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Identifying entrepreneurial skills required by South African black farmers - an entrepreneurial model

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Identifying entrepreneurial skills required by South African black farmers – An entrepreneurial model

Gugulethu Givenson Xaba

A research report submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Management in Entrepreneurship and New Venture Creation (MMENVC)

Johannesburg, 2014

ABSTRACT

This study was crafted on the realisation that some beneficiaries of land reform in South Africa have been struggling to turn their farming businesses into viable commercial enterprises. It was against this background that an investigation was carried out to identify entrepreneurial skills that are crucial in helping South African black farmers convert their small scale subsistence farming activities into lucrative commercial entities. The study utilised primary data of both a qualitative and quantitative nature and investigated the extent to which successful agricultural commercialisation is reliant on enterprise management skills, marketing skills, production skills, infrastructural utilisation skills, ICT skills, financial management skills and attitude to agricultural business. A logistic regression model was designed to test each of the seven hypotheses, and sought to establish all the variables that evoke appreciable influence on the probability of South African black farmers' commercialising successfully. The empirical results point to a number of attributes that have a significant impact on the likelihood of South African black farmers thriving commercially. These include, strategic planning, clear communication of organisation`s objectives and goals, beforehand knowledge of the market, promotion of own brand, conservation of agricultural practices, knowledge of seasons, timely conveyance of produce to the market, understanding of global agricultural trends, exploitation of ICT facilities, ease of access to funding, and qualified financial management personnel. Policy engineering around these aspects is likely to improve the lucrativeness of most black-owned farming enterprises.

DECLARATION

I, Gugulethu Givenson Xaba, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management in Entrepreneurship and New Venture Creation (MMENVC) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other university.

……..

Gugulethu Givenson Xaba

Signed at ……

On the 31st day of March 2014

DEDICATION

I dedicate this work to my late Dad, Zacheus Dinabantu Xaba whose dedication to his 12 kids was through education that would make them better citizens in the world and thereby contribute towards human development.

ACKNOWLEDGEMENTS

Acknowledgement first goes to my supervisor, Dr Shaw, for his guidance and support, to my dear wife for having been patient with me during the time I was busy with my studies, as well as my team members in my organisation for having accorded me time to finish this work.

I would like to further thank all the respondents who took their time to give me feedback on all the questionnaires I had sent out.

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CHAPTER 1: INTRODUCTION

1.1 Purpose of the study

This research paper sought to uncover the skill-based challenges experienced by black entrepreneurs in the farming sector in South Africa. The research proposed an entrepreneurial model that highlights the expertise required to integrate black farmer entrepreneurs into the South African mainstream economy, who will contribute towards the broader economic development of South Africa.

1.2 Context of the study

Post-apartheid Republic of South Africa has sought to steer itself towards being a nation that will achieve equitable distribution of wealth for all its citizens. In the past 19 years of democratic rule, the new government in South Africa has introduced a number of interventions aimed at addressing the imbalances, caused by the architects of apartheid, on the economic front. These include among others, broad-based black economic empowerment (BBBEE), land reform policies, employment equity (EE), and the Co-operative Act of 2005. There are many similar remedial instruments across different economic sectors meant to help to achieve equitable distribution of wealth in South Africa. The unsustainable progression, where the means of production are owned largely by a minority of the South African population, poses a challenge for the sustainability of South Africa as a whole.

In his policy discussion, former President Thabo Mbeki cited the concept of two economies, namely a first and second economy (Aliber, 2005). In this article, Mbeki debates the persistence of poverty and the under-development of the second economy. As a developing country, South Africa is driven primarily by a capitalistic economy, which is characteristically similar to other economies in both emerging and advanced nations (Mohr & Fourie, 2005).

In addition, this research discusses that South Africa's economy is resting on three main pillars, the primary, secondary and tertiary sectors. However, these pillars are economically contributing 9.5 percent 23.94 percent and 66.56 percent respectively. The primary sector comprises agriculture, forestry, fishing, mining and quarrying industries (Stats SA, n.d.).

1.3 Problem statement

The South African business environment provides opportunities for entrepreneurial success across all economic sectors. However, inadequate entrepreneurial skills and strategies among some black farmers, limits agricultural development as well as the thriving of their agricultural enterprises. Regardless of the government`s support and its several agricultural policies and interventions, many previously disadvantaged black farmers still struggle to attain full potential of the arable land they received through the land reform processes. The study noticed that some black farmers, who either bought and/or were given the farming land from the restitution programs of government, have not succeeded in practising farming as a business. Even though the South African government's interventions were made to equitably distribute farming land from minority whites to majority blacks, it has also proven a major challenge on many fronts. Moreover, those few South African blacks, who have been the recipients of good arable land, constantly fail to turn these assets into commercially viable farming entities that will create wealth in the same way their experienced white counterparts have done.

