do so (Kurimoto et al., 2015).

The cooperative principles additionally point out that:

> …cooperatives are controlled by their members and any decisions regarding policies and the well-being of the cooperative ought to be made by the members; members contribute equally and therefore equally own the cooperative; the cooperative is independent and may enter into agreements with other organisations; cooperatives are to provide education and training for their members; cooperatives serve their members by working together and for the benefit of the community (Kurimoto et al., 2015, p. 2).

These principles are not meant to be studied in isolation and are interdependent and are grouped together in order to strengthen each other (Kurimoto et al., 2015).

2.4.3 The role of cooperatives

Cooperatives create wealth for members including producers, consumers, entrepreneurs, employees, and service providers (Zeuli et al., 2004). Efficient and effective cooperatives are often able to: improve bargaining power; reduce purchasing costs; and obtain or broaden market and financial access (Department of Trade and Industry (DTI), 2012). Cooperatives and organised agricultural groups in general, like most organised groups, need to form relationships with other organisations resulting in an agribusiness ecosystem (Poocharoen & Ting, 2015).

Mojo, Fischer, and Degefa (2017) examined the relationship between membership of an organised agricultural group and economic performance and income. They found membership was positively associated with members' incomes. Members belonging to an organised agricultural group performed significantly better than non-members (Mojo et al., 2017). Chagwiza, Muradian, and Ruben (2016) supported this notion by arguing that organised agricultural groups were efficient business vehicles that stimulate and enhance rural development, agricultural entrepreneurship and food security.

Karantininis and Nilsson (2007) argue that there is a network nature to cooperatives with two levels: (1) the relationship amongst farmer members; and (2) the inter-organisational network created by the cooperative. These ecosystems are organised as complex networks of firms whose integrated efforts are focused on creating value for the end

consumer (Clarysse et al., 2014). Collaboration among farmers, and other stakeholders is increasingly being recognised as critical for the acceleration and scaling up of the agri-food system of many countries (Prager, 2015).

Cooperatives have played and continue to play a crucial role in the world economy, particularly referencing the number of employment opportunities they provide (Grace, 2014). Eum and Terrasi, (2017, p. 12) found that globally, cooperatives employ at least 279.4 million people, or approximately 10% of the world's population. It is reported that there are approximately 2.94 million reported cooperatives and that the revenue of the world's top 300 cooperatives exceeds USD 2 trillion, equating to the world's tenth-largest economy (Carini et al., 2019).

In Kenya, cooperatives contribute to almost half of the country's GDP and control the majority of the coffee, dairy, and cotton markets (International Cooperative Alliance, 2006). In India, the cooperative movement is the biggest in the world, with two in three urban households and almost the entire rural community involved (DTI, 2012). In New Zealand, approximately a quarter of the country's GDP is generated by cooperatives and they control 95% of the dairy market. In Spain, cooperatives have a turnover of €70 billion (R1.1 trillion). In Canada, 40% of individuals are members of cooperatives (International Cooperative Alliance, 2006). In the United States of America, 40% of the population are involved in cooperatives whilst in Italy 60% of the population is employed by cooperatives. Lastly, 50% of the population in Singapore are involved in cooperatives (Jara & Satgar, 2009). It is clear from the aforementioned statistics that cooperatives are fundamental in some of the world's largest economies.

2.4.4 Cooperatives in South Africa

As cooperatives have been largely successful and have played a significant role in the development of rural agriculture in other parts of the world (Abate et al., 2014; Jara & Satgar, 2009), the South African government expressed a desire to form cooperatives across the country to assist emerging Black African farmers to grow and become profitable commercial farmers (DTI, 2012). It was not until 1892 that South Africa formally established its first cooperative called the Pietermaritzburg Consumers Cooperative. During apartheid, white farmer cooperatives were used in the commercialisation of the

agricultural sector as well as rural development (Jara & Satgar, 2009). By the 1980s, white farmer cooperatives had grown to about 250 with approximately 142,000 members and a turnover of R22.5 billion (USD 16.9 billion) (Jara & Satgar, 2009). These cooperatives provided and financed the machinery, agricultural instruments, and inputs used by the entire white farming community. This success highlights the importance of the government in creating a conducive environment that will encourage the development of cooperatives (Jara & Satgar, 2009; Ortmann & King, 2007).

This has, however, not been the case recently in South Africa, as cooperatives have largely been unsuccessful (Binswanger-Mkhize, 2014; DTI, 2012; Kirsten, Lubambo & Ndlovu, 2014). In 2001, the government resolved to move the advancement of cooperatives from DAFF to the DTI to ensure that cooperatives received more dedicated and specialised support. Since then, the DTI has played a leadership role in stimulation and enhancement of cooperatives in South Africa (Jara & Satgar, 2009). In 2005, the South African government promulgated the Cooperatives Act (No.14 of 2005), which is an act that is grounded on the seven international cooperative principles. The government wanted to extensively develop strong, practical, self-sufficient, self-governing and self-sustaining cooperatives (Ortmann & King, 2007).

Thus, these cooperatives would:

> …create and develop income-generating activities; create decent and sustainable employment; reduce poverty; develop human resource capacities and knowledge; strengthen competitiveness and sustainability; increase savings and investment; improve social and economic well-being; and contribute to sustainable human development (DTI, 2012, p. 8).

The DTI created a Cooperative Development Policy for South Africa in 2004 and had the following vision:

> To move towards a growing, self-sustainable and integrated co-operative sector, supported by all stakeholders, contributing to economic growth, poverty reduction and employment creation, as well as assisting in bringing about economic transformation and an equitable society in South Africa (DTI, 2012, p. 11).

This vision was broken down into the objectives listed in Table 2.3:

Table 2.3: Cooperative Development Policy for South Africa Objectives

Cooperative Development Policy for South Africa Objectives
Growth of the cooperative movement that could result in a meaningful contribution by cooperatives to the country's economic and social agendas;
The stimulation and enhancement of cooperatives for employment creation, poverty reduction, and rural development;
The development of human resource capacities such as technical skills, entrepreneurial, business management, and cooperative education and training;
Enhanced cooperative sustainability through the provision of business development support services;
Increased savings and investment through the promotion and support of cooperative banks and financial services cooperatives;
The creation of an environment that fosters cooperation among cooperatives;
Increase awareness of cooperatives as dynamic and effective business organisations that can be utilised by individuals and communities to create value and economic development;
Establish the profile of cooperatives as vehicles that promote small-scale individuals or groups into large-scale activities and that assist vulnerable individuals or groups compete with major market players; and
Promote cooperatives as an effective vehicle that could improve the well-being of the following targeted groups: black people, women, youth and people with disabilities.

Source: Adapted from "Integrated strategy on the development and promotion of co-operatives…" by (DTI, 2012, p. 12).

The DTI has acknowledged the potential benefits of cooperatives to all stakeholders of the agri-food system of South Africa. These benefits include; increased bargaining power due to economies of scale and scope, broad-based community participation and development, collective member participation and motivation, multi-stakeholder value, representation of economic and political interests, stability, innovation, and legal protection (DTI, 2012, pp. 13-14). However, the benefits have not materialised due to cooperatives in South Africa being largely unsuccessful (Thaba & Mbohwa, 2015). The last recorded number of registered cooperatives was approximately 32,000, of which only 3840 are still operating meaning there is an 88% failure rate of cooperatives in South Africa (Westoby, 2014).

Bangladeshi cooperatives found themselves in a similar situation in the 1970s where they faced many challenges such as: insufficient managerial and human resource capabilities; inadequate education and training among cooperative members; limited access to funding and markets; and a shortage of cooperative-related knowledge (DTI, 2012; Gundani, Nevondwe, & Odeku, 2018). The government of Bangladesh introduced new policies and strategies to change the way cooperatives were managed (Gundani, Nevondwe, & Odeku, 2018). As a result, the number of cooperatives grew from 5,000 to 145,000 (DTI, 2012, p. 28). The measures taken by the Bangladesh government (Table 2.4) are similar to those taken by the Cuban government in 1993. The Cuban government became heavily involved in the support of farmers and agricultural cooperatives. Similar case studies can be found in Ethiopia, Brazil and Kenya (Jara & Satgar, 2009). The South African government as well as the other stakeholders of the agri-food system could learn from these case studies and adopt similar strategies to change the performance of cooperatives in the country (Gundani, Nevondwe, & Odeku, 2018; Jara & Satgar, 2009).

Table 2.4: Measures taken by the Bangladesh Government

Measures taken by the Bangladesh Government
"Amending the Constitution of Bangladesh to include cooperative development and support as a government obligation." (Department of Trade and Industry, 2012, p. 28).
"Established a fully-fledged Department of Cooperatives, within the Ministry of Local Government, Rural Development and Cooperatives. The Department of Cooperatives employed more than 4 000 civil servants in various provinces and districts and was responsible for the overall function of cooperative registrations and development. Responsibilities in this respect included the mobilisation of communities to form cooperatives through awareness campaigns; the registration of cooperatives; the development of appropriate legislation and policy for cooperatives; the conducting of research; the development of information management systems; the development of training programmes for cooperatives; the fostering of cooperation among cooperatives and the building of the cooperatives movement, which was still young and weak; the auditing of the accounts of cooperative members; and the provision of facilities for entrepreneurship development." (Department of Trade and Industry, 2012, p. 28).
"Establishment of a national Co-operative College, with Zonal Training Institutes in each province." (Department of Trade and Industry, 2012, p. 28).
"Providing financial assistance, through the establishment of village banks, which are affiliated to the apex Co-operatives Bank. The Bangladesh Central Bank provides whole-sale loans to the apex Co-operative Bank, which are guaranteed by government. The apex Co-operative Bank then provides retail loans to member village banks." (Department of Trade and Industry, 2012, p. 28).

Source: Adapted from "Integrated strategy on the development and promotion of co-operatives: Promoting an integrated co-operative sector in South Africa 2012-2022," by (DTI, 2012, p. 28).

2.5 Innovative Agri-Food Ecosystems

2.5.1 Business ecosystems

Various studies have been done on the concept of business ecosystem but there is little consensus on its definition (Adner, 2017; Jacobides et al., 2018; Peltoniemi & Vuori, 2004; Scaringella & Radziwon, 2018). The concept of an ecosystem is broad and has been used by scholars in the development of many concepts such as entrepreneurial ecosystems, business ecosystems, innovation ecosystems, environmental ecosystems, and more recently knowledge ecosystems. Scholars have used network, systems, institutional, resource dependency, and stakeholder theories to build upon the study of ecosystems (Scaringella, & Radziwon, 2018). Ecosystem research has undoubtedly highlighted some fundamental competitive, collaborative, and organisational challenges faced by a number of firms today (Jacobides et al., 2018).

When discussing ecosystems in agriculture, many have often confused the terms collaboration and coordination. One must, however, make a distinction: collaboration is when all stakeholders work together as a group or network to achieve a common goal; whereas, coordination is when stakeholders work towards a common goal but in isolation (Prager, 2015). This research study focuses on the collaboration of actors within an ecosystem. Collaboration between organisations working in a network of interconnections has been extensively researched (Wulf & Butel, 2017). The DAFF and the FAO have recently undertaken a Multi-Stakeholder Process (MSP) with the objectives of bringing various stakeholders together in order to solve the country's complex problems through the conceptualisation and formulation of new policies. The MSP intends to develop agri-food ecosystems that are expected to provide stakeholders with "access to more capabilities and resources by drawing on the full range of technical, human, knowledge, physical and financial capital existing within the ecosystem" (Blum & Worth, 2019, p. 4).

The designation of the word ecosystem generally refers to a collection of entities interrelating and depending on each other's activities. Moore (1996) introduced the term to business when defining business ecosystems as:

> An economic community supported by a foundation of interacting organizations and individuals. This economic community produces goods and services of value to customers, who are members of the ecosystem. The member organism also includes suppliers, lead producers, competitors, and other stakeholders. Over time, they co-evolve their capabilities and roles, and tend to align themselves with the direction set by one or more central companies. Those companies holding leadership roles may change over time, but the function of ecosystem leader is valued by the community because it enables members to move toward shared visions to align their investments, and to find mutually supportive roles (p. 2).

Since the introduction of the term, there have been many definitions of business ecosystems. For example, Eisenhardt and Galunic (2000) defined business ecosystems as a collection of companies that create value together through the combination of their skills and assets. Peltoniemi and Vuori (2004) defined a business ecosystem as: “a dynamic structure which consists of an interconnected population of organisations” (p. 13). This definition included organisations that span a wide range from smaller organisations to public sector organisations.

Iansiti and Levien (2004) defined a business ecosystem as:

> Loose networks – of suppliers, distributors, outsourcing firms, makers of related products or services, technology providers, and a host of other organizations – that affect, and are affected by, the creation and delivery of a company's own offerings. Like an individual species in a biological ecosystem, each member of a business ecosystem ultimately shares the fate of the network as a whole, regardless of that member's apparent strength (p. 2).

Teece (2007) defined a business ecosystems as a: “community of organizations, institutions, and individuals that impact the enterprise and the enterprise’s customers and supplies” (p. 1325). Teece (2016) later redefined this definition and described business ecosystems as being made up of: “interdependent firms who are using common standards in order to bring goods or services to their customers” (p. 1).

More recently, Adner (2017) defined an ecosystem as: “the alignment structure of the multilateral set of partners that need to interact in order for a focal value proposition to

materialize" (p. 2). Adner's (2017) definition consists of four elements, namely: (1) "alignment structure"; (2) "multilateral"; (3) "set of partners" and (4) "focal value proposition" to materialise. Alignment structure describes how actors must have a mutual agreement and must be satisfied with their positions within the ecosystem. An ecosystem is multilateral, consisting of interdependent relationships that are continually interacting and evolving. The set of partners element means that membership of the ecosystem is defined and not open-ended. Participating members jointly create value in order to achieve a desired common objective. This definition suggests that the intention of creating and developing value is at the centre of the ecosystem.

Adner (2017) also introduces the concept of an ecosystem-as-affiliation, which treats ecosystems as groups of interdependent actors defined by the network they participate in. In ecosystem-as-affiliation, there is a collapse of conventional organisational boundaries and an increase in interdependency amongst the actors in the form of collaborative partnerships (Adner, 2017). The ecosystem-as-affiliation strategy is focused on growing the ecosystem's platform, by increasing the number of participants in the system, resulting in increased platform and ecosystem value (Adner, 2017).

Iansiti & Levien (2004, p. 69) argued the concept of "shared fate" when describing the relationship that exists between the members of the ecosystem. This implies that the performance of the individual members affects the performance of the entire ecosystem. This concept was supported by Li (2013), who argued that the traits of business ecosystems include a network relationship between the members of an ecosystem on a platform that promotes coevolution. These members are offered an environment that grows and excels on heterogeneity, learning, connectivity, and mutually influencing interactions (Van der Borgh, Cloodt, & Romme, 2012). Scaringella and Radziwon (2018) also shared this view when they maintained that cooperation is a necessary ingredient for a successful ecosystem.

In a study of business ecosystems conducted by Lyman, Ref, & Wright (2018), many of the executives surveyed believed that participation in a business ecosystem allows businesses to innovate more, increase revenue growth and access new customers and markets. Successful businesses cannot evolve in a vacuum; therefore, these businesses need to continuously attract resources such as financial capital, mutually beneficial partnerships, innovative suppliers and new customers. Business ecosystems usually

combine numerous and diverse actors with various skills and core capabilities in order to develop, enhance, and innovatively serve markets in efficient ways (Kelly, 2015).

2.5.2 Innovation ecosystems

Innovation is a crucial component to the sustainability of the agri-food system, the success of agricultural entrepreneurs, the revitalisation of rural agriculture, the creation of employment in the sector, and the economic upliftment of many developing countries. But the pace of the innovation needs to be increased drastically (Faria & Mixon, 2016.)

FAO (2018, p. 5) defined agricultural innovation as:

> …the process whereby individuals or organizations bring new or existing products, processes or ways of organization into use for the first time in a specific context in order to increase effectiveness, competitiveness, resilience to shocks or environmental sustainability and thereby contribute to food security and nutrition, economic development or sustainable natural resource management.

When it comes to the agricultural sector, most individuals would assume that innovation has to do with the improvement or the introduction of something new. Innovation in agriculture involves different social, production and organisational processes, types of markets and the access to those markets, food preferences of consumers, financing mechanisms, extension services and the marketing of the produce (FAO, 2018). Innovation can activate the necessary transformation needed to respond to the various issues and challenges faced by the sector (Gaffney et al., 2019). In order to increase the pace at which the agricultural sector is growing, innovation ecosystems need to be created by the stakeholders of the agri-food system of South Africa (FAO, 2018).

The government, agricultural entrepreneurs, commercial farmers, the private sector, organised agricultural groups, research and academic institutions, financial institutions, agricultural intermediaries, and the consumers all have a role to play in the creation of a sustainable environment that encourages innovation that will generate solutions for the agri-food system of South Africa to flourish (FAO, 2018; Gaffney, 2019). South Africa has yet to fully harness the power of innovation in the agricultural sector. This will change once

stakeholders understand and put into place innovation drivers and processes that will enable transformative change through innovation ecosystems (FAO, 2018).

Innovation ecosystems are defined by Adner (2006) as: “the collaborative arrangements through which firms combine their individual offerings into a coherent, customer-facing solution” (p. 1). The development of a successful innovation ecosystem requires stakeholders to comprehend the value creation logic (Scaringella & Radziwon, 2018). Innovation ecosystems work around the joint value created by the members of the ecosystem for the benefit of the consumer. Innovation ecosystems consist of interdependent members and no single stakeholder can achieve maximum value creation without the other members (Scaringella & Radziwon, 2018). Thus, each stakeholder has a specific contribution to make to the innovation ecosystem.

2.5.3 Entrepreneurial ecosystems

Agricultural entrepreneurs are key stakeholders in these agri-food ecosystem of South Africa and it is, therefore, critical to look at how to set up entrepreneurial ecosystems. The concept of entrepreneurial ecosystems is a fairly new one (Spigel & Harrison, 2018; Stam, 2015). Entrepreneurship studies are mostly never focused on broader group characteristics but on the characteristics and behaviours of individuals or firms (Alvedalen & Boschma, 2017). In this dynamic and ever-changing business environment agricultural entrepreneurs find themselves in, a competitive economical advantage can be accomplished through shared resources, network externalities, knowledge spill-overs, local endowments, and government support (Audretsch, Cunningham, Kuratko, Lehmann, & Menter 2019).

Cohen (2006) defined entrepreneurial ecosystems as “…an interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures” (p. 3). Stam and Spigel (2017) defined entrepreneurial ecosystems as “individuals exploring opportunities to discover and evaluate new goods and services and exploit them in order to add as much value as possible” (p. 1). Mason and Brown’s (2014) definition of entrepreneurial ecosystems is ideal for this particular research study:

> …a set of interconnected entrepreneurial actors (both potential and existing), entrepreneurial organizations (e.g. firms, venture capitalists, business angels, banks), institutions (universities, public sector agencies, financial bodies) and entrepreneurial processes (e.g. the business birth rate, numbers of high growth firms, levels of 'blockbuster entrepreneurship', number of serial entrepreneurs, degree of sell-out mentality within firms and levels of entrepreneurial ambition) which formally and informally coalesce to connect, mediate and govern the performance within the local entrepreneurial environment (p. 5).

Many scholars who have studied entrepreneurial ecosystems have stressed that the function and role of entrepreneurial ecosystems is to create, discover, and exploit strategic entrepreneurial opportunities in a given sector (Alvedalen & Boschma, 2017). As with any ecosystem, an entrepreneurial ecosystem has to produce economic value for the entire ecosystem and has to disseminate this economic value amongst all the members of the ecosystem (Audretsch et al., 2019).

2.6 Stakeholder Management

2.6.1 Stakeholder Theory

The shareholder theory states that the shareholders of the organisation are the owners of the company and management has a fiduciary duty to maximise their investments and profits above all else (Lu, Rong, You, & Shi, 2014). This view was not inclusive of all parties as organisations did not look out for the interests of other parties besides those of the shareholder, and as a result a new comprehensive word, 'stakeholder', was introduced by 1963 (Freeman et al., 2010). The term encompassed every individual or group of the organisation. Today the word stakeholder is used regularly in many different industries and sectors.