1.4 Purpose statement

Most entrepreneurial strategies will fail unless integrated with management practices that support and reinforce the overall strategy. The purpose of this research is to integrate the new theory ingredients and new concepts on agriculture to assist black farmers understand entrepreneurial strategies that can help them successfully farm at commercial levels (Boehlje, Hofing & Schroeder,

1999; Morris, Kuratko & Covin, 2008). These strategies, according to Morris et al. (2008) and Boehlje et al. (1999) include, among others:

- Developing entrepreneurial vision;
- Specific attribute/differentiated raw materials;
- Increased perception of opportunity;
- Sell service and give away product;
- Institutionalising change;
- Personal/negotiated/closed markets;
- Instilling the desire to be innovative;
- Partnering with suppliers and purchasers;
- Investing in people's ideas; and
- Agriculture is primarily science based.

1.5 Hypotheses

Following the review of literature and the exploratory factor analyses, it was deemed necessary to refine and reformulate the original hypotheses. Figure 1 shows the modified hypothesis model as applied to this study.

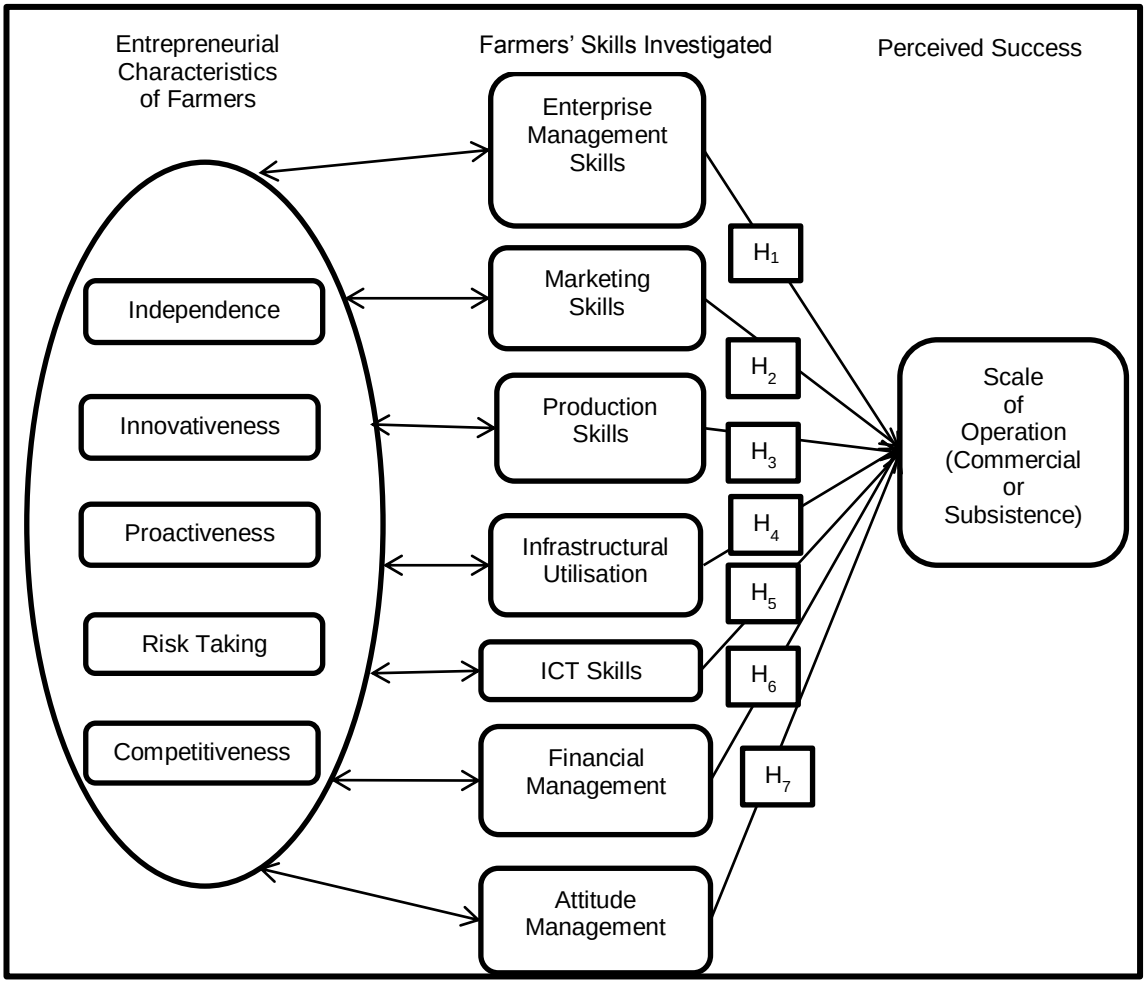

Figure 1: The modified hypotheses model

Adapted from Lotz & van der Merwe (2013)

Figure 1 portrays the interdependence that exists between the entrepreneurial characteristics that define farmers and the skills that they may require to attain the perceived success in their businesses. The relationship between the skills required by South African black farmers and their scale of operations can be analysed through the summary of the null hypotheses:

H_1: Enterprise management skills have no impact on the farmer's ability to commercialise.

H_2: Marketing skills are not essential for commercialising an agricultural enterprise.

H_3: Whether an agricultural enterprise is commercial or subsistence is unaffected by the level of production skills that the farmer possesses.

H_4: The degree to which the farmer can or cannot fully utilise their farm infrastructure does not affect the enterprise`s commercialisation potential.

H_5: Access to and the ability to utilise information communication technology (ICT) facilities does not determine whether a farmer will go the commercial or subsistence route.

H_6: The extent of the farmer's financial knowledge does not have an influence on their ability to commercialise their farming enterprises.

H_7: There is no relationship between the farmer`s attitude towards agriculture and the possibility of them commercialising.

1.4 Significance of the study

The failure by a majority of black agricultural farmers in South Africa is superficially assumed to be caused by the lack of financial and technical support (Coetzee, 1998). It is, however, not very clear what hinders these farmers from converting their subsistence farming operations to viable commercial enterprises. This research, as a starting point sought to fill this knowledge gap.

The global world of business has long entered the technological trajectory. Knowledge management integrated with entrepreneurial flair has become a cornerstone, even on the agricultural farming sector (Mueller, 2001). While black farmers are still playing a catch-up game, compared to their developed white counterparts; the agricultural farming business environment is not waiting, even as e-commerce in agriculture is taking root. Mueller (2001) hypothesizes that e-commerce in agriculture is mostly business-to-business (B2B) and has three broad categories that distinguish entrepreneurship involvement in e-commerce:

[1] Adoption of ordinary e-commerce practices by farmers, agribusiness, and intermediaries;

[2] Organised e-commerce markets; and

[3] Alert discovery of e-commerce profit opportunities.

It was therefore important to carry out a study of this nature as it addressed gaps in the farmers` entrepreneurial skill requirements. The study also proposed a workable entrepreneurial model. The model will go a long way in aligning black-owned agribusinesses with the dynamic and highly competitive technologically driven agricultural environment that currently exists. This research also assisted black farming entrepreneurs to understand the recent trends in agribusiness management thus helping them become innovative to achieve growth of their agro-based ventures. Once the entrepreneurial aptitudes of the black farmers were refined, there would be greater potential for sustainable positive trickle down effects, such as employment creation, food security and a better economy for all. Finally, this study could be an important tool that policy makers could use when formulating strategies on how to intervene meaningfully when helping black agricultural entrepreneurs to operate at commercial levels that are competitive both locally and globally.

1.6 Delimitations of the study

The agricultural sector is a very wide industry, which cannot be covered entirely through this research; hence, this study's focus was on a primary sub-sector. Due to the broad scope of primary agriculture, this study was delimited to crop farming. The study focuses on KwaZulu Natal particularly the Zululand District Municipality where emphasis was also restricted to a relatively small sample of black farmers.

1.7 Definition of terms

- *Entrepreneur*: An individual who manages a business with the intention of expanding it and with the leadership and managerial capabilities to achieve its goals (Gray, 2002).
- *Commercial farming*: The European Commission of Agriculture and Rural Development (European Commission, 2011) defines commercial farming in

the context of farms that are large enough to serve as the main activity for the farmer and to provide a level of income sufficient to support the household.