Gilbert and Rasche (2008) have observed that stakeholder theory consists of an amalgamation of different concepts, perspectives, and ideals and stakeholder theorists are "a broad church" (p. 756). This amalgamation of perspectives and ideals means that the stakeholder theory consists of a number of interpretations and uses (Miles, 2017). Different definitions have developed over time to define stakeholder theory (Freeman et al., 2010). These different interpretations and definitions have created confusion amongst

the field of study. Stoney and Winstanley (2001) observed that ‘‘…there is considerable confusion arising from the multitude of conflicting views [and]… failure to recognize and map this diversity has weakened rather than strengthened the stakeholder concept’’ (pp. 605-606). Fassin (2009) echoed these sentiments by claiming that ‘‘the stakeholder model is seen as suffering from vagueness in scope and ambiguity due to the possible interpretations of the basic stakeholder concept’’ (p. 2). Crane and Ruebottom (2011) later supported this view by arguing that the concept of stakeholder theory “has remained vague and superficial, limiting the theory’s use… and running the risk that ‘‘stakeholder’’ will become a meaningless term’’ (p. 77).

These are the definitions that best align with this research study. Freeman (1984) defined a stakeholder as “any group or individual who can affect or is affected by the achievement of the organisation’s objectives” (p. 54). Carroll and Buchholtz (1989) defined stakeholders as “individuals or groups with which business interacts who have a ‘stake’ or vested interest in the firm. This ‘stake’ is also described as a ‘claim’, ‘interest’ or ‘right’” (p. 22). Jones (1995) described a stakeholder as being “… characterized by relationships with many groups and individuals (‘’stakeholders’’), each with (a) the power to affect the firm’s performance and/or (b) a stake in the firm’s performance” (p. 407). Post, Preston, and Sauter-Sachs (2002) defined stakeholders as “individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers” (p. 8). Kaler (2002) encouraged that all definitions of stakeholder be classified by whether the individual or group in question is a ‘claimant’, that is, has a claim on the services of the organisation; or their level of ‘influence’, that is, whether they have influence over the business. All the stakeholders identified in this research study either have a claim or influence in the agri-food system of South Africa.

2.6.2 Multi-stakeholder partnerships

The global agri-food system faces increasingly volatile, uncertain, complex issues and challenges (Breeman, Dijkman, & Termeer, 2015; Von Bormann, 2019). Because of their complexity, global agri-food systems require a cross-sectoral and holistic approach that involves the combination of resources, knowledge and skills of multiple stakeholders (Breeman, Dijkman, & Termeer, 2015; High Level Panel of Experts, 2018; Kilelu et al.,

2017). The agricultural sector has seen a rise in multi-stakeholder partnerships. Many agribusinesses around the world have attempted to create cooperation among a much broader set of stakeholders that includes but is not limited to; academic and research institutions, government, investors, food supply value chain actors, NGOs, and civil society (Breeman, Dijkman, & Termeer, 2015; High Level Panel of Experts, 2018; Kilelu et al., 2017). Numerous multi-national corporations around the world that are involved in the agribusiness sector are participating in strategic multi-stakeholder alliances that cover multiple sectors (Dentoni & Peterson, 2011).

These multi-stakeholder partnerships result in the co-creation of unique resources and capabilities by participating stakeholders through a process of engagement, knowledge exchange, and interorganisational learning (Dentoni et al., 2016; Kilelu et al., 2017). Co-creation of unique resources and capabilities results in a competitive economic advantage for the entire multi-stakeholder partnership, because each stakeholder is able to access external resources, capabilities and knowledge they would not have had access to otherwise (Dentoni et al., 2016; Kilelu et al., 2017). The actors of the multi-stakeholder partnership take action together and collaborate through a process of communication, planning, decision-making, and implementation (Dentoni et al., 2016). Freeman's stakeholder theory posited that strategies that aim to provide benefits to more stakeholders will ultimately result in long-term growth or survival for the organisation (Freeman et al., 2010).

2.6.3 Stakeholders Engagement

The World Economic Forum (2016) developed an eight-step framework that aimed to assist multi-stakeholder partnerships and ecosystems design, implement, adapt and scale.

Step 1: Engage: Identify and engage the stakeholders of the agri-food system of South Africa that will form a part of the innovative agribusiness ecosystem. Assign roles for each activity based on the stakeholder's capabilities. This research study has identified important stakeholders that form part of the agri-food system of South Africa and that would participate in the innovative agribusiness ecosystem.

- Agricultural Entrepreneurs;
- Agricultural Intermediaries;
- Private Sector;
- Financial Institutions;
- Organised agricultural groups;
- NGOs;
- Academic and Research Institutions;
- Commercial Farmers/Mentors;
- Farm Workers;
- Consumers; and
- Government.

Step 2: Align: Align the objectives, goals and vision of all the stakeholders so that shared value may be achieved. Create a shared partnership agenda as well as shared priorities for the innovative agribusiness ecosystem.

Step 3: Structure: Structure a strong management team that will coordinate, plan, and implement the partnership's mandate. Determine which stakeholders will be involved, what each stakeholder's role will be, and which stakeholders will take the lead.

Step 4: Plan: Define the goals, objectives and targets of the partnership and coordinate plans on how these will be achieved.

Step 5: Implement: Involve and communicate with the necessary stakeholders that will be tasked with the execution of the goals and objectives in order to achieve the specified targets. Be sure to also involve local actors and experts to be a part of the implementation.

Step 6: Advance: Advance the partnership's agenda by highlighting and celebrating short-term wins and inviting high-level leaders to be involved. Set up periodic meetings that will advance the partnership's goals and bring in interested parties willing to invest in the partnership. Prepare regular reports on the partnership's progress and troubleshoot any problems.

Step 7: Scale: Maximise the impact of the partnership by scaling the activities and model of the partnership so that a meaningful contribution is felt. Expand the breadth and depth of the impact and further institutionalise the partnership as it grows.

Step 8: Review: Review the partnership's strategy, vision, and structure as it evolves. The partnership needs to be adaptive, dynamic and flexible in order to stay relevant.

Developing a multi-stakeholder partnership is a long and difficult journey for all the stakeholders involved. The stakeholders need to be dedicated to the common shared value that will be derived from the success of the partnership.

2.6.4 Multi-Stakeholder Management

In the strategic management field of study, attempts to explain why some organisations outperform others have been regularly made (Harrison, Bosse, & Phillips, 2010). Strategic management theorists argue that in order for an organisation to achieve optimum performance it should implement a comprehensive strategy that integrates the needs of all its multiple stakeholder groups (Harrison et al., 2010). Hillman and Keim (2001) posit a positive relationship between the effective management of stakeholders and overall firm performance. The authors argue that effective management of the stakeholders can result in "intangible, socially complex resources that may enhance a firm's ability to outperform competitors in terms of long-term value creation" (p. 127).

Buchholtz and Carroll (2012) posited that to successfully manage stakeholders, an organisation must first take care of its primary stakeholders and then ethically deal with its secondary stakeholders whilst making a profit in the process. Verbeke, & Tung, (2013)

and Andriof and Waddock (2017) argued that stakeholder theory has evolved to now consider the types of relationships organisations have with their stakeholders. Perspectives of current stakeholder theorists have moved from the view that stakeholders need to be managed by the organisation to one where there is mutuality, interdependence and shared power (Andriof & Waddock, 2017).

2.7 Conclusion

This chapter has clearly set out the literature that supports the argument of the researcher and has assisted with the formulation of the research questions found in the next chapter. The literature review has demonstrated that one of the main reasons for the success of the white commercial farmers and the agricultural sector as a whole during the apartheid era was the formation of supportive organised agricultural groups. Through the theory and concept of entrepreneurship in agriculture, the cooperative model, business, innovative and entrepreneurial ecosystem concepts, and stakeholder and multi-stakeholder theories, it has been demonstrated by this study that the development of effective and efficient organised agricultural groups within innovative multi-stakeholder ecosystems, could assist with the enhancement of agricultural entrepreneurship, and as a result, the stimulation of the agri-food system of South Africa. Consequently, the stimulation of the agri-food system of South Africa could result in the significant increase of food production.

CHAPTER THREE: RESEARCH QUESTIONS

3.1 Introduction

The purpose of this research study was to explore how the stakeholders of the agri-food system of South Africa could double food production by 2050. More specifically, the aim of this research study was to establish whether the stimulation of the agri-food system of South Africa, which would result in increased food production, could be achieved by enhanced agricultural entrepreneurship through the development of efficient and effective organised agricultural groups participating in innovative multi-stakeholder agri-food ecosystems. Chapter 3 builds on the literature review found in the previous chapter and outlines the primary research question which is then broken down into five research sub-questions.

3.2 Primary Research Question

Numerous studies have examined and found a positive relationship between economic growth and an increase in entrepreneurial activity. The literature review highlighted how the global agri-food system's complex issues and challenges could be dealt with by collaboration within innovative multi-stakeholder ecosystems. The literature review points to a gap in agriculture specific entrepreneurship literature, resulting in the primary research question that this research study aims to answer:

How can the stakeholders of the agri-food system of South Africa double food production by 2050?

In order to investigate and gain deeper insights on how the stakeholders of the agri-food system of South Africa could double food production by 2050, the study focused on answering the following five research sub-questions that stemmed from the primary research question.

3.3 Research Sub-Question 1:

What is the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa?

This research question aimed to understand and establish the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa. The respondents were asked their age, gender, academic qualification, years of experience in the agri-food system, reasons for entering the agri-food system and the qualities they think make a successful agricultural entrepreneur. The literature reviewed suggests that the majority of Black African agricultural entrepreneurs are poor, uneducated individuals who only get into the agri-food system to avoid poverty and unemployment (Khapayi & Celliers, 2016).

3.4 Research Sub-Question 2:

What are the advantages and disadvantages of belonging to an organised agricultural group?

Breeman, Dijkman, and Termeer (2015), Dentoni et al. (2016) and Dentoni, Bitzer, and Schouten (2018;) argue that in order for the global agri-food system to efficiently and effectively deal with the complex issues and challenges it faces, they need the stakeholders of the agri-food system to collaborate in multi-stakeholder partnerships. Organised agricultural groups have long been in existence and there are known benefits of belonging to one. This research question sought to establish the advantages and disadvantages associated with being a member of an organised agricultural group in South Africa. The benefits, as well as the challenges discovered, could be used in the formulation of a solution to enhance agricultural entrepreneurship, and consequently, the entire agri-food system.

3.5 Research Sub-Question 3:

What reasons do agricultural entrepreneurs have for not joining organised agricultural groups?

Establishing the reasons why some Black African agricultural entrepreneurs would choose not to join an organised agricultural group despite knowing of the perceived benefits will

be extremely helpful to the stakeholders of the agri-food system of South Africa. These reasons can be used to improve organised agricultural groups in order to make them more attractive to agricultural entrepreneurs. The respondents were asked what organised agricultural groups can do to be more appealing. This could assist organised agricultural groups to become more efficient and effective in enhancing agricultural entrepreneurship, and consequently, the entire agri-food system.

3.6 Research Sub-Question 4:

How can the stakeholders of the agri-food system of South Africa stimulate and enhance organised agricultural groups?

The South African government is a key stakeholder of the agri-food system, yet the literature has found that their policies and interventions have been ineffective in dealing with the complex issues and challenges facing the agri-food system. In many countries, organised agricultural groups contribute immensely to the issues and challenges faced by the agri-food system. This is not the case in South Africa. This research question aimed to understand and establish how the South African government, as a leading stakeholder, could improve the success rate of organised agricultural groups, and consequently, the entire agri-food system.

3.7 Research Sub-Question 5:

Which stakeholders need to be a part of the innovative multi-stakeholder agri-food ecosystem?

Multi-stakeholder partnerships are a key to solving the complex issues and challenges faced by the agri-food system of South Africa. The unique resources, capabilities and competencies brought by each stakeholder could enable innovative solutions that could lead to the stimulation of the agri-food system of South Africa. Therefore, it is critical to make sure that the relevant stakeholders are involved in these multi-stakeholder partnerships. This research question aimed to identify the relevant stakeholders and their roles within the innovative multi-stakeholder agri-food ecosystem.

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

4.1 Introduction

This chapter summarises the choice of research methodology and design, sampling technique, measurement instrument as well as data gathering and analysis that was utilised by the researcher in order to answer the primary research question and sub-questions presented in the previous chapter. The choice of methodology was informed by the literature review conducted in Chapter 2. The literature review established that contextualised entrepreneurship research, especially in the agricultural sector, was lacking and had not been fully explored by entrepreneurship scholars. The literature review also posited that stakeholders of the agri-food system of South Africa needed to form innovative multi-stakeholder agri-food ecosystems so as to achieve the doubling of food production by 2050.

Because of the gap mentioned above, an exploratory and qualitative approach was then deemed an appropriate method for this study. This research methodology method was chosen for this study in order to explore and understand how the stakeholders of the agri-food system of South Africa could double food production in order to feed the growing population and avoid nation food insecurity. The researcher conducted and recorded in-depth, face-to-face, semi-structured interviews with 13 agricultural entrepreneurs operating in Gauteng, and three (3) agri-food system experts. The initial respondents were identified through the researcher's network, thereafter, snowball sampling was conducted to identify the remaining respondents. The data collected from the respondents was transcribed by a third-party using the recordings and then analysed with the assistance of a Computer-aided Qualitative Data Analysis Software (CAQDAS).

4.2 Research Methodology and Design

4.2.1 Philosophy

The agri-food system of South Africa faces many complex issues and challenges that have yet to be fully understood by the stakeholders of the system. The literature reviewed has suggested using agricultural entrepreneurship and innovative multi-stakeholder agri-food ecosystems as possible measures to tackle some of these issues and challenges. The agri-food system of South Africa consists of many stakeholders or social actors who

need to work together to create economic value for the system. The unique resources, capabilities and competencies of the different stakeholders can be leveraged to the agri-food system's advantage. In order to understand how the agri-food system of South Africa could be stimulated, this study adopted an interpretivist philosophy.

Saunders and Lewis (2018) defined interpretivism as "a philosophy which advocates the necessity to understand differences between humans in their role as social actors" (p.109). Burrell and Morgan (1979) suggested that an "interpretivist paradigm is informed by a concern to understand the world as it is and understand the fundamental nature of the social world at the level of subjective experience" (p. 28). Interpretivism is important in business and management research due to the increasingly complex, volatile, unprecedented, and uncertain world business finds itself in (Saunders & Lewis, 2018). This is also true for the agri-food system of South Africa, which is currently facing complex social, economic, political and environmental issues and challenges.

The interpretivist philosophy aims to understand the interpretations and subjective meanings of the individuals being studied (Goldkuhl, 2012). As the stakeholders of the agri-food system are key to its stimulation, it was imperative to get their interpretations and opinions on how this could be done. This is in contrast to positivism research which relies specifically on scientific evidence and usually only accepts one answer. Research that subscribes to an interpretivist philosophy discovers reality through the perceptions, experiences, opinions, and background of the respondents interviewed (Thanh & Thanh, 2015). The researcher aimed to find out from the agricultural entrepreneurs and experts of the agri-food system interviewed, if efficient and effective organised agricultural groups were the key to the enhancement of agricultural entrepreneurship, and consequently, the entire agri-food system of South Africa.

4.2.2 Research Approach

The approach used in this research study included both deductive and inductive methods. A deductive approach tests research questions, propositions or hypotheses by "using a research strategy designed to collect data for testing" (Saunders & Lewis, 2018, p. 112). Deductive reasoning is the testing of a theory, concept, or model and inductive reasoning is the development of a theory, concept, or model (Armat, Assarroudi, Rad, Sharifi, & Heydari, 2018). Firstly, the stakeholder and entrepreneurship theories, the cooperative

model, and the business, innovation and entrepreneurial ecosystem concepts were briefly explored in the context of the agri-food system of South Africa using a deductive approach. Research questions were then formulated based on these theories, concepts and models. The purpose was to determine whether these theories and concepts could be used to enhance agricultural entrepreneurship through the development of efficient and effective organised agricultural groups participating in innovative multi-stakeholder agri-food ecosystems.

This study then attempted to understand how these different theories, concepts, and models could be operationalised. This was achieved using an inductive research approach. Using an inductive paradigm "suggests a 'bottom-up' approach to theory development" (Saunders & Lewis, 2018, p. 113). Inductive reasoning allows human beings to make authoritative generalisations from sparse data (Tenenbaum, Griffiths, & Kemp, 2006). Williams (2007) described inductive reasoning as: "…the observational elements that pose questions that the researcher attempts to explain" (p. 3). Inductive reasoning, therefore, moves from specific observations that are seen in the field towards broader generalisations and theories that can be adopted by others in research.

4.2.3 Choice of Methodology

A mono-method technique comprising the qualitative research method was used. In order to fully explore and understand how agricultural entrepreneurship could be used to stimulate the agri-food system of South Africa, it was imperative for the researcher to obtain the views of key social actors in the system, the agricultural entrepreneurs. The research questions posed in Chapter 3 involved complex issues and challenges that needed to be answered in-depth. In order for the researcher to answer these complex questions, an exploratory qualitative research approach was employed. Qualitative research aims to answer questions about the 'how', 'why' or 'what' of an issue or a problem and since the research questions are in this format, qualitative research was the correct method to employ (McCusker & Gunaydin, 2015).

The exploratory qualitative research method provided a holistic approach that aimed to promote a deep understanding of the phenomena of organised agricultural groups and agricultural entrepreneurship in the agri-food system of South Africa (Williams, 2007), thus making it a suitable method for this research. Zikmund, Carr, Babin, and Griffin (2013)

posited that qualitative research methods allow the researcher to “elaborate interpretations of market phenomena without depending on numerical measurement and focus on discovering true inner meanings and new insights” (p.133). Qualitative research explores a societal or human issue by developing a comprehensive picture through an inquiry process and the analysis of data. Qualitative research is based on the observations and understanding of the respondents and is essentially a snapshot of their perceptions (Khan, 2014). This research study sought to find out from the agricultural entrepreneurs and agri-food system experts, how the stakeholders of the agri-food system could double food production by 2050 in order to avoid national food insecurity. Seeing that this is was a societal and human issue, the use of qualitative analysis was the most appropriate.

4.2.4 Purpose of research design

The agricultural sector has found itself excluded from many fields of research. Scholars have called for the entrepreneurship fraternity to be more encompassing and inclusive of the different sectors, with agriculture being specifically mentioned. To the researcher’s knowledge, research on the enhancement of agricultural entrepreneurship with the use of efficient and effective organised agricultural groups participating in innovative multi-stakeholder ecosystems remains scarce. Thus, the exploratory research methodology was deemed appropriate for this research study. Exploratory research is suitable when new information about a topic or business phenomena is sought that will provide “new insights, ask new questions and assess topics in a new light” (Saunders & Lewis, 2018, p. 115). The researcher conducted semi-structured interviews, a common way of conducting exploratory research (Saunders & Lewis, 2018).

4.2.5 Strategy

This study used qualitative thematic analysis of the interview data collected from 16 semi-structured interviews. The interviews were recorded and then transcribed by a professional third-party transcriber. The data was then analysed using Computer-aided Qualitative Data Analysis Software (CAQDAS), categorised into codes, then categories, and then themes in order to establish any relationships and patterns.

4.2.6 Time horizon

Due to time constraints relating to the completion of the research project, this was a cross-sectional research study, a snapshot of how the stakeholders of the agri-food system of South Africa could, despite the complex issues and challenges faced by the system, double food production by 2050. This objective did not require a longitudinal study as the issues and challenges have developed over time.

4.2.7 Techniques and procedures

Semi-structured, in-depth, face-to-face interviews were conducted with Black African agricultural entrepreneurs and agri-food system experts located in the Gauteng Province of South Africa. This method was chosen by the researcher in order to gain deep insights from the respondents. Cassell (2015), cited in Saunders and Lewis (2018), observed that semi-structured interviews are useful when the researcher "wishes to gather data about a particular topic" (p. 158). In-depth semi-structured interviews are able to provide a "researcher with reliable and comparable qualitative data" (Cohen & Crabtree, 2006, p. 2). Qu & Dumay (2011) described the semi-structured interviewing process as involving a set of pre-prepared questions guided by themes previously identified in the literature review that also allow for improvisations and changes to the structure to allow the respondents to add more depth. The researcher employed a blend of closed-and-open-ended questions that were followed by probing questions that sought to uncover unforeseen information and data, as is common in the semi-structured interview process (Newcomer, Hatry, & Wholey, 2015). The use of semi-structured interviews in this research study ensured that as much information as possible pertaining to how the stakeholders of the agri-food system of South Africa could significantly increase food production was obtained.

4.3 Population

A population is "the complete set of group members" (Saunders & Lewis, 2018, p. 138) and the total number of people that may be sampled in a research study (Robinson, 2014). The aim of this research study was to investigate and understand how stakeholders of the agri-food system of South Africa could, despite the complex issues and challenges faced by the system, double food production by 2050 in order to avoid national food insecurity.

Therefore, for the research purpose, the population that was deemed relevant consisted of Black African stakeholders of the agri-food system of South Africa based in Gauteng.

4.4 Unit of analysis

In order to investigate and understand how stakeholders of the agri-food system of South Africa could, despite the complex issues and challenges faced by the system, double food production by 2050 in order to avoid national food insecurity, it was determined by the researcher that Black African agricultural entrepreneurs and agri-food system experts based in the Gauteng Province would form the final unit of analysis for this research study.

4.5 Sampling method and size

The sampling technique that was employed for this research study was a non-probability sampling technique, which included purposive sampling as well as snowball sampling. This sampling technique was chosen because the researcher did not have a complete list of all the Black African agricultural entrepreneurs and agri-food system experts in the Gauteng Province as this population was not well defined. In non-probability sampling, randomisation is not critical and subjective methods are used to decide which sample to include in the research study (Etikan, Musa, & Alkassim, 2016). The researcher made use of his available network and snowball recruitment.

It was then fundamental for the researcher to decide on the type of non-probability sampling technique that was to be used for the study (Etikan et al., 2016). This research study made use of a purposive sampling technique as opposed to the convenience sampling technique. Purposive sampling is a type of non-probability sampling technique in which the researcher uses his or her judgement to select the sample members based on a range of possible reasons (Saunders & Lewis, 2018). This sampling technique was adopted as the researcher needed both agricultural entrepreneurs belonging to an organised agricultural group and those that did not belong to an organised agricultural group. The participants were purposively chosen based on the study's research purpose and objectives of establishing whether the stimulation of the agri-food system of South Africa could be achieved in order to double food production by 2050. Purposive sampling is the most frequently used form of non-probability sampling and is mainly used to select a small sample when collecting qualitative data as opposed to convenience sampling that is most frequently used for quantitative studies (Etikan et al., 2016).

In qualitative sampling, the sample size is generally small, and researchers have not attached the same level of importance to sample size. The sample should not be so large such that a deep analysis is not possible (Onwuegbuzie & Leech, 2007). A small number of respondents are able to produce rich, useful and detailed data (Cleary, Horsfall, & Hayter, 2014). The sample size consisted of 16 respondents, 13 agricultural entrepreneurs and three (3) agri-food system experts from the Gauteng Province of South Africa. Data saturation was achieved. Data saturation is a process of interviewing more and more participants for a study until there is data replication or redundancy (Marshall, Cardon, Poddar, & Fontenot, 2013). Saturation was reached when all the research questions were fully explored and the respondents were starting to reiterate each other's ideas (Cleary et al., 2014).

4.6 Measurement instrument

The researcher made use of face-to-face, in-depth, open-ended, semi-structured interviews. This method was chosen to allow the agricultural entrepreneurs and experts a chance to offer their views, opinions and recommendations on how the agri-food system of South Africa could be stimulated. Qu & Dumay (2011) argued that "qualitative interviews require various skills such as intensive listening, note-taking, careful planning and sufficient preparation" (p. 239). The researcher made use of a recording device and recorded the interviews, with the permission of the respondents, to mitigate any errors.

An interview guide was formulated from the literature review conducted in Chapter 2 as well as the primary and sub-research questions developed in Chapter 3. When developing an interview guide for semi-structured interviews, the interview process should "involve prepared questioning guided by identified themes in a consistent and systematic manner" (Qu & Dumay, 2011, p. 246). This carefully prepared questioning and interview guide ensured that as much information on the topic was received from the respondents. Most qualitative researchers agree that not all information collected in the field is useful, credible or legitimate (Maxwell, 2002). Therefore, an interview guide was necessary to mitigate against the use of different thematic approaches during the interviews (Qu & Dumay, 2011).

4.7 Data validity and reliability

Data reliability and validity are essential concepts when evaluating a measurement. Validity is the extent to which data collection methods accurately measure what they were intended to measure and if the research findings are what they appear to be. Reliability is the extent to which data collection methods will produce consistent findings with no differences occurring (Saunders & Lewis, 2018).

To ensure reliability and validity of the research instrument, the interview guide was piloted on two agricultural entrepreneurs and one expert prior to the final respondents to ascertain whether the data gathered would be sufficient to be able to answer the research questions. The information gathered during these pilot interviews provided rich insights, which were sufficient to answer the research questions, therefore there was no need to revise the research instrument.

4.8 Data gathering process

As suggested by Saunders & Lewis (2018), one of the most effective methods of conducting exploratory research is through doing extensive literature reviews and then conducting in-depth interviews. The researcher made use of secondary data retrieved from desktop research to gather as much information on the chosen theories and concepts as possible. The researcher also made use of academic journals and books to form the literature review. Face-to-face, in-depth, open-ended, semi-structured interviews were then conducted with agricultural entrepreneurs and agri-food system experts from the Gauteng Province in order to derive maximum information and data. An interview guide was developed listing the topics, themes and initial questions before conducting the semi-structured interviews. The interview guide was based on the main research question and sub-questions.

Pilot interviews were conducted by the researcher to ascertain whether the questions were easily understood and that the answers would provide the data that is needed to answer the research questions (Saunders & Lewis, 2018). These pilot interviews also indicated how long the interviews would be. The interviews were conducted on the premises of the respondents and some, in coffee shops. Prior to conducting the interviews, both parties signed consent forms and permission was sought to record the interviews. The interviews were appropriately documented via notes taken as well as voice recordings. The voice

records were then transcribed by a professional third-party for maximum accuracy and a precise depiction of what was said by the respondents. The interviews were conducted in English, with minimum vernacular phrases, which have been translated by the transcriber.

4.9 Analysis approach

The data collected during the interviews was analysed qualitatively using thematic analysis. Braun and Clarke (2006) describe thematic analysis as “a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail” (p. 6). The researcher made use of an independent professional third-party transcriber in order to retrieve and analyse all the information that was gathered from the semi-structured interviews. Saunders and Lewis (2018) stated that a researcher, whether using deductive or inductive methods, must look for patterns or common themes to answer the research questions. The researcher followed the following steps in the analysis approach: namely; listened to the recordings immediately after conducting the interviews in order to make notes, studied the transcripts of the interviews to get a clear picture of what the respondents said, used thematic analysis with the aid of a CAQDAS in order to develop meaningful codes, categories and themes to describe the data. The data collected from the semi-structured interviews was coded for the research questions. Since the researcher used both a deductive and an inductive approach, themes emerged from the data collected. ATLAS. ti was used for data coding. A total of 265 codes were created (see Appendix Three) that were then categorised and grouped into themes aligning with the 5 sub-research questions.

4.10 Research Ethics

It was explained to the respondents that their participation in the research study was voluntary, and that they could withdraw at any time without penalty. The respondents were also asked to sign a consent form. By signing this form, they agreed to the interview being recorded using an audio recording device and the recordings transcribed by a third-party. The respondents were also made aware that any data recorded during the conversations would be treated as confidential and reported anonymously, without identifiers used in place of their name.

The researcher obtained ethical clearance from the Gordon Institute of Business Science's Ethics Committee prior to the collection of data.

4.11 Limitations

- The researcher is an agricultural entrepreneur and has faced or is currently facing many of the complex issues and challenges experienced by the agricultural entrepreneurs interviewed. The possibility of researcher bias must be acknowledged. The researcher, however, decided not to interview individuals that he knew personally and chose a sample size from across the Gauteng Province.

- The research approach of this study was qualitative and relied solely on the semi-structured interviews of the black African agricultural entrepreneurs who took part in the research study. Polkinghorne (2005) described qualitative data as a collection of human experience compared to data about human behaviour and therefore, the inherent limitations. This means that the results presented will be subjective and varied as the researcher interacted with many different respondents, and the data will have some bias because of the respondents' personal voices.

- There was limited time to conduct this study, and this may pose a limitation in terms of scope and the size of the sample of agricultural entrepreneurs interviewed.

CHAPTER 5: RESULTS

5.1 Introduction

This chapter presents and outlines the findings according to the primary research question and research sub-questions introduced in Chapter 3. These findings are a result of the analysis, summarisation and comprehension of 16 in-depth, face-to-face, and open-ended semi-structured interviews with 13 agricultural entrepreneurs and three agri-food experts. The findings present the views, experiences and perceptions of the respondents and provide insights into the issues and challenges faced by the agri-food system of South Africa and the role of organised agricultural groups in the enhancement of agricultural entrepreneurship. The 16 semi-structured interviews were coded using the CAQDAS.

5.2 Summary of respondents

All 16 of the respondents are based in the Gauteng Province of South Africa and the agricultural entrepreneurs' farms are scattered around the province so as to ensure rich and diversified interviews and information collected.

Table 5.1: Summary of respondents interviewed

Respondent	Age	Gender	Race	Years Farming	Academic Qualification	Organised Group
1	24	Male	Black African	3 years	Matric	No
2	25	Female	Black African	15 years	Degree	No
3	35	Female	Black Africa	3 years	Degree Journalism	No
4	30	Male	Black African	10 years	Degree in Construction	No
5	25	Female	Black African	2 years	BTech Horticulture	Yes
6	45	Female	Black African	8 years	Degree Nutritionist	Yes
7	31	Female	Black African	15 years	Degree adolescent counsellor	No
8	40	Male	Black African	5 years	Statistical Engineer	Yes
9	32	Female	Black African	1 year 6 months	Bachelor of Commerce Marketing	Yes
10	**34**	**Male**	**Black African**	**Expert 1**	**N/A**	**N/A**
11	48	Female	Black African	4 years	Post graduate qualification	Yes
12	32	Female	Black African	2 years	Business Management degree	No
13	35	Male	Black African	2 years	Management accountant	No
14	**65**	**Male**	**Black African**	**Expert 2**	**N/A**	**N/A**
15	52	Male	Black African	2 years	Qualified Educator/Principal	Yes
16	**31**	**Male**	**Black African**	**Expert 3**	**N/A**	**N/A**

Source: Author's Own.

5.3 Research Sub-Question 1: What is the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa?

In order to establish the profile of these Black African agricultural entrepreneurs in the agri-food system of South Africa, the respondents were asked their age, gender, reasons for entering the agribusiness sector, number of years being an agricultural entrepreneur, academic qualifications, and the qualities they thought an agricultural entrepreneur should possess. The researcher interviewed 16 respondents for this study. There were 13 agricultural entrepreneurs and three (3) experts. Of the 13 agricultural entrepreneurs interviewed, there were five males and eight females, with a range of ages. Many were under 35 years of age.

The number of years the respondents had been agricultural entrepreneurs varied from less than two years to 15 years. The majority (62%) of the respondents had less than five years agricultural entrepreneurship experience, highlighting the fact that they were new entrants into the agri-food system.

Respondents were then asked what academic qualifications they possessed and if they thought that it was imperative to study any agricultural degrees or courses in order to be successful at farming. Twelve of the 13 respondents have degrees varying from accounting, engineering, business management, auditing, marketing, finance, journalism, education and construction.

The respondents were asked if they thought it was imperative to have some sort of agriculture training or degree. The majority of the respondents thought it fundamental to have some sort of agriculture training and knowledge but did not believe this was necessarily received from school:

> *"I had to teach myself the commercial skill; I had to get a mentor and work at different farms. I do not have accredited qualifications in agriculture, everything that I did and know I learned through mentors and working in commercialised properties for a number of years for me to teach myself the systems."*
>
> (Respondent 4)

Most of the respondents had no formal agricultural education but highlighted the need for a mentor or for experienced commercial farmers to help them become successful (Respondents 2, 3, 4, 6, 8, 9 & 12). Some of the respondents taught themselves the basics using the internet, books and magazines (Respondents 2, 3, 4, 6, 8, 9 & 16).

> *"I have a BTech in Horticulture. I think one needs to study, even if one doesn't study but research is very important in the agricultural field…because there are so many challenges that we encounter in this industry. There are also trends in terms of crop/product modification, you need be well informed…being informed is beneficial to you as the farmer as well as the consumers".*
>
> (Respondent 5)

Respondent 6 mentioned that she mentors recent graduates from various universities who have agricultural degrees and diplomas, but she has more practical experience and expertise than the graduates.

> *"I really don't know which is best, but in my opinion, I think that this sector is very different in that you can teach yourself especially if you have a mentor in the commercial sector. It is also important to read as much as possible, because the problem with this sector is that every lesson is costly, so it is important to equip yourself with information. However, perhaps having an agricultural background or qualification can be advantageous and might help to avoid certain errors. Having said that, I have also noticed that I sometimes find that I have more knowledge than the university graduate whom I am mentoring".*
>
> (Respondent 6)

Respondent 12 was of the opinion that for one to be successful at being an agricultural entrepreneur one needs to have both business management skills and technical expertise. The respondent went on to say that if an agricultural entrepreneur did not have both, they could develop a relationship with an experienced mentor to fill the gap until they were proficient at both requirements (Respondent 12).

The next question asked was: "what made you decide to get into farming?" The reasons provided by the respondents were very interesting, and a majority of the respondents did not become agricultural entrepreneurs because there was nothing else to do or because

it was the only option, but rather entered the sector voluntarily (Respondents 1, 2, 3, 4, 5, 6, 8, 9, 11, 12 & 13.

> *"I am originally from a construction background …I worked in the construction business for a few years, but …it is not my passion…I had to listen to myself and do some soul searching…to figure out what I wanted to do with the rest of my life... So, we started a company…in 2007 where we used to buy export quality vegetables and do door to door deliveries. From doing that, I…realised that I want to own the full value chain, I want to grow it, I want to package it, I want to put my label on it and I want to get it out there to the consumer. So that's how it all started"*.
>
> (Respondent 4)

Respondent 5 mentioned that it was a deep-seated passion for agriculture that led her into agricultural entrepreneurship (Respondent 5). This particular respondent fell in love with agriculture because of her parents.

> *"It is my passion and my love. I also think that my parents played a major role…my father is a farm worker…. My mother used to sell fruit. So, I merged the two, I wanted to be a combination of the two of them. I realised that I could amalgamate the two professions and become a farmer".*
>
> (Respondent 5)

Respondent 8 left a lucrative job to become an agricultural entrepreneur. The passion drove him when things got tough and he felt like giving up.

A number of the respondents were in other industries but were working closely with the agribusiness sector and they identified profitable opportunities in the sector that would also allow them to make a difference (Respondents 6 & 13)

> *"My initial reason was to assist small farmers, …in my previous role in the department of agriculture I was looking after the small and emerging farmers and I could see the way they were struggling. I opened my own company that would focus on addressing those problems, so that they don't "emerge" forever. In that process, I realised that I was helping others set up their own farming and I decided*

> *to set up my own so that it could also be a demonstration site for them. Additionally, I realised that farming is the "new mining", it is the future".*
>
> (Respondent 6)

Lastly, as part of the establishment of the profile of a Black African agricultural entrepreneurs in the agri-food system of South Africa, the respondents were asked what qualities they thought would make a successful agricultural entrepreneur. There were many similar views which show that these are common characteristics that agricultural entrepreneurs need to possess in order to be successful.

Respondent 4 highlighted the need to be a risk-taker and to not be afraid to lose everything you have in pursuit of your dream. Respondent 6 stated that in order to be a successful agricultural entrepreneur one needed to be determined and be willing to learn everything it took to make it in the sector. The respondent also mentioned that an agricultural entrepreneur needed to treat farming like a business from day one and show entrepreneurship qualities as one would with any business (Respondent 6).

Respondent 11 mentioned the need for resilience because of the risky nature of the agri-food system and the several issues and challenges that come with it. The respondent also stated the need for patience as agricultural entrepreneurs do not make money for many years being in the agri-food because of the length of time it takes to break even.

> *"You need to have a lot of faith, because it all boils down to planting a seed and hoping that it will become something. So, you need a lot of faith, a lot of hard work and determination, because you won't see money today, but you can set a 10-year goal. Even then, most of the money you must plough it back, because the infrastructure needs to be in order. I am also still working on my irrigation, even to this day as well as working to grow my tunnels. The work is ongoing, you need to be in it for the long haul, because your money is buried in the ground for most of the time".*
>
> (Respondent 11)

Planning and being meticulous was a key characteristic of a successful agricultural entrepreneur for respondent 12. The respondent also mentioned the need to understand the sector as a whole and what challenges and opportunities lie in it.

> *"One needs to understand the market, the industry as a whole, and which products are moving and which are not, you need to know when to grow and when not to. So that technical knowledge … is a requirement, however if you don't have it you can still make it. Another characteristic is being able to plan, you need to do your production planning on a weekly basis. You also need marketing skills, because you need to know how to be a marketer of your business. This is why I believe that a person needs both business and technical skills".*
>
> (Respondent 12)

It is evident from the data collected from the respondents that the agri-food system of South Africa has many issues and challenges and in order to be successful, an agricultural entrepreneur needs to have patience, resilience, diligence, a risk appetite, meticulous planning abilities, technical skills and overall managerial abilities. Agriculture is not a fall-back sector which can absorb any unemployed individuals, but a highly skilled sector that requires astute entrepreneurship.

Table 5.1 summarises the findings related to Research Question 1 and shows the themes that emerged from the analysis.

Table 5.1: Summary of findings for Research Sub-Question 1

SUMMARY OF FINDINGS FOR RESEARCH QUESTION 1
• **There are many young Black African agricultural entrepreneurs participating in the agri-food system**.
• **There are women participating in the agri-food system despite the inequality**.
• **There are educated Black African agricultural entrepreneurs participating in the agri-food system**.
• **There are a number of new entrants in the agri-food system**.
• **Agricultural training and knowledge fundamental for success**.
• **Mentorship from experienced commercial farmers advantageous**.
• **One can equip themselves with agricultural knowledge using books and the internet**.
• **Both business management skills and technical expertise necessary**.
• **Qualities that make a successful agricultural entrepreneurs include patience, resilience, diligence, a risk appetite and meticulous planning abilities**.

Source: Author's own.

5.4 Research Sub-Question 2: What are the advantages and disadvantages of belonging to an organised agricultural group?

This question sought to find out what the advantages and disadvantages were of belonging to an organised agricultural group. First, the researcher analysed what was said by the agri-food system experts that were interviewed to get a sense of what the benefits of subscribing to an organised agricultural group ought to be, before the researcher tackled the agricultural entrepreneurs' responses.

5.4.1 Findings from Agricultural Experts

Expert 1, from his work on the field, presented some of the benefits associated with being a member of an organised agricultural group as: trading of information on pricing and when and what to plant; collaboration and sharing of ideas; the leveraging of numbers to produce more crops and therefore lower costs; cross learning from each other, and; combination of funds.

> *"… it is very difficult for…a farmer to own a combine harvester since one is approximately R3.2 million. So, in a group it is much easier for everyone to reinvest their earnings into procuring a R3.2 million harvester, which can be rotationally used and shared among the group. In my opinion this is where the real power is".*
>
> (Expert 1)

Expert 2, who had 40 years of experience in the agribusiness sector, shared the same views on the benefits of belonging to an organised agricultural group:

> *"The first of the benefits is the sharing of resources that one needs as a farmer, for example you'll share knowledge, because as a group you can always exchange knowledge. The second benefit is the sharing of all logistical arrangements including ploughing services. Another benefit is the sharing of ideas in terms of the direction the industry will take, this is where things like marketing come into play including financial inputs and so forth".*
>
> (Expert 2)

Expert 3, who also had a number of years helping agricultural entrepreneurs become successful and serves on a number of agricultural boards, praised organised agricultural groups and deemed them essential to the enhancement of agricultural entrepreneurship.