- *Subsistence farming*: Abele, Voigt and Weingarten (2002) refer to subsistence agriculture when farms consume a fundamental part of their own net production in their household and therefore do not primarily produce for the market. Similarly, Fan, Brzeska, Keyzer, and Halsema (2013) define subsistence farmers as smallholders who consume the majority of their farm output and who are held back from participating more actively in commercially oriented agriculture by a variety of constraints.
- *Autonomy*: The independent actions of an individual or a team in bringing forth an idea or a vision and carrying it through to completion (Lee & Sukoco, 2007; Lumpkin & Dess, 1996).
- *Pro-activeness*: Madsen (2007) defines proactiveness as a posture of anticipating and acting on future wants and needs in the market place, thereby creating a first-mover advantage.
- *Risk taking*: The term, risk taking, is defined by Dewett (2004) as the extent to which there is uncertainty about whether potentially significant and/or disappointing outcomes of decisions will be realised.
- *Innovativeness*: According to Schumpeter (2000) innovation is defined as an introduction of new goods or better quality good. It can also refer to the introduction of a new production method, a new market, a new source of raw material or a change in current industry structure. Caliyurt, (2001) defines innovation as being positively related to business performance in small firms, whether demonstrated by the introduction of new products, services and processes or by the re-invention of existing products and processes.
- *Competitive aggressiveness*: The entrepreneurs' propensity to directly and intensely challenge its competitors in an attempt to improve its position in the market place (Chang, Lin, Chang & Chen, 2007; Lumpkin & Dess, 1996).

1.9 Assumptions

This study was done with the following assumptions in mind:

- The sample taken in Zululand District Municipality was considered a true reflection of the entire population of aspirant black commercial farmers in South Africa.
- The number of respondents to the survey was adequate to gain enough computable data for the research report.
- The respondents understood the challenges involved in moving from subsistence to commercial farming.
- The respondents found all sections of the questionnaire clear, understandable and non-offensive.
- The respondents fully understood that the aim of this study was not commercial; therefore, no one could expect any personal incentives or remuneration for their participation.
- All responses provided by respondents were accurate, factual and fully represent their circumstances.
- The results of the study were unaffected by the variation in the type of agricultural enterprises the farmers are involved in.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature in an attempt to investigate agriculture as a potential sector for profitable entrepreneurship. The chapter starts by looking at developments in South African agriculture in relation to entrepreneurship. The chapter progresses by discussing what agro entrepreneurship entails before highlighting the entrepreneurial skills critical to South African Agri-businesses. Entrepreneurial characteristics such as innovativeness, autonomy, risk-taking, pro-activeness and competitive aggression are then discussed. The remainder covers some of the business strategies relevant to agro-entrepreneurship, distinguishing successful from unsuccessful entrepreneurs, relating financial management to entrepreneurship before touching on issues like credit, gender and agricultural entrepreneurship.

2.2 Background of South African agriculture in the context of entrepreneurship

According to Genis (2012) of the Institute for Poverty, Land and Agrarian Studies, the foundation for South Africa's large-scale commercial farming sector was laid by government policy intervention between 1910 and 1980. This was done by legislation to first segregate white and black farmers and then to facilitate 'orderly marketing'. This was followed by instituting interventions and direct subsidies that decreased the white farmers' dependence on black labour and protected them from overseas competition (Vink & Kirsten, 2000). White commercial farmers still received financial support and subsidies to the value of R3 912 billion during the 1980s and early 1990s. This was used primarily to purchase land, implements and livestock; for debt consolidation; to improve infrastructure; for emergency draught schemes and among other things to convert marginal land (Kirsten, Edwards & Vink, 2007). The Land Bank Act of 1912, Land Act of 1913 and 1936, the Co-operative Societies Act of 1922 and 1939, the Native Administration Act of

1927 and the Marketing Act of 1937 laid the foundation for the almost total segregation of agriculture and indeed for a comprehensive system of support measures to white farmers (Genis, 2012).

After South Africa's first democratic elections in 1994 followed by the deregulation of the agricultural marketing in 1996 this privileged position passed, transforming the agricultural sector into one that was open and sensitive to world market events (Genis, 2012). The removal of policies along with the restructuring of the commercial farming sector produced 'winners and losers', while the removal of government support produced a 'uniquely hostile' environment for new entrants. Distorted land ownership patterns have created Centuries of dispossession, now land reform is the focus of government policy. This will redress past injustices and transform ownership patterns. In line with Section 25 of the Constitution, land policy makes provision for programs of land redistribution, land restitution and tenure reform (Genis, 2012).