> "…it's a form of protectionism. *Where we protect a certain area and we try to minimise outside entrance and outside influence into the economic sector of the area. So, does it help your development? The answer is Yes. Does it give you access to other knowledgeable people who are willing to overextend their hands to help you also become a success? The answer is once again Yes. So, is it a good forum for younger entrepreneurs? The answer is Yes".*
>
> (Expert 3)

Expert 3 went on to describe what could be achieved when agricultural entrepreneurs come together, protect each other and combine their resources and efforts to build something big:

> *"You're getting approximately 30-40 years of experience in what you are excited about, you also get support and invaluable advice. What they do in the agricultural organised co-ops is the perfect developmental mentorship system"*
>
> (Expert 3).

5.4.2 Findings from Agricultural Entrepreneurs

Only six of the respondents belonged to some sort of organised agricultural group. These six respondents belonged to cooperatives, some to farmer associations, and some belonged to both. The majority of the agricultural entrepreneurs interviewed did not belong to any form of organised agricultural group, even though most of the respondents knew of the perceived benefits (Respondents 1, 2, 3, 4, 7, 12 & 13).

For those agricultural entrepreneurs that belonged to an organised agricultural group, there were mixed sentiments about any benefits received (Respondents 5, 6, 8, 9, & 11). Whilst a number of the agricultural entrepreneurs did in fact experience benefits as a result of being a part of an organised agricultural group (Respondents 5, 6, 11 & 15), some did not (Respondents 8 & 9).

Respondents 5 raised the concept of working as a team as opposed to working alone and saw collaboration as the only way to navigate the issues and challenges faced by the agri-food system as well as the benefits received from the government.

> *"I do have a cooperative named Kgaisa Refresh Harvest. The main aim of this cooperative was for us to form a team where we can combine our backgrounds and skills… Our aim is to work together and to empower, because it is a cooperative consisting only of females. We merely started by collaborating and then from there we decided to formalise it and make it a cooperative, because there are so many opportunities available to cooperatives than to individual businesses. The first benefit is that it is easier to access land and financing for example. Also, when you go to pitch, the first question you are asked is "where is the team?" There is a bit more trust in a team than in individuals".*
>
> (Respondent 5)

Respondent 6 highlighted the concept of networking being incredibly important in agricultural entrepreneurship and the reason she belonged to an organised agricultural group. The respondent stated that networking enabled agricultural entrepreneurs to gain access to information that they otherwise would not have when working alone. Respondent 6 also mentioned access to funding and markets as a result of being in an organised agricultural group.

> "*Networking is extremely important... My reason for joining was obviously for networking purposes and to be in the same circle of people in my profession whilst also learning from them. Also, for a sense of being in a union, which is very important to me, because then it means that you have people who can talk and sell on your behalf".*
>
> (Respondent 6)

Respondent 11 believed that there was strength in numbers and that succeeding as an agricultural entrepreneur was much easier for 25 agricultural entrepreneurs in an organised agricultural group as opposed to just one.

> *"I would say that it will be easier for any financial institution to invest in us if we go as a group of 25 people and perhaps by then we will have a sizeable amount in*

> *our coffers too. If I go alone, it is not appealing for any institution or even the government, because it doesn't seem worth it for a government official to travel all the way to Randfontein for one person".*
>
> (Respondent 11)

Respondent 15 echoed some of the sentiments mentioned by the other respondents. The respondent spoke about helping each other out through collaboration and cooperation.

> *"I do belong to an association, AFASA (African Farmers Association of South Africa). We have clusters in the various districts for when we meet. We even share the market, so some farmers who have contractual obligations they cannot fulfil will ask other members for assistance so that they meet their obligations to their clients. So, that's how we integrate in our cluster".*
>
> (Respondent 15)

A number of participants formed their own organised agricultural groups that were less formal than cooperatives or farmers associations (Respondents 3, 4, 8, 9, 11, 12, 13 & 15). They found that these informal groups worked better than joining large, rigid, structured and often unaligned cooperatives and farmers associations (Respondents 3, 4, 8, 9, 11, 12, 13 & 15). These respondents formed these organised agricultural groups because of the benefits they would accrue from them and not to get government grants or assistance (Respondents 3, 4, 8, 9, 11, 12, 13 & 15).

> *"We are a network of farmers for example in Magaliesburg and Tarlton - basically our surrounding areas…someone will write in the [WhatsApp] group that they need 5000 bundles of spinach, we all start asking around and combining our efforts towards meeting that particular demand. So, for us that is where the co-op is, working together to meet the demand. …We have a huge database of farmers that we work with countrywide, where we help and advise each other. In our group we have all types of farmers, including agronomists, if someone's crops have been affected by some disease, they send a picture, and everyone chips in to offer help and advice".*
>
> (Respondent 8)

Respondent 11 had a similar view. She mentioned having an informal organised agricultural group of agricultural entrepreneurs in her area that shared ideas and information. However, her group was in the process of registering a cooperative in order to qualify for government grants and assistance. She recommended that agricultural entrepreneurs go this route and start with an aligned, focused, and dedicated informal group. Once this group becomes efficient and effective, they could then form a formal cooperative in order to access government funds. She pointed out that starting with the organised agricultural group formation before there is alignment of strategies and goals would result in its failure.

A number of the respondents also mentioned that if one wants to receive any form of funding or assistance from the government, then one is required to be in some sort of organised agricultural group, specifically a cooperative (Respondents 2, 3, 5, 6, 7, 8, 9, 11, 13 & 15). The government departments are hesitant to assist individual agricultural entrepreneurs and insist that they form large groups before they can gain access to any form of funds or assistance (Respondents 9 & 11).

> *"I am part of the cooperative and it is leasing the farm from the government. Government leases the farm out for 30 years on a lease to sell basis. After the 3 decades they come to evaluate and consider selling the farm to you".*
>
> (Respondent 9)

> "*The Department of Rural Development has advised us that if we organise ourselves, they will provide us with tractors. Our idea is that we have a place through which we as farmers can book the tractors for a certain number of days, they are also going to give us storage facilities and cold rooms. For them to assist us, we needed to organise ourselves and come together. They will assist us with everything that we need like logistics, packaging and so forth. They will even help us to transport our produce to the market, they will provide us with trucks to do that. They have asked us to be a group of 25".*
>
> (Respondent 11)

Besides the benefits experienced by some of the respondents (Respondents 5, 6, 11 & 15), there are some that experienced more challenges than benefits of being a member of an organised agricultural group (Respondents 8 & 9). Respondent 6 made it clear that

she belonged to an organised agricultural group that is a farmers' association and not a cooperative, because she believes that cooperatives do not work in South Africa.

> *"I am not a cooperative member. I belong to an association. That is my choice, because of the challenges that I saw when I was working for the Department of Agriculture as well as from what I have seen with fellow farmers. Cooperatives in this country never work. Someone needs to first change the mindsets of the farmers".*
>
> (Respondent 6)

Respondent 8 had an opposing view of farming associations. He stated that farming associations did nothing for Black African agricultural entrepreneurs and that he was considering not renewing his membership.

> *"I belong to AFASA (African Farmers Association of South Africa), however one of the biggest problems is that there are quite a number of farming organisations. However, the question is what are they doing for us as black farmers? Although I belong to AFASA I am not active, but I have been asked to be on the committee and I can't because my question is what have they done in the past 5 years for other farmers? So, although I am associated with them but I'm actually at a stage where I might not even renew my membership".*
>
> (Respondent 8)

Respondent 9 found herself joining an existing cooperative formed by the government. The members of this cooperative had let the farm get into a desperate state and were no longer interested until she arrived and made some improvements. She invested her own money to fix the farm and once it was operational again, the other four members of the cooperative wanted get involved again. She drove home the point that misalignment of vision and goals was a major problem with cooperatives started solely to get government grants and assistance.

Among the agricultural entrepreneurs who were members of organised agricultural groups, there seemed to be conflicting views. Some of the respondents experienced benefits as a direct result of being in these groups (Respondents 5, 6, 11 & 15). However, some of the respondents only became members of organised agricultural groups to

access government funding and grants but otherwise saw no other real benefits (Respondents 8 & 9). Some of the respondents saw no value whatsoever of being a part of any organised agricultural group and went as far as starting their own informal groups (Respondents 3, 4, 8, 9, 11, 12, 13 & 15). In some cases, these informal groups did more for their members than the formal and structured groups (Respondents 3, 4, 8, 9, 11, 12, 13 & 15).

Table 5.2 summarises the findings related to Research Question 2 and shows the themes that emerged from the analysis.

Figure 5.2: Summary of findings for Research Sub-Question 2

SUMMARY OF FINDINGS FOR RESEARCH QUESTION 2
• Benefits of belonging to an organised agricultural group should include access to funding, markets, information and knowledge, infrastructure and government support.
• Cooperatives do not work in South Africa because the government does not understand the model.
• Government support creates dependency amongst existing agricultural entrepreneurs and attracts non-farmers to the sector.
• Collaboration with other agricultural entrepreneurs more efficient and effective as opposed to working alone.
• Agricultural entrepreneurs have started their own informal organised agricultural groups because they are less restrictive and provide more alignment of strategy and vision.
• Government funding should be based on performance and regular monitoring should be undertaken.
• Currently, government funding prefers agricultural entrepreneurs belong to organised agricultural groups.
• Collaborating with other agricultural entrepreneurs could lead to lower prices because of economies of scale and a continuous bulk supply or produce.
• Organisational politics often hampers the effectiveness of organised agricultural groups.

Source: Author's own.

5.5 Research Sub-Question 3: What reasons do agricultural entrepreneurs have for not joining organised agricultural groups?

There were seven respondents who were not members of organised agricultural groups, making them a majority of the sample. The respondents had various reasons why they were not members. It was interesting that most of the respondents knew of the perceived benefits and what they were missing out on but had still decided to not join an organised agricultural group (Respondents 1, 2, 3, 4, 7, 12 & 13).

Respondent 1 spoke about market access being a challenge of working alone and not being a part of an organised agricultural group. He mentioned the difficulties a sole agricultural entrepreneur faced when approaching big retailers. Big retailers rarely trust agricultural entrepreneurs working on their own as the supply is not guaranteed (Respondents 1, 4, 5 & 13). The respondent also mentioned economies of scale and pricing:

> *"…when you do it on your own, your costs for example come up to R5.00 per spinach bundle, and you decide to go to sell it for R7.00 in the market so you can make a R2.00 profit. When you do it on your own, it is easy for someone else who is much bigger than you and who has a bigger advantage than you to simply decide that market price for that week is going to be R5.00 and then the best you can do is to simply break even".*
>
> (Respondent 1)

Eleven out of the 13 (85%) respondents indicated an awareness of the perceived benefits of being in an organised agricultural group (Respondents 1, 2, 3, 4, 5, 6, 7, 11, 12, 13 & 15). These included; more market share, all year crop production, access to government funding, and market access (Respondents 1, 2, 3, 4, 5, 6, 7, 11, 12, 13 & 15).

> *"[One of the main benefits of being in an organised agricultural group is] more market share. You can grow for the whole year, so if I say I am going to do one hectare of this, and you can plant this then we can basically be in charge of the food chain. And I think because co-ops usually have the extension officer and they have WhatsApp groups and so this extension officer will be in the WhatsApp group as well as the regional manager, and this person has significant influence with the*

department of agriculture and so things move faster for them. So, when I come as an individual and I want a tractor by myself, it can be a problem if you don't have that personal relationship with the extension officer. Your query won't get pushed at head office".

(Respondent 2)

"As much as it is my choice to not belong to any groups, I am also aware of how much government assistance I am missing out on. However, there is an organisation that I quite like, they are called FUSA (Farmers United, South Africa). I love what they are doing, in the sense that they are trying to participate more vigorously as farmers in political and economic dialogues to make sure that Black farmers are leading the conversations on how to take the South African food system forward. So, they are actively participating and are in dialogue with the government. These farmers have distribution networks, centres and depots something like a Joburg market that is not led by people who have no interest in farmers—they have full spectrum value chain in that they create and distribute their own".

(Respondent 3)

Even though the respondents knew of the perceived benefits of being a part of an organised agricultural group and the challenges experienced as a result of not belonging to one, many had compelling reasons why they have not joined. Some of the respondents had the feeling that the organised agricultural groups in their areas or those being enforced by the government were misaligned to their own visions and goals (Respondents 2, 4, 7, 12 & 13). Some respondents believed that there was too much administrative work and red tape, and everything was a lengthy and inefficient process (Respondents 2, 4, 7, 12 & 13). Some respondents felt that going at it alone was better than being subjected to the will of the masses (Respondents 2, 4, 6, 7, 12 & 13).

"I think for me, I came into an environment where my dad worked by himself and me attending these meetings, it's just been an eye opener that a lot of people want government handouts and so they are actually not working in that time period because they are waiting for a tractor or a tunnel or any other thing…So, I just feel like that there is a lot of laziness when it comes to that. I do not want to be the one carrying the rest, because I feel like that would be a huge burden for me".

(Respondent 2)

"I have declined offers, because I cannot move under someone's brand. I need to build my own, I believe in ownership, in creating my own so I can create a legacy. So, I cannot do that under other brands and organisations…but I truly believe that as young people we have the opportunity to create our own organisations that speak for our particular problems in this industry. I believe that those organisations were created by old people…We do not have a lot of young and fresh blood with young and fresh ideas. I truly believe that we need a youth led organisation".

(Respondent 4)

"I tried getting into a more organised structure for women and by women, however I think it is very important to have the same kind of goals when you go into such things. I didn't feel this was the case in this group…. So, I don't belong to any organisation or to any structure".

(Respondent 7)

The respondents were then asked what changes needed to be made or what it would take for them to consider joining an organised agricultural group. Respondent 2 is of the belief that agricultural entrepreneurs should work hard in order to grow and not depend on the government for assistance and grants. She mentioned an incident where people were complaining about a R255.00 (USD 17.00) registration fee at a cooperative meeting which ultimately led to her not joining that cooperative. The respondent then made the following suggestion:

"I think that if there was an initiative-based concept, if people were incentivised, for example the government advised a farmer that if he or she makes a certain amount that year then there would be a reward. I think that would motivate people. Currently even if a tractor breaks down, people just make a call to the government and it gets repaired".

(Respondent 2)

Respondent 3 felt that the government should exercise more governance and monitoring on the agricultural entrepreneurs they give funding to. She was of the opinion that even non-performing farming operations kept on receiving funding and grants because the

extension officers were either bribed to look the other way or did not visit the farms regularly. The respondent praised the cooperative model in its entirety but criticised the way the South African government implemented it. She mentioned organisations like 'Food and Trees' who link agricultural entrepreneurs to the retail market and corporates as organisations that the government could mimic (Respondent 3).

Respondent 4 saw a need for government officials to show a more hands on approach and to be more knowledgeable because each farm is different to the next. He advised government to spend more time on farms than in offices so that they may be familiar with the farmer's issues and challenges.

Respondent 7 recommended an individualised solution system rather than the current blanket approach that has been used by the departments. According to the respondent, the government officials would provide seeds, fertilisers and tractors to agricultural entrepreneurs without finding out their specific needs. The respondent mentioned the different planting and harvesting seasons of agricultural entrepreneurs that require the tailored supply of agricultural implements and inputs, but the department would allegedly deliver these agricultural implements and inputs at their own convenience without consultation with the agricultural entrepreneurs, resulting in wasted inputs.

> *"So, the first thing I would do would be to identify what particular farmers need and then class them according to their needs…Also, it is important to have the right people, with the right knowledge in agriculture in the leadership of these groups. So, I would structure the organisation in a way that it is a nice mix of successful and not so successful, the learned and not so learned but practical farmers and also the experts; people who are working with agricultural products, implements, logistics and agronomists. So, I would work with these kinds of "value adding agents", because they would understand the value of a farmer as well as the challenges faced by a farmer. I wouldn't work with people who have a theoretical perception of what a farmer can do".*
>
> (Respondent 7)

Even though some of the respondents knew of the perceived benefits of joining an organised agricultural group, most wanted to follow their own vision and work at their own pace (Respondents 2, 4, 7, 12 & 13). They did not want to be bounded by bureaucracy

and rigid structures that would prevent them from executing their vision (Respondents 2, 4, 7, 12 & 13). Some respondents felt that the existing organised agricultural groups did not speak to their values, work ethics and strategies (Respondents 2, 4, 6, 7, 12 & 13). All the respondents made a number of suggestions on how the organised agricultural groups could be changed to be more effective and efficient.

Table 5.3 summarises the findings related to Research Question 3 and shows the themes that emerged from the analysis.

Figure 5.3: Summary of findings for Research Sub-Question 3

SUMMARY OF FINDINGS FOR RESEARCH QUESTION 3
• Agricultural entrepreneurs know of the perceived benefits but choose to not belong to an organised agricultural group.
• Agricultural entrepreneurs are aware they face lack of funding, market access, infrastructure access, information and knowledge, and government support.
• Major retailers usually choose to work with organised agricultural groups rather than individuals.
• Organised agricultural group's goals and vision is usually not aligned to the agricultural entrepreneurs.
• Lengthy bureaucratic red-tape and inefficient government departments a deterrent for these agricultural entrepreneurs.
• Agricultural entrepreneurs should work on their own and build their businesses as opposed to depending on government assistance.
• Government needs a more hands on approach if it is to improve organised agricultural groups.
• A more individualised solution-based system should be employed as not all farming operations are the same.
• Some agricultural entrepreneurs believe they are more successful because they are not bounded by rigid organised agricultural group structures and rules.

Source: Author's own.

5.6 Research Sub-Question 4: How can the stakeholders of the agri-food system of South Africa stimulate and enhance organised agricultural groups?

A number of respondents compared the government's cooperative model to that of successful white cooperatives and organised agricultural groups and vocalised the noted differences (Respondents 1, 6, 7, 8, & 9). There was a consensus that the white cooperatives and organised agricultural groups were working well and that the government could take some recommendations from them.

> *"I have noticed that the white cooperatives are the most successful ones. Remember when cooperatives were first introduced to black South Africans, they were introduced as some form of money-making scheme and never as a means of educating us on the power of working as a cooperative. You might find that out of five members, only two are actually dedicated and the other three are merely there to benefit from the funding. The reality is that when people in a cooperative are not pulling with the same energy, then they will fail. This is why I say that there needs to be a mindset change from the farmers' side. As much as the government is pushing the concept of cooperatives, they are not pushing the educational side of it, which will empower people".*
>
> (Respondent 6)

> *"The structure of the more successful* [organised agricultural groups] *is very different to the structure of the government one. The government needs to stop grouping people who come from all walks of life and calling them farmers….the cooperatives that were formed by our white counterparts were formed because they were neighbours. They knew what the neighbouring farmer was farming, and they realised that if they worked together, they would grow and succeed. However, they were operational and working. Of course, they have generational wealth, however if we are also going to do this then we need to do it properly and with the correct structures in place. We need to have proper finance that is directed at the needs of the farmers, this needs to be monitored. If we don't monitor, we have already failed, because we didn't check on the investment. This is how they are so different and how the one became more successful than the other".*
>
> (Respondent 7)

> *"However, when you compare the black associations to the Afrikaner ones there is a difference. With the Afrikaner associations you can see progress. The co-ops among black people have failed, but among the white people there is progress and I say this because I am surrounded by white farmers. So even though I belong to AFASA I can say that it is not doing anything for the black farmers compared to what the white associations are doing for the white farmers".*
>
> (Respondent 8)

The respondents were then asked what they thought needed to be done by the various stakeholders in order to improve organised agricultural groups in South Africa. Respondent 1 believed that the government should not try copy the successful white organised agricultural groups.

> *"However, one begins to realise that the agriculture in South Africa is a very racial and political game. If you can find an organisation that can realise that we are not trying to copy the guys who are already big and that we are not content being the smaller guys, we also want to be that big, supplying tonnes and supplying huge supermarkets. We also want to open our own supermarkets".*
>
> (Respondent 1)

Respondent 6 recommended that agricultural entrepreneurs need to put their own 'skin in the game' so that they have something to lose.

> *"For example, if I was the government, the first thing I would ask for before I offer any assistance is the person's contribution as that will show me whether or not this person will succeed. I often tell the government that I will succeed with or without the government's help. I am going forward as an entrepreneur; this is why I went to a private bank to set up my farming business".*
>
> (Respondent 6)

Respondent 11 echoed these sentiments when he said that the government needs to find cooperative and organised agricultural group members from agricultural entrepreneurs who have farming experience and some form of track record. The respondent believed that organised agricultural groups formed from these agricultural entrepreneurs will have

a much better chance of succeeding than organised agricultural groups comprising individuals who have little to no farming experience.

> *"…the government has encouraged people to form a cooperative and it comprised people who have never farmed, and more importantly, if you tell people that they will receive a grant for being in a farming cooperative, then it becomes more about the grant and not about the farming…it becomes a short-term financial solution, because then those people are looking forward to receiving that grant and a 6 month's salary".*
>
> (Respondent 11)

Respondent 15 puts agricultural entrepreneurs at the centre of the agri-food ecosystem and concludes that the enhancement of agricultural entrepreneurship rests on their shoulders.

> *"My advice would be that people must move away from dependency, especially from the government. People must use the little that they have, because with the government you wait forever for things and you end up being discouraged. A person can start by planting a small portion and then reinvest that money to gradually expand. Then when the state arrives, it can actually find that farmer far ahead rather than waiting for the government. In my opinion, depending on the government is the reason why most of our African farmers are growing at a slow rate".*
>
> (Respondent 15).

The agri-food system experts echoed the same views and had similar advice to give to the government and other stakeholders of the agri-food system of South Africa.

Expert 1 also questioned the government's strategy of gathering unemployed individuals and making them agricultural entrepreneurs for the same reasons outlined above. However, Expert 1 was of the belief that cooperatives could work in South Africa, but only if measures were put in place to ensure accountability and performance.

> *"It is clear that there is a level of intermediation or agricultural management understanding that there are low levels of competence and skills and so with this*

socio-economic context we need black-owned agricultural management companies that are going to know and manage this nuance. I think it's a waste of money for the government to keep giving money to co-ops without saying that there is conditional investment and that there will be additional support. Due diligence should also be carried out on individual members of the co-op and also figure out what the chances of the success of that co-op are".

(Expert 1)

The second expert (Expert 2), emphasised the point that cooperatives and organised agricultural groups needed to be started around already existing activities of the agricultural entrepreneurs. He went on to state that organised agricultural groups should exist to assist already performing projects or operations and not ignite them.

"The problem with the government is that they start the cooperative with the expectation that the cooperative will encourage its members to farm. It doesn't work like that. It has got to be the other way around. The cooperative has to be the entity that supports the farming activities of the farmers. Therefore, the failure is due to the fact that cooperatives were started the wrong way for black farmers".

(Expert 2).

Expert 3 saw government's cooperative initiatives a one big "tick boxing exercise" and not a genuine effort to transform the agriculture sector.

"The first thing we need to look at is a statistic that we don't have available, how many members of the white/Afrikaner co-ops are employed and how many run the businesses? With the black co-ops, it is merely the government creating these short-term appeasement programmes instead of a longer, broader economic overhaul that they should have embarked on. So, I think just the awareness of knowing that on the one hand you have white co-ops formed by entrepreneurs who decided to set up their own businesses and who decided to work together, then you get government black co-ops that have been started from a point of zero or even a negative, where the members have to scrounge for money just to attend a meeting".

(Expert 3).

Table 5.4 summarises the findings related to Research Question 4 and shows the themes that emerged from the analysis.

Figure 5.4: Summary of findings for Research Sub-Question 4

SUMMARY OF FINDINGS FOR RESEACH QUESTION 4
• There was a comparison of white owned organised agricultural groups to those organised agricultural groups developed by the government.
• It was recommended that the government should approach and work with these white owned organised agricultural groups.
• Agricultural entrepreneurs need to step up and lead the enhancement of agricultural entrepreneurship.
• The government must support already existing farming activities and operations.
• Government should stop encouraging the formation of organised agricultural groups consisting of individuals who have no experience or interest in agriculture.
• White owned and run organised agricultural groups are run on business principles and strategies.
• Organised agricultural groups have the potential to work in South Africa if they could be developed properly by all stakeholders of the agri-food system.
• Government needs to revise their policies and strategies on organised agricultural groups.
• The government is using organised agricultural groups more for political gains as opposed to the advancement of the agri-food system of South Africa.

Source: Author's own

5.7 Research Sub-Question 5: Which stakeholders need to be a part of the innovative multi-stakeholder agribusiness ecosystem?

Respondent 2 highlighted the role that some of the corporates are playing in her business. She believed that the private sector should take the lead in creating and developing innovative multi-stakeholder agri-food ecosystem as it has more experience in running successful multi-stakeholder partnerships than the government. She also mentioned that mentors would be important stakeholders of the ecosystem because they had experience and knowledge of the sector and could impart this knowledge to the new agricultural

entrepreneurs. Lastly, the respondent mentioned the youth as important stakeholders who could come in and become agricultural entrepreneurs.

> *"…we found that it is actually easier to get things from corporates* [retailers] *than you would with government. Since working with corporates, the people, I deal with have agricultural credentials and when they come, they are very interactive and they challenge a person and that's exactly what one needs, to engage with someone who is knowledgeable. Since corporates hire the right people to help you, you are also held accountable. So, if the government could take the same approach, we would see a lot of change in agriculture".*
>
> (Respondent 2)

Respondent 3 echoed this view of corporates leading the enhancement of agricultural entrepreneurship, and ultimately, the entire agri-food system:

> "*I think corporates are better placed with the tools and models to do the right checks and balances, because there is only one measure—the bottom line. If government had the country's best interest* [at heart]*, then there would be the intermediary between corporate participation as well as furthering the aims needed from the ground. What would then be needed is that both parties be allowed to create their own checks and balances, so if corporate says that they would like to see a certain amount of production to be able to see a return on their investment and if that expectation is realistic for the other party, then I think that this is a model that can actually work. The problem is that government cannot oversee such checks and balances, because their own checks and balances are not great. However, government can help with the infrastructures for people to be able to do this more commercially, whether it be land or the greenhouses".*
>
> (Respondent 3)

Respondent 5 recommended the use of agricultural intermediaries between the government and the other stakeholders of the agri-food system of South Africa. She mentioned that the government had hired non-profit organisations (NPOs) to negotiate with retailers on their behalf:

> *"For example, the government used to give money to the NPOs, and these kinds of projects were actually managed by the NPOs. The NPOs were in the role of representing us and they would go to the government to state that they had these kinds of suppliers who bring this type of value to the business, then we would sign a contract with them and they would sign a contract with the FLG* [Food Lover's Group]*".*
>
> (Respondent 5).

Respondent 6 saw the role of the government being that of an enforcer to ensure that all the other stakeholders are committed to the enhancement of agricultural entrepreneurship and the entire agri-food system. The respondent was of the view that when government enforces laws and policies that encourage the private sector, agricultural intermediaries, financial institutions, academic and research institutions, major retailers, consumers and other stakeholders to support agricultural entrepreneurship, then things would become easier.

> *"The government is the custodian of the whole thing. If the government can enforce its BEE* [black economic empowerment] *policies, then every corporate will know that it is unlawful to not support a black farmer. The current problem is that nobody is enforcing this, hence corporates can actually get away with this kind of behaviour. For example, if you take the issue of certification, there is local good agricultural practices (GAP), which allows you to export and so forth, then there is the South African GAP. Yet, when you go to shops like Shoprite with your South African GAP, you are asked for the local gap because they prefer it to the South African GAP. I have asked the government how they can allow people to bring in their own certificates and those certificates supersede the South African ones. Having the South African GAP is not only good agricultural practice, it is also sufficient when I am playing locally. These are some of the factors that contribute to cooperatives failing, because the government is simply not informed".*
>
> (Respondent 6)

Respondent 7 envisioned an entire agri-food ecosystem that comprised the agricultural entrepreneur, agronomists, government, and communities. Respondent 7 allocated the advisory and monitoring role to the government.

"So, we would have the entrepreneurs, we'd have the agronomists to provide technical guidance to the entrepreneurs…then we would have corporate coming in and committing to buying produce in bulk and even providing farmers with the planting programmes that they want to suit their respective markets. We would have the government coming in informed on things like corporates committing to buying in bulk, and then they would ask the entrepreneur what kind of inputs they need. The government would then advise the entrepreneur of the monitoring and evaluating that comes with them investing the resources. Finally, with the communities, there would be a network of how people can access the farmer's goods without having to go through the premium client first…That assists the farmer with both their formal and informal markets"

(Respondent 7)

Respondent 8 mentioned what the governments in other countries were doing and how that was working and questioned why the South African government seemingly could not do the same. Respondent 8 wanted the South African government to be the leading stakeholder in the development of agricultural entrepreneurs and the agri-food system.

"The government is a major player…I have seen the fruits of when the government is significantly contributing to agriculture. For example, farmers from Holland who are farming in South Africa are still receiving government incentives from Holland. If you look at countries like Israel, the government is a 90% contributor to its agriculture. Then you look at us, the government is a major role player, and yet it is not playing the role at all. They are trying to shift the blame and place it on the cooperatives by saying that the cooperatives must play some role. However, the question is; what is the government doing for our black farmers?"

(Respondent 8)

Respondent 11 shared the same views as respondent 8. The respondent said that she saw the government not only offering a monitory and advisory role but being a consumer of the food produced by agricultural entrepreneurs.

"In my view I would suggest that any tender prerequisites specify that 30% of produce must come from black farmers so that whoever is putting forward a tender can start searching for us. Corporates are bad, because there are no rules in this

country. They always get produce from white established farmers, because their prices are lower. You will find that with the chain stores, most of those are white dominated. We cannot compete with them, this happened to me when I took 2000 bags of cabbages to the market and this guy came with 100 000".

(Respondent 11)

Respondent 13 put the responsibility of ensuring the success of the innovative multi-stakeholder ecosystem on the agricultural entrepreneurs and stated that the other stakeholders could do all they could but without the commitment and work of agricultural entrepreneurs, the innovative multi-stakeholder agri-food ecosystem could not work.

"The government should be playing its role as a stakeholder. The next stakeholder is definitely the farmers themselves, if they play their role, they actually become a very important stakeholder. Another important stakeholder is actually the different markets, these work well for farmers especially when you're still starting. Then let's talk about the big shops, those guys are quite influential, but they don't want to commit which I think is problematic Another thing is the learning institutions, that's where I'm also seeing a gap. I visited the North West recently and I saw that the farmers and the university have a close relationship, the farmers often have students on their farms and are even invited to give lectures. That in my opinion produces students who are closer to reality than students who only know the theoretical side of agriculture".

(Respondent 13)

Expert 1 shared a concept of aggregation. Instead of having multiple stakeholders all with different goals, visions and strategies, one should aggregate these differences and have the private sector and consumers talking to one aggregated entity.

Expert 2 has similar views of aggregation. He was of the belief that the government should not waste resources and money on trying to operate a parallel system and should work with existing stakeholders to bring about growth in the sector.

"My view is that the government must work with the existing cooperatives, because of their track record and experience. They need to work with them to get them

transformed and get the black farmers to start working with these cooperatives. There's no need to reinvent the wheel by starting new cooperatives"

(Expert 2)

However, the question of which stakeholder needs to lead this stimulation and enhancement of the agri-food system of South Africa was not satisfactorily answered. Expert 3 advised: "Another limitation is that we are obsessed with the idea of being led. But who must lead us, when we cannot even lead ourselves?". From the perceptions and opinions given by the agricultural entrepreneurs and agri-food system experts, it was made clear that all the stakeholders of the agri-food system of South Africa would need to play a meaningful role in the stimulation and enhancement of the agri-food system.

Table 5.5 summarises the findings related to Research Question 5 and shows the themes that emerged from the analysis.

Figure 5.4: Summary of findings for Research Sub-Question 5

SUMMARY OF FINDINGS FOR RESEARCH QUESTION 5
• The government needs to have the political will to develop and enforce policies that would assist in the stimulation and enhancement of the agri-food system of South Africa.
• All stakeholders should play a meaningful role in the innovative multi-stakeholder agri-food ecosystem.
• Aggregation of competencies, resources and human capital could lead to the stimulation and enhancement of the agri-food system of South Africa.
• Agricultural entrepreneurs should play in key role in the agri-food ecosystem.
• Government should be a consumer of the agri-food system.
• Government should be the enforcer and monitor the other stakeholders of the innovative multi-stakeholder agri-food ecosystem.
• The private sector should be more involved in the agri-food ecosystem.
• The private sector has the core capabilities and resources to lead the innovative multi-stakeholder agri-food ecosystem.
• Agricultural intermediaries should be used to connect all the stakeholders.

Source: Author's own.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

This chapter will analyse and discuss the results in more depth and in the context of the research questions whilst integrating the concept and theories from the literature review conducted in Chapter 2. The fundamental argument of this research study is that the agri-food system of South Africa could be stimulated, resulting in increased food production, through enhanced agricultural entrepreneurship. Furthermore, this study found that agricultural entrepreneurship is enhanced when the agricultural entrepreneurs are a part of efficient and effective organised agricultural groups. It was also established that the issues and challenges facing the agri-food system of South Africa could be overcome if the stakeholders of the agri-food system established and participated in innovative multi-stakeholder agri-food ecosystems. (Breeman et al., 2015; Dentori et al., 2016; Dentori & Peterson, 2011; High Level Panel of Experts 2018; Kilelu et al., 2017; Vellema & Wijk, 2014; World Economic Forum, 2016).

6.2 Why agricultural entrepreneurships are not succeeding in South Africa

The establishment and understanding of the issues and challenges faced by agricultural entrepreneurs and the reasons why agricultural entrepreneurship is not succeeding in South Africa was not intended to contribute to the stimulation of the agri-food system of South Africa discussion. However, the respondents' responses were useful in highlighting the issues and challenges that would have to be overcome by the stakeholders of the agri-food system of South Africa in order to double food production by 2050.

The responses derived from the respondents clearly identify issues and challenges that inhibit the enhancement of agricultural entrepreneurship, and ultimately the agri-food system of South Africa. A majority of the agricultural entrepreneurs, as well as the agri-food system experts were in agreement regarding some of the reasons agricultural entrepreneurship was not succeeding. These are named below:

6.2.1 Access to finance

The stimulation and enhancement of agriculture in South Africa requires a financial services sector that can support the required investment and infrastructure needs. The

World Bank (2018b), observes that, financial institutions remain sceptical about funding agricultural enterprises due to agribusiness being defined as high risk. This is due to the high risk that is associated with farming. Many financial institutions have not yet produced unique financial models that cater to the agricultural sector (World Bank, 2018b). Von Loeper, Drimie and Blignaut (2018) interviewed four of the biggest commercial banks in South Africa and out of the four banks, only one had a product tailored specifically for agricultural entrepreneurs. The banks argued that their agricultural products were designed for large commercial farmers that could supply collateral and a proven track record (Von Loeper et al., 2018).

It is extremely difficult for agricultural entrepreneurs to get funding to get started or to expand their operations. Many of the respondents interviewed mentioned that government intervention and assistance has not been useful because of the length of the entire process, the bureaucracy and unnecessary red tape. Improving access to finance is a critical ingredient that will enhance agricultural entrepreneurship in South Africa.

6.2.2 Access to market

No matter what quality and quantity agricultural entrepreneurs produce, if there is no market to buy their produce then they are bound to fail (Khapayi & Celliers 2016). The agri-food system of South Africa is dominated by large-scale white commercial farmers who have decades of farming experience and who have created and maintained market channels and networks with many stakeholders (Ortmann & King, 2007; Thaba & Mbohwa, 2015). The major retail companies have been working with these commercial farmers for many years and have established good relationships and trust (Von Loeper et al., 2018). Back in 1990, there were a few major national retail stores and they only accounted for 10% of the market share (Von Loeper et al., 2018). Today these few major national retail stores dominate the formal food market of South Africa with over 60% market share (Von Loeper et al., 2018). Therefore, these few major national retail stores are a huge stakeholder in the agri-food system of South Africa and could be classified as custodians of the formal food market.

One major retail store reportedly procures 90% of its fresh produce from large commercial farmers (Von Loeper et al., 2018). This is a huge barrier to the enhancement of agricultural entrepreneurship. Agricultural entrepreneurs entering the sector are finding it difficult to

penetrate this large retail market. Some of these major retail stores have claimed to have given agricultural entrepreneurs numerous chances to be a part of their procurement process only to be disappointed in the end by either poor quality produce or insufficient product being delivered (Von Loeper et al., 2018). However, the statistics do not support this.

The same is true for the municipal run fresh produce markets. These markets give preferential pricing to big commercial farmers solely based on the quantities they can supply as well as the relationships they have managed to maintain at the markets. Some of the respondents stated that the market was a last resort and they would rather sell their produce on their own than to sell to the market (Respondents 1, 4, 8 & 11). Once a market is guaranteed for agricultural entrepreneurs through various off-take agreements and market access, the stimulation of the agri-food system of South Africa and the enhancement of agricultural entrepreneurship could be achieved (Von Loeper et al., 2018).

6.2.3 Competition from big commercial farmers and foreign imports

Agricultural entrepreneurs not only face competition from large, established commercial farmers but also producers from other countries through increased imports (Von Loeper et al., 2018). Some of the respondents relayed stories of arriving at the Johannesburg Fresh Produce Market with 1 000 bags of produce only to compete with a large-scale commercial farmer who has 20 000 bags of the same produce. This forced the price of their produce down and the agricultural entrepreneur oftentimes sold his or her produce at break-even or even at a loss. Even if they did not agree with the price it is difficult for them to try get their produce to another buyer because fresh produce does not last long once it has left the farm unless it is refrigerated, infrastructure many of the agricultural entrepreneurs do not have (Respondents 1, 4, 8 & 11).

It is evident that for agricultural entrepreneurs to successfully compete with large commercial farmers as well as cheap imports, they need to organise themselves into strong, competitive, efficient, and aligned organised agricultural groups. Being a part of efficient and aligned organised agricultural groups would enable them to: effectively use economies of scale to get competitive prices; to continuously supply quality produce; to supply many varieties of produce; to use pricing information and forecasts in order to

predict what to plant and when to plant; and lastly, to increase profits of their farming operations.

6.2.4 Stringent regulations and requirements

The agricultural entrepreneurs interviewed complained about stringent and unnecessary requirements imposed upon them just to compete in the agri-food system. Many of the respondents made an example of the local and global good agricultural practices (GAP) requirements (Respondents 1, 4, 6, 12 & 15). GAP ensures that producers produce food in a safe, effective and sustainable manner (Respondent 2). Whilst the respondents fully understood and agreed that there was a need for such certifications and regulations, they divulged that some local retailers, instead of accepting the global GAP as proof of quality, also required the local GAP, which is more stringent and difficult to obtain, thus keeping the agricultural entrepreneurs out of the local market (Respondents 1, 6 & 12). These respondents felt that this is done by the established commercial farmers to deter them from competing in the market (Respondents 1, 6 & 12).

Developmental agencies and financial institutions who are meant to be assisting and developing agricultural entrepreneurs are also stagnating their growth as their requirements are sometimes too much for these agricultural entrepreneurs (FAO, 2017). Some agencies and banks require a long list of documents before providing financial assistance, often deterring would-be agricultural entrepreneurs (FAO, 2017).

6.2.5 Poor business management and technical skills

Some of the respondents mentioned the need for business management skills as much as technical skills as one cannot successfully compete without having both of these (Respondents 2, 3, 4, 5, 6, 7, 8, 9, 12, 13 & 15). It is possible for agricultural entrepreneurs to hire employees that either have business management skills or technical skills to fill the gap. Without business management skills the business will have a small chance of surviving (Respondent 13). Farming is a risky business that takes many years of reinvestments before one sees a profit. If an agricultural entrepreneur does not understand the financial, marketing, and human resource implications of their decisions, then the business will not last long (Respondent 13). Equally so, the business could have the best financial and marketing plans but if the agricultural entrepreneur does not

understand all the technical implications of everything happening on the ground, the business will not succeed (Respondent 13).

6.2.6 Assistance from the government

For many years, the stakeholders of the agri-food system in South Africa have called upon the government to address the challenges and barriers they face in the agricultural sector (Stevens, 2017; Thaba & Mbohwa, 2015). The governments of the countries reviewed in the literature review conducted in Chapter 2 have been stimulating and enhancing their agri-food system through active participation (DTI, 2012; Hasen & Mekonnen, 2017; Jara & Satgar, 2009). The government has developed multiple policies and programmes for land redistribution, food security, cooperative enhancement, agricultural support services and financial support that are meant to stimulate and enhance the agri-food system of South Africa. Yet this is not happening as the agricultural sector continues to contribute less to the country's GDP with many jobs are being lost (Statistics South Africa, 2019a).