Land redistribution whereby the state acquired agricultural land for handing over to citizens who historically had no or little access to land. Land restitution aimed at equitable restoration of property to communities or persons who were dispossessed of their land after the Native Land Act of 1913. Tenure reform intended to provide communal land residents, farm workers, former farm workers, sharecroppers, as well as labour tenants with secure tenancy as they occupy other people`s land with no secure rights.

In the globalised economy, agriculture has become a commercial activity and agricultural business remains an integral part of business life for developing countries like South Africa. Therefore, technological up-grade of agriculture-based enterprises has become imperative (Meena, Prasad & Singh, 2009). In South Africa, the Department of Land Reform and Rural Development made it a priority to recapitalise as well as provide development support to land reform beneficiaries in rural communities to improve their capacity for economic agriculture that is sustainable. In most of the developing countries, including South Africa, the majority of the rural farmers have small landholdings, limited resources and

excess labour. In 2006 alone, the estimated population of farmers in developing countries was estimated to be 1.32 billion (FAOSTAT, 2006).

Even though the agricultural sector now accounts for less than three percent of the total gross domestic product (GDP) in South Africa, it is still, directly or indirectly, contributing significantly to the overall economy. Agro-processing is one such example, where turning primary agricultural products into processed commodities for markets has the potential to provide entrepreneurs in this sector with entrepreneurial opportunities and good financial returns. The potential of agro-processing is thought to be huge. It has been found to reduce wastage, enhance food security and improve livelihoods for low-income groups (Meena, et al., 2009). In sub-Saharan Africa, for instance, it is estimated that 60 percent of the labour force is reliant on small-scale food processing (Practical Action, n.d.).

Practical Action (n.d.) further posit that entrepreneurs in this field, face many challenges, especially with the uncertainty that exists over access to finance, support, information and the availability of stable markets. One of the biggest challenges currently facing South Africa is the development and improvement of its knowledge and skills base, particularly among previously disadvantaged and marginalised sectors of the population (Venter, Urban & Rwigema, 2010).

What made this study interesting was the fact that black farmers in South Africa are not only competing against established and entrenched competition, but against an inaccessible global market. Furthermore, in the 21st century, society has been changing and developing at an increasing rate; like other business sectors, farm-based companies must adapt to the vagaries of the market, changing consumer habits, enhanced environmental regulations, new requirements for product quality, supply chain management, food safety and sustainability (Lans, 2010).

Lans (2010) further argues that this kind of change has opened the door for experimentation with alternative farming and growing methods, for example, organic farming, landscape conservation, rural tourism, care farming and innovation in business processes and distribution such as introducing tracking and

tracing systems, value-added logistics and certification. The described developments mark a shift, in Markman's (2007) terms, from a strong, highly regulated situation towards a weak situation in which entrepreneurial competence is needed as a way to confront these new challenges (Hulsink, 2005; Markman 2007). It is no wonder, therefore, that black farmers wanting to establish agro-based businesses must comprehend all the processes and systems to compete and succeed in the 21st century.

2.3 What agro-entrepreneurship entails

The increasing importance of entrepreneurship to agricultural producers cannot be understated. It is imperative to discuss the evolving state of entrepreneurship in relation to literature with a focus on the skills that farmers require such as; infrastructure utilisation and knowledge, ICT, production knowledge, enterprise management, financial knowledge, marketing, and attitude to the agricultural business. Having well-developed skills in the aforementioned areas provides opportunities that arguably enhance the sector's ability to focus on agricultural practices that are more innovative.

Varying suggestions of what an entrepreneur is have been put forward in the literature. Gray (2002) defines entrepreneurs as "individuals who manage a business with the intention of expanding that business and with the leadership and managerial capabilities for achieving their goals" (p. 64). In the Commission's Green Paper (European Union, 2003), entrepreneurship is defined as the mindset of an individual and the process they go through to create and develop economic activity with a unique mix of creativity and/or innovation, efficient management and an appetite for risk within a new or existing organisation. Corporate entrepreneurship (Intrapreneurship), according to Hashemi, Nadi and Rezvanfar (2012), is an incremental and developmental process of organisational renewal through innovation initiatives from personnel.

Entrepreneurs are however defined as "the personalised drive and capability to commercialise (bring to market realisation) a product, service, process, or business idea" (Knudson, Wysocki, Champagne & Peterson 2004, p. 1331).

According to Harris (2002), entrepreneurship comprises decisions and the direct consequences of these decisions; it is management with results directly associated with the manager. Furthermore, entrepreneurship is evidenced by the farmer's advantages and disadvantages, rights and responsibilities, and returns and hazards in the business that he operates This, with any subtraction of rights, benefits or rewards, represents a diminution in entrepreneurship, while additions to responsibilities, burdens or risks represent a weakening of his position (Harris, 2002).