Some respondents posited that the national and provincial departments responsible for the implementation of these policies were ineffective and should be replaced with individuals with knowledge of the agricultural sector (Respondents 2, 3, 4, 5, 8, 9, 11, 12, 13 & 15). The experts interviewed suggested that DAFF should not handle the implementation of these policies themselves but rather hand over this responsibility to an agricultural intermediary. These agricultural intermediaries would have agribusiness experts, funding experts, agronomists and marketing experts who know what is happening on the ground. The onus would then lie with these agricultural intermediaries to make sure that the funds received from government are used effectively and efficiently in the stimulation and enhancement of the agri-food system of South Africa (Experts 1, 2 & 3).

6.3 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 1

Research Question 1: What is the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa?

The first research question was to determine the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa. The intention of this research question was to ascertain the kind of agricultural entrepreneurs in the agri-food system of

South Africa. Okunlola et al. (2016) found during their research study that there was a lack of reliable official information about Black African farmers in South Africa and that government lacked reliable data on how many Black African agricultural entrepreneurs existed. Cousins (2015) shared this view by highlighting the poor documentation of Black African farmers by policymakers. Cousins (2015) went on to note that no national statistics existed on the levels of farm production of Black African farmers. Binswanger-Mkhize (2014) also mentioned that there was a large volume of private transactions in which Black African individuals bought farmland from white farmers, but the number cannot be quantified because the sales were not recorded. However, studies by Statistics South Africa (2016), Swanepoel et al. (2017), and Van den Berg (2013) will be used for comparative purposes.

Agriculture has generally, been seen by many as a sector for the older generation with the average age of South African farmers reported to be 62 (Sihlobo, 2018a). The average age of respondents in the Swanepoel et al. (2017, p. 133) study was 50 years and 51 years in the Van den Berg (2013, p. 3) study. Statistics South Africa (2016, p. 16) reported that 62% of farmers in South Africa were over the age of 45 years old. It was interesting that there were a number of young people already participating in the agricultural sector. Research by (Agwu, Nwankwo & Anyanwu, 2014; Ahaibwe, Mbowa & Lwanga, 2013; Bezu & Holden, 2014; McMillan & Harttgen, 2014; Sumberg et al., 2014) found that there is youth disengagement in the agricultural sector of many African countries due to large-scale urbanisation, lack of interest, and a lack of access to land and finance.

This sample pool indicated that there are indeed a number of young Black African agricultural entrepreneurs in the agri-food system of South Africa. A significant number (69%) of the agricultural entrepreneurs interviewed were 35 years old or younger and only 15% were over the age of 45 years. This data indicates that there are young people coming into the agri-food system of South Africa and that they recognise the opportunities available. Some of the respondents indicated that they knew of many more young people in the agri-food system of South Africa and that these numbers were growing (Respondents 2, 4, 5, 7,8, 9 & 12).

This is important for the agri-food system of the country as an increase in the number of successful commercial farms and commercial farmers will result in an increase in the number of food produced. With the increasing number of young Black African agricultural

entrepreneurs entering the agri-food system of South Africa, the required 50% increase in food production may actually be achieved. The government and the other stakeholders of the agri-food system need to promote the agricultural sector and agri-food system to schools and the youth in general in order to increase the number of young people interested in joining (Respondents 2, 3 & 11).

Sihlobo (2018b) argued that the statistics and debate on women in the agri-food system of South Africa was not well documented but posited that the issues and challenges affecting women in South Africa were similar to those of other developing countries. There are evident gender disparities when it comes to resources provided and support given to women (Sishuba, 2016). In sub-Saharan Africa women receive less than 10% of available credit and 7% of extension services even though they account for between 60% - 80% of agricultural production (Sishuba, 2016, para. 8). Despite their contribution and importance in the sector, they face too many challenges not faced by their male counterparts (Huyer, 2016).

In the research study done by Swanepoel et al. (2017), 55% of the respondents were female. In a study by Van den Berg (2013) 71% of the respondents were female. In a survey conducted by Statistics South Africa (2016, p. 15), approximately 47% of the farmers reported were female. In this research study, 62% of the respondents were female. It has been well documented that due to gender inequality, women have less access to information, land, capital and inputs compared to men (Doss, Meinzen-Dick, Quisumbing, & Theis, 2018). This data shows that the agriculture sector in South Africa is starting to become gender inclusive and that there is an increasing number of females entering the sector on a commercial scale. In order for agricultural entrepreneurship to be enhanced in South Africa, women in the agri-food system of South Africa need to be afforded more equal rights and opportunities (Sishuba, 2016).

Lastly, the academic qualifications of the respondents were determined. A number of agricultural scholars have found a positive relationship between the amount of education an individual has to their agricultural productivity. Oduro-Ofori, Aboagye, and Acquaye (2014) found that as education levels increased, the productivity and output of the farming operation increased. This finding is similar to a study by Khapayi and Celliers (2016) that found that a lack of education, management skills and business acumen played a critical role in hindering emerging farmers from progressing to commercial farmers. In the

research study done by Swanepoel et al. (2017, p. 133), only 4% of the respondents had obtained post-qualification diplomas or degrees and, in the survey conducted by Statistics South Africa (2016, p. 16), only 8,5% of the farmers interviewed had a tertiary education.

The respondents in this study had a different profile, with twelve of the 13 holding tertiary degrees from various academic disciplines. A number of the respondents advocated for business management skills as a major part of being a successful agricultural entrepreneur (Respondents 6, 7, 8, 12 & 13). Education is an important factor in enhancing agricultural entrepreneurship and in the development of the agri-food system of South Africa (Khapayi & Celliers, 2016).

The findings of this research question indicate that the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa is changing. There are Black African agricultural entrepreneurs in the agri-food system of South Africa that are young, educated, and female. Furthermore, these findings contribute to the lack of information and reliable profile the policy makers have of Black African agricultural entrepreneurs.

6.4 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 2

Research Question 2: What are the advantages and disadvantages of belonging to an organised agricultural group?

Research Question 2 sought to establish what the advantages and disadvantages were of belonging to an organised agricultural group. Perdomo et al. (2016) argued that the complex and multiple challenges facing agricultural entrepreneurs could be overcome with collective action. There is a general consensus in the agricultural sector that belonging to an organised agricultural group will yield a number of benefits for agricultural entrepreneurs (DTI, 2012; Giagnocavo et al., 2017; Grace, 2014; Hasen & Mekonnen, 2017; Karantininis & Nilsson, 2007; Lutz, Smetschka & Grima, 2017; Ortmann & King, 2007; Thaba & Mbohwa, 2015). Karantininis & Nilsson (2007) proposed that by developing more organised agricultural groups such as cooperatives, agricultural industry associations, farmer's associations, commodity organisations, and informal local associations, there would be an increase in agricultural productivity. Chaddad and Cook (2004) as well as Poocharoen and Ting (2015) maintained this view and argued that the formation of partnerships, coalitions and strategic alliances were necessary in order to

increase agricultural productivity and deal with these challenges successfully. Giagnocavo et al., (2017) agreed by stating that the current issues facing the global agri-food system required an understanding of not only technical aspects of farming, but also economic, social, organisational and business aspects

Cooperatives have been largely successful in increasing agricultural productivity of farmers around the world (Abate et al., 2014; DTI, 2012, Eum & Terrasi, 2017; Jara & Satgar, 2009). Iliopoulos, Cook & Chaddad (2016) referenced a recent study that concluded that every country in the world that has a first-class agricultural sector, had organised agricultural groups play a major role in its agri-food system. Carini et al. (2019) observed that of the top 20 countries that have the most successful cooperatives in the world, none are in Africa. These statistics show that organised agricultural groups are effective in increasing agricultural productivity and that there are plenty of benefits associated with being a part of such a group (Carini et al., 2019). These benefits include market linkages, access to funding, procurement of infrastructure facilities, trading of information and ideas, collaboration in production, and economies of scale (Carini et al., 2019; Zeuli et al., 2004).

However, this does not seem to be the case in South Africa (Binswanger-Mkhize, 2014). Binswanger-Mkhize (2014, p. 259) has observed that only a few organised agricultural groups were farming successfully in South Africa and that less than half were proving beneficial for the members. Thaba and Mbohwa (2015) agree with this finding by observing that despite government support of South Africa cooperatives, there has been limited success as many cooperatives fail.

Even though the government has been promoting the formation and development of cooperatives in many sectors but more especially in agriculture, in this research study, only 46% of the respondents were members of organised agricultural groups. All the respondents fully agreed with the concept of working together as opposed to working alone. The respondents agreed with Perdomo et al. (2016) that the only way agricultural entrepreneurs would be able to enhance agricultural entrepreneurship is through collaboration and networking. Although the respondents belonging to organised agricultural groups believed in collaboration and working together, they did not believe that the government was doing a good job with cooperatives in the country (Respondents 5, 6, 8, 9 & 15). In reality, according to Thaba and Mbohwa (2015) what the government

was doing, was taking poor, uneducated, unemployed individuals from their homes and encouraging them to start agricultural cooperatives. The government would give these individuals grants, inputs, land, and infrastructure. Because these individuals did not voluntarily enter the agriculture sector, they would often abandon the farms when circumstances became challenging and there was no profit. This practice has resulted in a number of abandoned farms and a waste in grant funding (Thaba & Mbohwa, 2015).

Some of the respondents interviewed mentioned that many of the agricultural entrepreneurs from the rural areas had a severely dependent mentality, as they would always want and rely heavily on government support. This notion was also supported by Thaba and Mbohwa (2015). The respondents suggested that the government adapt their support structure and award funding based on performance. Certain targets and goals should be pre-determined before any funding is handed out. For every target and goal attained, the organised agricultural group could be rewarded with money and infrastructure support. This would ensure that those organised agricultural groups not serious about farming do not receive any support and those organised agricultural groups that work hard to develop their farming operations would receive all the support and funding they require.

Some of the respondents mentioned that they have started their own informal organised agricultural groups. They carefully select who to include in these groups and only work with competent individuals with the same goals and vision as theirs. These informal organised agricultural groups include agricultural entrepreneurs, marketers, agronomists, funding experts, business experts and members of government. The reason they are informal is that they do not want the government to control them and they can do things that benefit the group as a whole.

It is therefore evident that if agricultural entrepreneurs, the government, and other stakeholders of the agri-food system came together in a constructive manner to form new and improved organised agricultural groups, that they would work and succeed in enhancing agricultural entrepreneurship. Organised agricultural groups that are formed on the principles of hard work and a common vision of enhancing agricultural entrepreneurship, the reduction of food insecurity, the provision of jobs, the advancement of youth and women in the sector and a larger contribution to the economy of South Africa, would stimulate the agri-food system and increase food production.

6.5 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 3

Research Question 3: What are the reasons for agricultural entrepreneurs not joining organised agricultural groups?

Research Question 3 sought to establish the reasons why some agricultural entrepreneurs decide to not join organised agricultural groups in South Africa. These reasons could be instrumental in assisting the stakeholders of the agri-food system of South Africa improve organised agricultural groups so that they are appealing to more agricultural entrepreneurs. There were 7 respondents out of the 13 interviewed (54%) who were not members of any organised agricultural group. This was the case even though these respondents knew of the benefits of being in an organised agricultural group. Agricultural cooperatives have not worked in South Africa, but have enjoyed success as in other parts of the world (Binswanger-Mkhize, 2014; Department of Trade and Industry, 2012; Jara & Satgar, 2009; Kirsten, Lubambo & Ndlovu, 2014; Thaba & Mbohwa, 2015).

A large number of successful organised agricultural groups that were once cooperatives have evolved to become agribusinesses and larger farmers associations in South Africa (Rena, 2017). Organised agricultural groups such as; Agri South Africa, BKB, GWK, Kaap Agri, Obaro, LandBou, Senwes, KLK and the Agricultural Business Chamber (Agbiz). This evolution has allowed the agribusinesses to become more successful and independent. Agribusinesses have access to more beneficial sources of capital, increased revenue streams, improved management, innovation and an entrepreneurial flair (Rena, 2017). This proves that there are benefits associated with organised agricultural groups but in South Africa they have been poorly managed because of government interference. The organised agricultural groups that are functioning as independent agribusinesses are successful and are taking advantage of the collective efforts of all the stakeholders.

The respondents who were not part of any form of organised agricultural group simply believed that in South Africa cooperatives did not work. They believed that simple governmental administrative tasks were unnecessarily lengthy and that there was so much red tape and that by the time one received assistance one may no longer need it. Many felt that cooperatives and large farmers associations required too much work and were too overburdened with the political agendas of some members. People were so consumed with titles and positions that they lost focus on the actual objectives of the

organised agricultural groups. The respondents also felt that within large organisations and organised agricultural groups, it was not easy to attend to every member's needs and some members may find themselves not being a part of the larger group's plans. Whereas in smaller, more focused, organised agricultural groups, members could join based on their specific requirements and would have a better chance of being assisted. Hence, some of the respondents had started their own informal organised agricultural groups. They wanted to build their own brand and own track record rather than joining a large cooperative with predetermined goals, vision and ideas. With informal organised agricultural groups like WhatsApp, community or cluster groups, the respondents felt that they were still free to do as they wished but still had the added benefit of belonging to a group that shared resources and information.

6.6 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 4

Research Question 4: How can the stakeholders of the agri-food system of South Africa stimulate and enhance organised agricultural groups?

It was clear from the data collected from the agricultural entrepreneurs, the experts, as well as the literature review conducted, that the stakeholders of the agri-food system of South African, specifically the government, have to make some structural changes in order to change the success rate of organised agricultural groups in the country (DTI, 2012; Ortmann & King, 2007; Rena, 2017; Thaba & Mbohwa, 2015). Rena (2017) recommended that the government, as the custodian of cooperatives in South Africa, reconsiders and abides by the main assumptions that administer cooperatives in the country. The first assumption discusses the role of the state in the governance of cooperatives. The state may contribute to the establishment and support of the cooperatives in the country but needs to ensure that these cooperatives are autonomous and self-sustaining (Rena, 2017). The government may not interfere with cooperative governance for political reasons. This has been found to be the case in South Africa (Thaba & Mbohwa, 2015). The second assumption is that cooperatives should concentrate on satisfying the social needs of members as opposed to capital and political gains, this has already been ignored by the government of South Africa (Jara & Satgar, 2009). The third assumption of cooperatives states that support from the government is not the only component to developing successful cooperatives (Rena, 2017). The state has invested a huge amount of money in the establishment and development of cooperatives in South Africa and

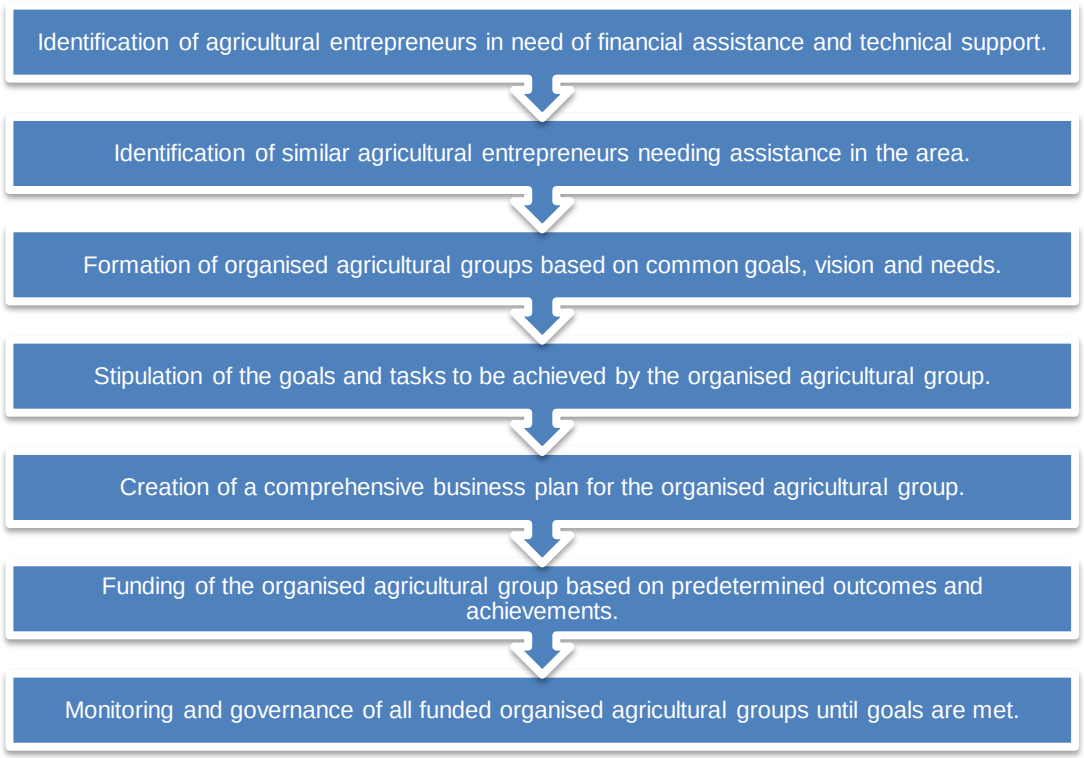
continues to do so even though there has been minimal success (Binswanger-Mkhize, 2014). Rena (2017) posited that should the government of South Africa revisit and abide by these three simple assumptions, there would be a change in the success of cooperatives in the country.

Thaba and Mbohwa (2015) recommended that the state review their policies and strategies of cooperative governance in partnership with the other stakeholders of the agri-food system of South Africa. The authors suggested that the state coordinates and aggregates the various government institutions dealing with cooperatives in order to increase efficiency and effectiveness. Government should also set up education and training for cooperative members in order for them to fully benefit from the advantages provided by cooperatives. Lastly, the state should increase the provision of support services to cooperatives in order to ensure their continued success (Thaba & Mbohwa, 2015).

Whilst the literature indicated that government should be in charge of turning the fortunes of cooperatives around in the country, the respondents believed otherwise. A majority of the respondents believed that the government should form multi-stakeholder partnerships with the other stakeholders of the agri-food system in order to stimulate and enhance organised agricultural groups. This view was shared by Thaba & Mbohwa (2015) and Rena (2017).

The following flow chart depicts how the respondents believed organised agricultural groups should be formed and managed.

Figure 13: The process to be followed by the government when dealing with organised agricultural groups



Source: Author's own.

One of the experts cautioned the government against trying to compete with already existing organised agricultural groups who have been operating for many decades. These organised agricultural groups, mainly white, have the expertise and human capital to assist the government with the implementation of their policies and strategy documents. Therefore, it is in the best interest of the entire agri-food system of South Africa, that multi-stakeholder partnerships should be formed between the stakeholders of the agri-food system. Perdomo et al. (2016) agreed with this argument and went on to posit that the collective action amongst various stakeholders could only stimulate and enhance the agri-food system.

6.7 DISCUSSION OF RESULTS FOR RESEARCH SUB-QUESTION 5

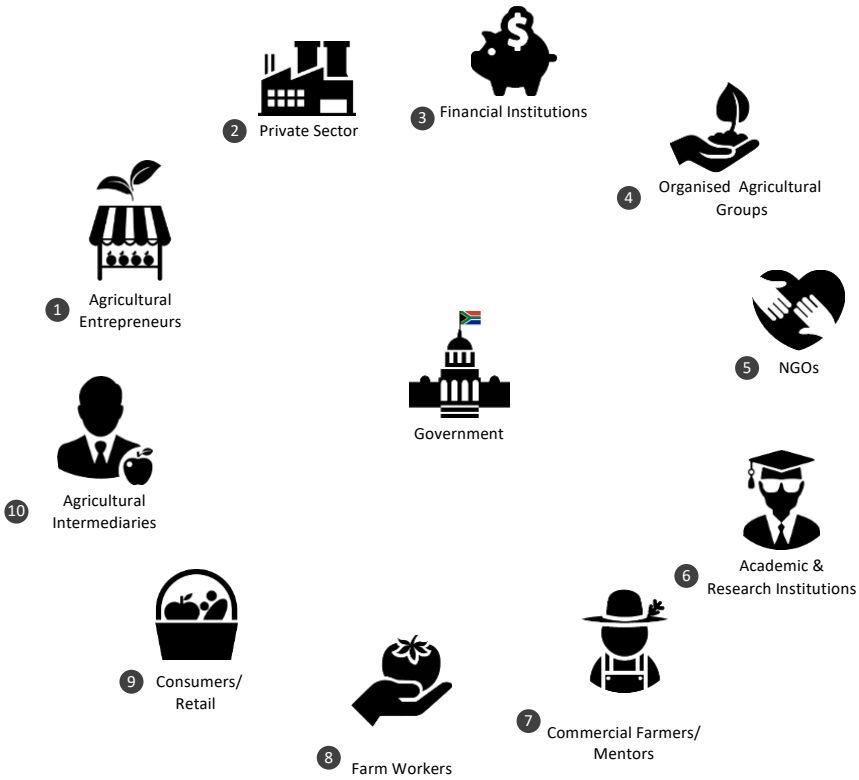
Research Question 5: Which stakeholders need to be a part of the innovative multi-stakeholder agribusiness ecosystem?

Many scholars have argued that in order for the agricultural sector to deal with the increasingly complex and multiple challenges it faced, multi-stakeholder partnership needed to be formed (Binswanger-Mkhize, 2014; Chaddad & Cook, 2004; Dentoni et al.,, 2016; High Level Panel of Experts, 2018; Karantininis & Nilsson, 2007; Perdomo et al.,

2016; Poocharoen & Ting, 2015; Von Bormann, 2019; World Economic Forum, 2016). The respondents identified similar stakeholders as the literature review. Perdomo et al. (2016) identified the following stakeholders in their research study of multi-stakeholder partnerships; agricultural entrepreneurs, organised agricultural groups, researchers, financial service providers, extension agents, retail outlets, local NGOs, the private sector and the government. Von Bormann (2019) identified agricultural entrepreneurs, research institutions, government, financial institutions, formal and informal retailers, NGOs, workers, consumers and multinationals.

The researcher identified, based on the literature review and the data collected from the respondents, the following stakeholders that would need to participate in the innovative multi-stakeholder agri-food ecosystems; agricultural entrepreneurs, agricultural intermediaries, the private sector, financial institutions, organised agricultural groups, NGOs, academic and research institutions, commercial farmers/mentors, farm workers and consumers. These stakeholders are illustrated in Figure 6.1:

Figure 6.1: Stakeholders of the agri-food system



Source: Author's own.

CHAPTER 7: CONCLUSION

7.1 Introduction

The previous chapter (6), discussed the results of the semi-structured, face-to-face, in-depth interviews conducted with 13 agricultural entrepreneurs and three (3) agri-food system experts. The results were discussed under each research question together with the literature review as well as the relevant theories, models and concepts. Chapter 7 explains and summarises the principle findings of the research study as well as makes recommendations to the stakeholders of the agri-food system of South Africa. A proposed framework model and diagram of the 'Innovative Multi-stakeholder Agri-Food Ecosystem' is also discussed. In conclusion, the limitations of the research study are explained and future research opportunities in this field of study are proposed.

7.2 Principal findings

The research study was conducted to gain an understanding of how the stakeholders of the agri-food system of South Africa could double food production by 2050 in order to avoid national food insecurity. More specifically, the aim of this study was to establish whether the stimulation of the agri-food system of South Africa, which would result in increased food production, could be achieved by the enhancement of agricultural entrepreneurship through the development of efficient and effective organised agricultural groups participating in innovative multi-stakeholder agri-food ecosystems. The principal findings of this research study are summarised below with the use of the primary research question and five (5) research sub-questions.

7.2.1 The profile of Black African agricultural entrepreneurs in the agribusiness sector

The profile of Black African agricultural entrepreneurs in the agri-food system may be changing. Black African agricultural entrepreneurs in this study were mostly young, educated, females. This is contrary to the common belief that young people are not interested in agriculture. This sample indicated that there are indeed a number of young people in the agri-food system of South Africa that are committed to the government's fight against food insecurity. Furthermore, these findings contribute to the lack of

information and reliable profile the policy makers have of Black African agricultural entrepreneurs.

The Black African agricultural entrepreneurs interviewed were fairly new entrants to the agriculture sector, the majority had less than five (5) years' experience. This means that the agriculture sector is attracting new agricultural entrepreneurs which bodes well for the future of agriculture as well as for food security. This also means that there is a growing number of agricultural entrepreneurs entering the sector and participating in the agri-food system of South Africa.

Black African agricultural entrepreneurs in this study were educated professionals from many fields and sectors. Twelve out of the 13 respondents have degrees from tertiary institutions varying from accounting, engineering, business management, auditing, marketing, finance, journalism, education, and construction.

7.2.2 The advantages and benefits associated with being a member of an organised group

In this research study it was established that there are advantages and benefits to being a member of an organised agricultural group. It was also concluded that organised agricultural groups did in fact offer members benefits such as market linkages, access to funding, assistance with the procurement of infrastructure facilities, trading of information and ideas, collaboration in production of produce, and economies of scale resulting in lower input costs and thus lower prices for one's market. It was found that membership to an organised agricultural group was positively associated with members' incomes and that members belonging to an organised agricultural group performed significantly better than non-members. The literature review maintained that the only way agricultural entrepreneurs can successfully navigate the complex issues and challenges experienced by the agriculture sector was to join an organised agricultural group.

Many organised agricultural groups from around the world show that these groups work extremely well and are beneficial to not only the members, but also to the country as a whole. Organised agricultural groups such as cooperatives are contributing as much as 30%-60% to the GDP of some countries. The government has introduced legislature, policies and strategies aimed at the formation, support, and enhancement of organised agricultural groups that will include and promote Black African agricultural entrepreneurs.

Sadly, these have been unsuccessful. Many of these organised agricultural groups in the form of cooperatives that were started through government initiatives have failed and have not meaningfully participated in the agri-food system of South Africa. Only 12% of the cooperatives registered are still active today, meaning there is an 88% failure rate of cooperatives in South Africa (DTI, 2012). This statistic indicates that the current approach in which government runs cooperatives and organised agricultural groups in South Africa is not working and needs to be revised.

7.2.3 Reasons for agricultural entrepreneurs not joining organised agricultural groups

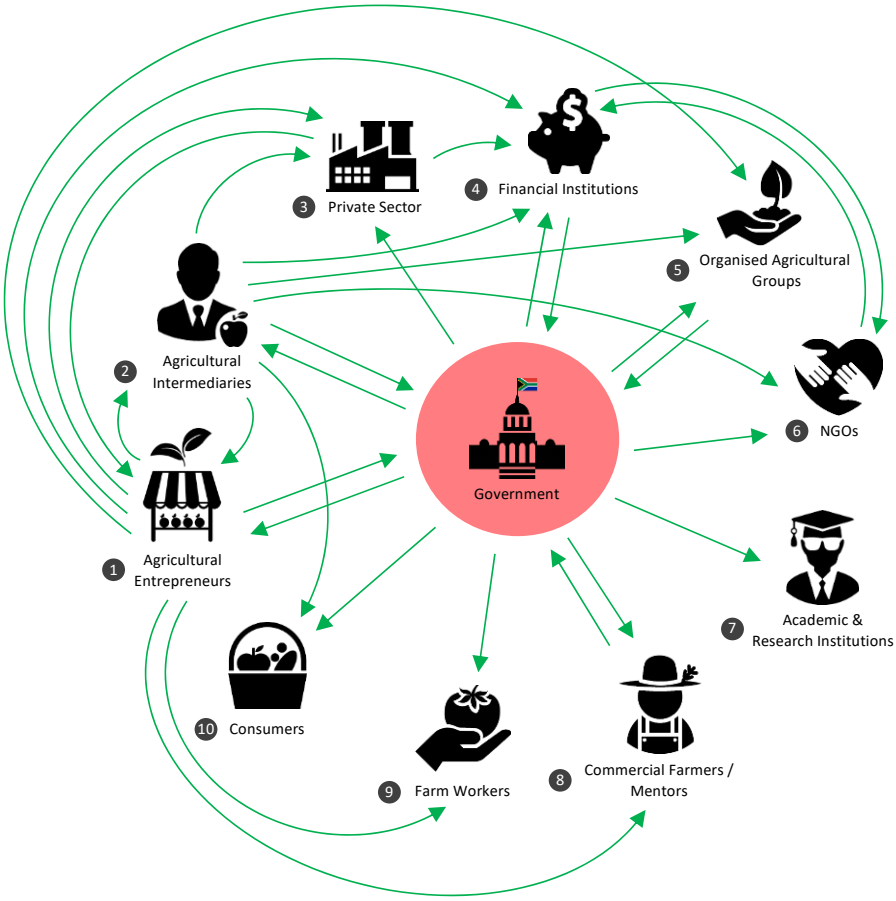
Those agricultural entrepreneurs who chose not to join these organised agricultural groups had compelling reasons for doing so. The rigid structure, misalignment of goals and objectives, forced participation in order to receive support, bureaucracy, cluster driven membership formation, lengthy and inefficient processes, and size of cooperatives deterred them from joining these groups. Respondents were interested in joining smaller, vision driven organised agricultural groups in which the sharing of information, resources, funds and markets was seamlessly achieved.

7.2.4 The stimulation of the agri-food system of South Africa by the stakeholders using innovative multi-stakeholder agri-food ecosystems

Partnerships that bring together multiple stakeholders are increasingly being encouraged as a mechanism to drive economic growth in the global agri-food system. These partnerships have the potential to modernise the global agri-food system, result in sustainable agriculture, and bring about multiple benefits for all the stakeholders involved. The ‘Innovative Multi-Stakeholder Agri-Food Ecosystem’ model was developed through a thoughtful and methodical integration of theories and concepts from Chapter 2, as well as the categories and themes that were identified in Chapter 5. Careful consideration was also given to the data collected from the 16 semi-structured, face-to-face, in-depth interviews conducted with the respondents. The ‘Innovative Multi-Stakeholder Agri-Food Ecosystem’ model (Figure 7.1) aims to assist the stakeholders of the agri-food system of South Africa stimulate and enhance agricultural productivity in order to double food production by 2050.

The following stakeholders that would need to participate in the agribusiness ecosystem: Government, agricultural entrepreneurs, agricultural intermediaries, private sector, financial institutions, organised agricultural groups, NGOs, academic and research institutions, commercial farmers/mentors, farm workers, and consumers.

Figure 7.1: Innovative Multi-Stakeholder Agri-Food Ecosystem



Source: Author's own.

7.3 Implications for management and other relevant stakeholders

Government plays an integral part of the innovative multi-stakeholder agri-food ecosystem. Although they do not have the expertise and resources to ensure that the innovative multi-stakeholder agri-food ecosystem runs efficiently and effectively, they can form partnerships with the other stakeholders of the agri-food system. They can create relevant policies and objectives and set aside funding to make sure that the stimulation of the agri-food system of South Africa successfully occurs.

1. Agricultural Entrepreneurs:

The first and most important stakeholder in the innovative multi-stakeholder agri-food ecosystem will be the agricultural entrepreneur. Without agricultural entrepreneurs this ecosystem will not work. All the other stakeholders need to assist in getting more youth and women interested in agriculture. This will ensure that there is a huge pool from which agricultural entrepreneurs can be converted to commercial farmers. The current agricultural entrepreneurs also need to be passionate and hardworking and not reliant on government grants. Once the agricultural entrepreneurs show the required enthusiasm and dedication, the rest of the stakeholders will come on board and play their parts. The agricultural entrepreneurs will work closely with the private sector, the financial institutions, the organised agricultural groups, the commercial farmers/mentors, the agricultural intermediaries as well as the government. This will ensure that the agricultural entrepreneurs get as much support from the other stakeholders as possible. In order to make this process easier and consolidated, these relationships can be handled by the agricultural intermediaries as seen in Figure 7.1.

2. Agricultural Intermediaries:

Agricultural intermediaries will play one of the most critical roles in the innovative multi-stakeholder agri-food ecosystem. They will play the role of the implementors and enforcers of the decisions, plans, strategies and policies developed by the stakeholders of the agri-food system. These agricultural intermediaries would report directly to the other stakeholders of the agri-food system and the accountability would lie with them. The agricultural intermediaries will work closely with the government, playing the role of project managers. They will receive a budget from the government to execute the policies and objectives of the government. They will be responsible for the outcomes of the objectives. The agricultural intermediaries will also work closely, on behalf of the agricultural entrepreneurs, with the private sector, the consumers/retail shops, the NGOs, the financial institutions and the organised agricultural groups to ensure that the stimulation of the agri-food system is achieved.

3. Private Sector:

The private sector in South Africa is very powerful and has large sums of money that could assist with the stimulation of the agri-food system of South Africa. However, they have

often been accused of not contributing as much as they should to food security. It has been established that some organisations have started taking the lead and are increasingly becoming involved in the agri-food system of South Africa. These organisations are assisting Black African agricultural entrepreneurs with financial and technical support, mentorship as well as guaranteed markets through off-take agreements. The private sector has the necessary core capabilities, skills, resources and expertise to make a meaningful contribution to the agri-food system of South Africa. It is time for the private sector to directly get involved. The private sector will work closely with the agricultural entrepreneurs and the government through the agricultural intermediaries.

4. Financial institutions:

One of the biggest barriers to entry into the agricultural sector is financing, and one of the main reasons why most agricultural entrepreneurs do not succeed is because of insufficient access to funds. Financial institutions in South Africa have not come to the party when it comes to growing the agri-food system and financing agricultural entrepreneurs. Through carefully developed financial instruments between the agricultural entrepreneurs, the private sector, NGOs, agricultural intermediaries and government, solutions could be found that could result in the stimulation of the agri-food system.

5. Organised agricultural groups:

Organised agricultural groups are an important stakeholder of the agri-food system of South Africa as well as the innovative multi-stakeholder agri-food ecosystems. The groups will play the role of advocating for and facilitating a favourable agri-food system environment for the agricultural entrepreneurs. These organised agricultural groups have the potential to play an integral role in developing policies and strategies that could enhance agricultural entrepreneurship, and in turn, the whole agri-food system. The organised agricultural groups will work closely with the agricultural entrepreneurs, and the government.

6. NGOs:

There are NGOs who have partnered with the South African agri-food system stakeholders in order to promote sustainable agricultural development, increase food security, develop the rural agricultural economy and manage natural resources. These

NGOs include both local and international organisations. Some of the big NGOs involved in the agri-food system of South Africa are the FAO, The World Health Organization of the United Nations (WHO), The World Food Programme of the United Nations (WFP), the World Wide Fund for Nature (WWF) and the International Fund For Agricultural Development of the United Nations (IFAD). These NGOs would work closely with the government, they would also work closely with the agricultural intermediaries to ensure that more funds are available for agricultural entrepreneurs. These NGOs will also work with financial institutions to offer some finance that would stand as collateral, which would enable some deserving agricultural entrepreneurs without collateral to receive funding.

7. Academic and research institutions:

Academic and research institutions play a critical role in the innovation, sustainability and advancement of the agri-food system of South Africa. These institutions are tasked with improving the competitiveness of the agri-food system of South Africa compared to its counterparts. Academic institutions have a responsibility of promoting agriculture as an attractive sector for entrepreneurs to enter. In South Africa there are a few institutions and colleges that offer agriculture as an academic degree but more needs to be done to introduce the sector to the youth. This will increase knowledge and interest in the sector. Partnerships with the government will ensure that graduates automatically have jobs and careers after leaving school.

8. Commercial farmers/Mentors:

It has been established that agricultural entrepreneurs benefit immensely from having existing commercial farmers or mentors assist them with the sharing of ideas and knowledge. Most commercial farmers in South Africa have decades of farming experience and their families have been farming for many generations. It is imperative that these farmers partner up with the agricultural entrepreneurs in order for the entire agri-food system of South Africa to grow. These commercial farmers and mentors will work closely with the agricultural entrepreneurs as well as the government.

9. Farm workers:

Farm workers are often one of the greatest assets of almost every agricultural farming operation. The growth and success of the agricultural entrepreneur requires a dedicated, passionate and enthusiastic workforce. Farm workers need to be seen more as stakeholders who are able to meaningfully contribute to the growth of the agricultural entrepreneur than a mere resource that is to be used to get the desired profits. The farm workers will work closely with the agricultural entrepreneurs as well as the government.

10. Consumers/Retail Shops:

Over the past few years, the consumer's power has increased. Consumers now determine what they will buy, where they will buy it, and for how much they will buy it for. Consumers also have the power to affect the enhancement of Black African agricultural entrepreneurs, if for example, consumers required supermarkets and retail shops to buy food from local Black African agricultural entrepreneurs that could change the whole landscape of the agri-food system. Major retail shops also have a duty to procure a sizeable portion of their produce from Black African agricultural entrepreneurs. In order to ensure that they do not experience disappointment due to non-compliance and non-performance, retail shops should deal with the agricultural intermediaries who will ensure that enough produce is delivered constantly.

7.10 Limitations of the research

The following limitations were noted in this research study:

- **Sample size:** The research study only conducted a total of 16 semi-structured interviews, 13 with agricultural entrepreneurs and 3 with agribusiness experts. These numbers are smaller than desired, but saturation was reached.

- **Geographical location of study:** The research study only interviewed agricultural entrepreneurs and experts from the Gauteng Province as this is where the researcher was located. Therefore, the results of the study are limited. However, the researcher strongly believes that agricultural entrepreneurs across the country face similar challenges when it comes to agricultural entrepreneurship and that the agribusiness ecosystem will be effective in any province in South Africa.

- **Time Frame:** The research study was conducted over a limited period due to the time frames stipulated by the academic institution of the researcher. Perhaps, more insights could have emerged should the study have been allowed to be performed over a longer period.

7.11 Suggestion for future research

- South Africa is a rather unique country with its complicated past. South Africa is a more industrialised and technologically advanced country. And the history that is apartheid offers unique and contextualised challenges. This study needs to be replicated in other developing country contexts.
- Research into why other countries' cooperative sectors are contributing more to the GDP than other countries. There are countries who have cooperatives contributing between 30%-60%. A study on how these countries are doing this would be advantageous to the sector.
- Given the common challenge of access to funds, a study into the different financial instruments that are used in successful agriculture sectors around the world could be conducted and then adapted to developing countries.

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APPENDIX ONE: CONSISTENCY MATRIX

RESEARCH QUESTIONS	LITERATURE REVIEW	DATA COLLECTION TOOL	ANALYSIS
SQ1: What is the profile of black agricultural entrepreneurs in the agri-food system of South Africa?	Binswanger-Mkhize, 2014; Cousins, 2015; Cousins & Chikazunga, 2013; Hendriks, 2014; Greyling, Vink, & Mabaya, 2015; Okunlola, Ngubane, Cousins, & Du Toit, 2016; Pienaar & Traub, 2015; Statistics South Africa, 2016; Swanepoel, Van Niekerk, & D'Haese, 2017; Tregurtha, Vink, & Kirsten, 2010; Van den Berg, 2013.	Semi-structured interviews	Qualitative analysis and Thematic codification

SQ2: What are the advantages and disadvantages of belonging to an organised agricultural group?	Abate, Francesconi, & Getnet, 2014; Chaddad & Cook, 2004; Chagwiza, Muradian, & Ruben, 2016; Clarysse, Wright, Bruneel & Mahajan, 2014; Department of Trade and Industry, 2012; Eum & Terrasi, 2017; Giagnocavo, Bienvenido, Ming, Yurong, Sanchez-Molina, & Xinting, 2017; Grace, 2014; Hasen & Mekonnen, 2017; Iliopoulos, Cook, & Chaddad, 2016; Ingalsbe & Groves, 1989; International Cooperative Alliance, 2006; Jara & Satgar, 2009; Karantininis & Nilsson, 2007; Kurimoto, Draperi, Bancel, Novkovic, Shaw, Wilson, & Cracogna, 2015; Lutz, Smetschka & Grima, 2017; Mojo, Fischer, & Degefa, 2017; Ortmann & King, 2007; Perdomo, Farrow, Trienekens, & Omta, 2016; Poocharoen & Ting, 2015; Thaba & Mbohwa, 2015; Wanyama, Develtere, & Pollet, 2009; Zeuli, Cropp, & Schaars, 2004.	Semi-structured interviews	Qualitative analysis and Thematic codification

SQ3: What reasons do agricultural entrepreneurs have for not joining organised agricultural groups?	Binswanger-Mkhize, 2014; Department of Trade and Industry, 2012; Jara & Satgar, 2009; Kirsten, Lubambo & Ndlovu, 2014; Rena, 2017; Thaba & Mbohwa, 2015.	Semi-structured interviews	Qualitative analysis and Thematic codification
SQ4: How can the stakeholders of the agri-food system of South Africa stimulate and enhance organised agricultural groups?	Adner, 2017; Adner, 2006; Alvedalen & Boschma, 2017; Audretsch, Cunningham, Kuratko, Lehmann, & Menter, 2019; Blum & Worth, 2019; Cohen, 2006; Eisenhardt & Galunic, 2000; FAO, 2018; Faria & Mixon, 2016; Gaffney, Challender, Califf, & Harden, 2019; Iansiti & Levien, 2004; Jacobides, Cennamo, & Gawer, 2018; Kelly, 2015; Li, 2013; Lyman, Ref, & Wright, 2018; Mason & Brown, 2014; Moore, 1996; Peltoniemi & Vuori, 2004; Prager, 2015; Scaringella & Radziwon, 2018; Spigel & Harrison, 2018; Spigel, 2017; Stam, 2015; Stam & Spigel, 2017; Teece, 2016; Van der Borgh, Cloodt, & Romme, 2012; Wulf & Butel, 2017	Semi-structured interviews	Qualitative analysis and Thematic codification

SQ5: Which stakeholders need to be a part of the innovative agribusiness ecosystem?	Andriof & Waddock, 2017; Breeman, Dijkman, & Termeer, 2015; Buchholtz & Carroll, 2012; Carroll & Buchholtz, 1989; Crane & Ruebottom, 2011; Dentoni, Bitzer, & Pascucci, 2016; Dentoni & Peterson, 2011; Fassin, 2009; Freeman, 1984; Freeman, Harrison, Wicks, Parmar, & De Colle, 2010; Gilbert & Rasche, 2008; Harrison, Bosse, & Phillips, 2010; Harrison & Wicks, 2013; High Level Panel of Experts, 2018; Hillman & Keim, 2001; Jones, 1995; Kaler, 2002; Kilelu, Klerkx, Omore, Baltenweck, Leeuwis, & Githinji, 2017; Lu, Rong, You, & Shi, 2014; Miles, 2017; Mitchell, Agle, & Wood, 1997; Post, Preston, & Sauter-Sachs, 2002; Stoney & Winstanley, 2001; Verbeke & Tung, 2013; Von Bormann, 2019; World Economic Forum, 2016	Semi-structured interviews	Qualitative analysis and Thematic codification

APPENDIX TWO: INTERVIEW GUIDE

Interview Guide

Research Question 1: What is the profile of Black African agricultural entrepreneurs in the agri-food system of South Africa?

Interview Questions:

1. Gender, race, age?
2. How many years of farming experience do you have?
3. What made you decide to get into farming?
4. Are you a full-time or part-time farmer?
5. Do you live full time on your farm?
6. What crops do you farm?
7. What academic qualifications, if any, do you possess?
8. Do you think it is imperative to study any agricultural courses or degrees in order to be successful at farming?
9. What qualities do you think make a successful agricultural entrepreneur?

Research Question 2: What are the advantages and disadvantages of belonging to an organised agricultural group?

Interview Questions:

1. Do you belong to an organised agricultural group?
2. What kind of organised agricultural group do you belong to?
3. How long have you been a member of this organised agricultural group?
4. How did you get to hear about this organised agricultural group?
5. What are your reasons for being a member of this organised agricultural group?
6. Do you know of other farmers in your area who are members of an organised agricultural group?
7. Does membership in the organised agricultural group add value to your operation?
8. What are some of the challenges related to being a member of this organised

agricultural group?

9. Have you ever considered leaving the current organised agricultural group you are a part of, please explain your reasons?
10. Would you recommend other agricultural entrepreneurs join any type of an organised agricultural group?
11. What additional benefits, if any, would you like the organised agricultural group to give you?
12. What do you think needs to be done to improve organised agricultural groups in South Africa?
13. There are many agricultural entrepreneurs not succeeding at agricultural entrepreneurship, why do you think this is the case?
14. What are some suggestions you would give relevant stakeholders of the agri-food system of South Africa to help enhance agricultural entrepreneurship?

Research Question 3: What reasons do agricultural entrepreneurs have for not joining organised agricultural groups?

Interview Questions:

1. Do you belong to an organised agricultural group?
2. Do you know of any organised agricultural groups around the area where you farm?
3. Do you know the perceived benefits of being a member of an organised agricultural group?
4. What are your reasons for not being a member of organised agricultural group?
5. Do you know of other farmers in your area who are members of organised agricultural group?
6. What are some of the challenges, if any, related to not being a member of an organised agricultural group?
7. Are you considering joining a cooperative anytime soon, if not, why?
8. What would convince you to join an organised agricultural group?
9. What do you think needs to be done to improve organised agricultural group in South Africa?
10. There are many agricultural entrepreneurs not succeeding at agricultural entrepreneurship, why do you think this is the case?

11. What are some suggestions you would give the relevant stakeholders of the agri-food system of South Africa to help enhance agricultural entrepreneurship?

Research Question 4: How can the stakeholders of the agri-food system of South Africa stimulate and enhance organised agricultural groups?

Interview Questions for agri-food system experts:

1. What do you think are the benefits of belonging to an organised agricultural group?
2. Do you think membership of an organised agricultural group contributes to increased productivity by the farmers?
3. What would you say is the most single important benefit of being a member of an organised agricultural group?
4. In your opinion, does the organised agricultural group way of doing business contribute to the growth of agriculture and the economy?
5. Do you think it is possible to create many organised agricultural groups throughout the country that will enhance agricultural entrepreneurship in the agri-food system?
6. How could the government of South Africa use the cooperative model or organised agricultural groups to agricultural entrepreneurship in the agri-food system?
7. How can the government successfully scale the cooperative model or organised agricultural groups into the rural parts of South Africa?
8. Are there any skills required to run an organised agricultural group?
9. What are the key components to starting and running a successful cooperative or organised agricultural group?
10. What changes to the current cooperative model or organised agricultural group could be made in order to scale to the larger population of South Africa?

Research Question 5: Which stakeholders need to be a part of the innovative multi-stakeholder agribusiness ecosystem?

Interview questions for cooperative experts

1. What do you think needs to be done in order to get more youth and women into the agri-food system of South Africa?
2. There are many agricultural entrepreneurs not succeeding at agricultural entrepreneurship, why do you think this is the case?
3. Which stakeholders are a part of a successful agri-food ecosystem?
4. What role does each stakeholder play in a successful agri-food system?
5. Who is missing or not adding value to this agri-food system?
6. What needs to happen for an efficient and effective agribusiness ecosystem to be put in place?
7. Do you think the creation, replication and expansion of these agri-business ecosystems could enhance agricultural entrepreneurship in the agri-food system of South Africa?
8. What can government do to assist with the creation, replication and expansion of these agribusiness ecosystems?
9. Who needs to take charge in the creating, replication and expansion of these agribusiness ecosystems?

APPENDIX THREE: CODE LIST

ATLAS.ti Report: Gibs MBA Thesis

265 Codes

Report created by Buchule Jack on 5 February 2020
○ Academic institutions
○ Access to financing as benefit
○ Access to infrastructure as benefit
○ Access to knowledge and information as benefit
○ Access to land as benefit
○ Access to market
○ Access to support as benefit
○ Accountability and monitoring
○ AFASA
○ Aggregation model
○ Agri-BEE
○ Agricultural entrepreneurs advising each other
○ Agricultural entrepreneurs to play their role
○ Agricultural management services
○ Agricultural training
○ Alignment to agricultural entrepreneurs
○ Associations have created their own distribution and markets
○ Automation
○ Awareness of global food system
○ Belongs to a cooperative
○ Belongs to an organised agricultural group

○ **Benefits of being in an organised agricultural group**
○ **Black Agricultural Entrepreneurs**
○ **Black agricultural entrepreneurs supplying the government agencies**
○ **Black agricultural entrepreneurs uniting**
○ **Breakeven takes long**
○ **Bulk production**
○ **Business acumen**
○ **Business management**
○ **Carrying of other coop members**
○ **Catered solutions**
○ **Challenges in farming**
○ **Classify needs and align the support to those needs**
○ **Climate change**
○ **Cluster meetings**
○ **Cluster organisations**
○ **Collaborations with other farmers**
○ **Collective action**
○ **Combination of skills and resources**
○ **Commercial farmers work on their own**
○ **Communication is key in agriculture**
○ **Community shared agriculture**
○ **Comparison to white cooperatives**
○ **Constant research is required in agriculture**
○ **Consultancy to advise other farmers**
○ **Continuous supply of produce**
○ **Continuous support by government**

○ **Cooperative members who are not farmers**
○ **Cooperatives do not work**
○ **Cooperatives must be started around activities of farmers**
○ **Coops in area**
○ **Coordinate bureaucracy**
○ **Corruption**
○ **Create own markets**
○ **Create own organisations**
○ **D-I-Y mentality**
○ **Decision making in coops is difficult**
○ **Degree in Agriculture**
○ **Department of Agriculture**
○ **Department of Rural Development**
○ **Determination**
○ **Developmental finance**
○ **Different crops**
○ **Difficult Coop model**
○ **Disadvantages of organised groups**
○ **Discrimination between black and white farmers**
○ **Do not belong to OAG**
○ **Easier to work with private sector than government**
○ **Economies of scale**
○ **Ecosystem creation necessary**
○ **Educate the consumers**
○ **Educating youth about farming**
○ **Education on cooperatives essential**

○ **Enhance farming skills**
○ **Eskom**
○ **Existing organised group has different goals**
○ **Experience is the best teacher**
○ **Export demand**
○ **Extension officer**
○ **False perceptions about agriculture**
○ **Family business**
○ **Farmer is a price taker**
○ **Farmer issues unique**
○ **Farmers must manage farmer's affairs**
○ **Farmers United South Africa**
○ **Farming is hard work**
○ **Fascinated by farming**
○ **Fight in meetings**
○ **Find the right crop**
○ **First generation farmers**
○ **FNB**
○ **Food security**
○ **Formation of informal organised agricultural groups**
○ **Fresh Produce Market**
○ **Full-time farmer**
○ **Funding from government should be for farming implements**
○ **G.A.P requirement limiting**
○ **Good personal skills**
○ **Good policies**

○ **Good quality product**
○ **Government acting as guarantor**
○ **Government baby-sit coops**
○ **Government checks and balances**
○ **Government does not understand cooperative model**
○ **Government failure**
○ **Government hand-outs**
○ **Government incubation and support**
○ **Government lack of understanding**
○ **Government must be on the ground**
○ **Government must facilitate and monitor but not lead**
○ **Government must get right people in-charge**
○ **Government must understand the needs of the farmers**
○ **Government must work with existing coops**
○ **Government must work with farmers**
○ **Government supports cooperatives**
○ **Government supports non-performing farmers**
○ **Government to lead ecosystem**
○ **Grew up in agriculture**
○ **Groups are taken more seriously by other stakeholders**
○ **Have no fear**
○ **Help others start farming**
○ **Help those who help themselves**
○ **Help yourself grow in the sector**
○ **High competition**
○ **Hire knowledgeable workers**

○ **Huge database of other black agricultural entrepreneurs**
○ **Identification of opportunity in farming**
○ **Identify gaps in agri-food system**
○ **Important to study agriculture**
○ **Individuals do not receive help from government**
○ **Inexperience**
○ **Infrastructure needs**
○ **Internships**
○ **Invest in serious agricultural entrepreneurs**
○ **Investment analysis should be conducted**
○ **Johannesburg Inner City Partnership**
○ **Know farmers in coops**
○ **Knowledge of farming**
○ **Lack of access to funding**
○ **Lack of access to information**
○ **Lack of freedom within an organised group**
○ **Lack of government capacity**
○ **Lack of government support**
○ **Lack of infrastructure**
○ **Lack of private sector commitment**
○ **Lack of Reliability of Black Agricultural Entrepreneurs**
○ **Lack of seriousness of some farmers**
○ **Lack of support from government**
○ **Land Bank**
○ **Land Reform**
○ **Large numbers required for coops**

○ **Large-scale commercial farmers**
○ **Learning and sharing**
○ **Learning farming through mentorship**
○ **Leasing from government**
○ **Live on the farm**
○ **Long time before you see financial rewards**
○ **Lose money**
○ **Major retail stores bias**
○ **Man-made barriers for black farmers**
○ **Marginalisation of black agricultural entrepreneurs**
○ **Market agents**
○ **Market prices low**
○ **Membership fees**
○ **Mindset change from agricultural entrepreneurs**
○ **Missing out on government assistance**
○ **Missing private sector**
○ **Mix up the stakeholders involved**
○ **More market share**
○ **More profit supplying to restaurants**
○ **More women in agriculture**
○ **Must not just focus on primary agriculture**
○ **NAFU**
○ **Need a lot of faith**
○ **Need for agricultural knowledge**
○ **Need marketing skills**
○ **Need technical skills**

- **Need to be able to plan**
- **Networking**
- **NGOs helping by matching private sector and government**
- **No database kept by government**
- **No equal work ethic in cooperatives**
- **No individualised approach**
- **No need for agricultural qualification**
- **No skin in the game for stakeholders on the agri-food system**
- **Non-South African inputs made**
- **Not a farmer but an agricultural entrepreneur**
- **Not considering joining an OAG**
- **Not important to study agriculture**
- **Obligation to other farmer partners**
- **Off-take agreements**
- **Open own markets**
- **Organisations believe more in teams**
- **Organised agricultural groups not well organised**
- **Other countries government is leading**
- **Participate in full agri-food system**
- **Participation in the production of food**
- **People join cooperative because of grant**
- **People renting out their farms because they can't farm**
- **People resell the equipment they received from government**
- **Performance based support**
- **Perseverance**
- **Pick 'n Pay**

○ **Policy enforcement by government crucial**
○ **Political and economic lobbying benefit of associations**
○ **Political will**
○ **Post-graduate qualification**
○ **Price advantages**
○ **Pricing challenges**
○ **Private sector**
○ **Private sector assisting government**
○ **Private sector hires competent and knowledgeable people**
○ **Private sector must benefit in the ecosystem**
○ **Private sector rather work with organised groups**
○ **Private sector to lead partnership**
○ **Quick on your feet**
○ **Rather struggle alone than join OAG**
○ **Reason for entering agriculture sector**
○ **Recruit agricultural entrepreneurs from agricultural colleges**
○ **Red-tape**
○ **Remove politics out of agriculture**
○ **Resilience as a quality**
○ **Risk taking**
○ **Risks involved in farming**
○ **SAB**
○ **Self-taught farming skills**
○ **Sell straight to market**
○ **Sharing of implements not happening**
○ **Sharing of infrastructure**

○ **Sharing of knowledge and information**
○ **Sharing of losses a deterrent**
○ **Sharing of market a benefit**
○ **Sharing of profits**
○ **Sharing of resources a benefit**
○ **Small land given to farmers**
○ **Small production volume**
○ **Stakeholders of agri-food system**
○ **Start small**
○ **Stringent paperwork requirements**
○ **Struggle to find land**
○ **Support only entrepreneurial farmers**
○ **Thinking of coops like companies**
○ **Too many cooperative members**
○ **Too many organised agricultural groups**
○ **Too much politics in cooperatives**
○ **Too small to compete with large commercial farmers**
○ **Training helps weed out uninterested parties**
○ **Transparency from government in support offered**
○ **Treat agriculture like a business**
○ **Understand the whole agri-food system**
○ **Unemployed cooperative members**
○ **Variety of crop diversification**
○ **Vision alignment between myself and the OAG**
○ **Vision misalignment with other coops members**
○ **Waste of government funding**

○ **WhatsApp Groups**
○ **White farmers working together**
○ **White organisations manage themselves**
○ **Work alone**
○ **Working together to meet demand**
○ **Years of experience**
○ **You need passion for farming**
○ **Young agricultural entrepreneur**
○ **Youth lack of involvement**
○ **Youth must get involved in agri-food system**

APPENDIX FOUR: ETHICAL CLEARANCE APPROVAL

Gordon Institute of Business Science
University of Pretoria

23 September 2019

Buchule Jack

Dear Buchule

Please be advised that your application for Ethical Clearance has been approved.

You are therefore allowed to continue collecting your data.

Please note that approval is granted based on the methodology and research instruments provided in the application. If there is any deviation change or addition to the research method or tools, a supplementary application for approval must be obtained

We wish you everything of the best for the rest of the project.

Kind Regards

GIBS MBA Research Ethical Clearance Committee

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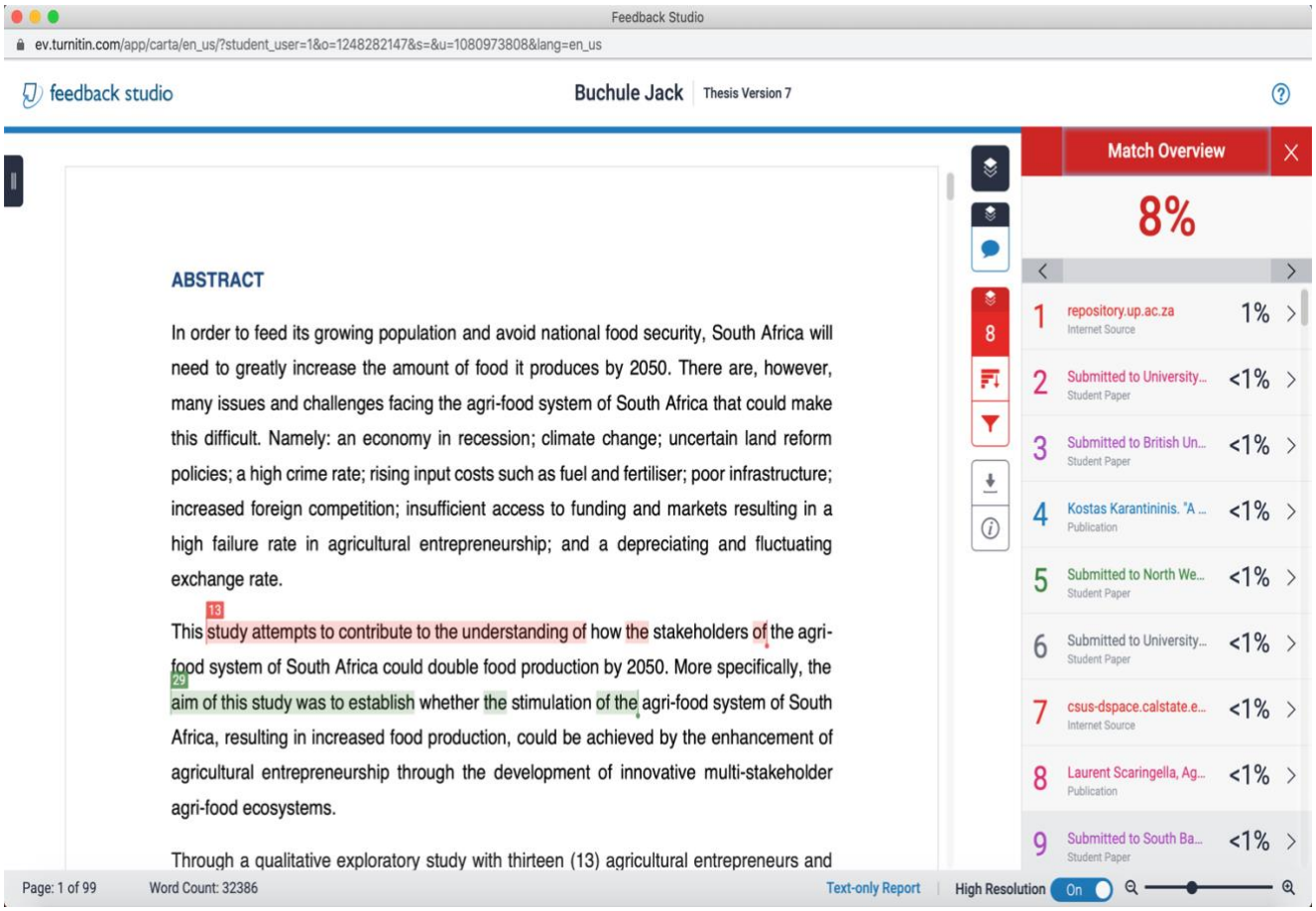
APPENDIX FIVE: TURNITIN SUBMISSION