Another school of thought is presented by Knudson et al. (2004) who believes that entrepreneurs are born and not made, as he observed that they commonly share certain personality characteristics such as "restlessness, independence, a tendency to be a loner and extreme self-confidence" (Knudson et al., 2004, p. 1332). Other researchers (Krueger & Brazael, 1994; Naffziger, Hornsby & Kurtado, 1994) refute this conclusion and take on a more dynamic approach in which "personality traits and subsequent behaviour are shaped by various factors such as the interaction between personality characteristics, perceptions, values, beliefs, background and environment" (Knudson et al., 2004, p. 1332). Entrepreneurial environments change over time and as such, entrepreneurship can be viewed in terms of the proportion of all possible choices that are open to the entrepreneur.

Knudson et al. (2004) suggest that the intention to initiate and continue entrepreneurial behaviour is influenced by the interaction of individual characteristics, individual environment, business environment, an individual's personal goal setting and the existence of a viable business idea. By conflating these factors, several comparisons are then made between perceptions of a probable outcome, their intended goals, intended behaviour, and actual outcomes. They are of the belief that many individuals are born with 'entrepreneurial DNA' in that they exhibit a predisposition to entrepreneurship. Knudson et al. (2004) are of the view that many entrepreneurs are born out of an event and that this event takes many forms. For others, this entrepreneurial spirit is unleashed by way of training and education. To succeed at being an

entrepreneur, whatever the entrepreneurial disposition, most individuals need to be equipped with the proper tools to execute entrepreneurial activity (Knudson et al., 2004). Entrepreneurial behaviour can be defined as “a set of activities and practices by which personnel at multiple levels autonomously generate and use innovative resource combinations to identify and pursue opportunities” (Hashemi et al., 2012, p. 576).

Being an entrepreneur of necessity or an opportunity-seeking entrepreneur are two distinct concepts. In very general terms, an individual who steps in to self-employment voluntarily is known as an opportunity entrepreneur, while an individual who started self-employment as a necessity (meeting an unavoidable need) is known as a necessity entrepreneur. The main difference between the two, hinges on the entrepreneurs motivation to start the undertaking (Block & Sandner, 2006).

Earlier studies by Montanari, Domicone, Oldenkamp and Palich (1990) found a strong correlation between entrepreneurial predisposition or propensity, and firm start-up decisions (Knudson et al., 2004). However, Hisrich, Peters and Shepherd (2008, cited in Knudson et al., 2004) provide other views. First, entrepreneurs do not only start their own ventures, second they also work for businesses run by other entrepreneurs or third, they become entrepreneurial in large organisations. This dispels the rule that an entrepreneur has to start a business and create new and innovative products; entrepreneurs operate on three levels.

2.4 Entrepreneurial skills critical to South African agribusinesses

The most important feature of farming is entrepreneurship and this will be increasingly so as time goes on (McElwee, 2005). Which factors account for the success of entrepreneurial activities among black farmers in South Africa is still being debated. Several studies describe entrepreneurial activity according to ethnicity/racial classification (Foxcroft, Wood, Kew, Herrington, & Segal, 2002; Nesdale & Pinter, 2000; McGrath, MacMillan & Scheinberg, 1992). Given the

agreement and understanding of the essence of entrepreneurship, and the confidence to teach business people to be entrepreneurial, the next step is to identify opportunities and obtainable objectives through relevant education and skills. The process of entrepreneurship includes behaviours, skills and attributes belonging to a person in entrepreneurial education (Gibb, 1993). In accordance, Hisrich, Peters and Shepherd (2008) also explained the need for business management skills to become entrepreneurs. This will contribute towards further studies into the focused area of economic success, which is heavily influenced by entrepreneurial abilities and skill.

According to research carried out by the global entrepreneurship monitor (GEM) (Turton & Herrington, 2012) a low level of overall education and training is still the biggest challenge facing South Africa. As such, a critical performance area must be to improve the overall level of education and training whilst promoting the notion of entrepreneurship (Nicolaides, 2011). The development of agro-entrepreneurship requires special skills such as the knowledge of agriculture and the global agriculture markets, among others. Although education alone is unable to prepare entrepreneurs for success, it greatly enhances their prospect of success. The literature on entrepreneurship emphasises that people with a higher level of education have a higher propensity to be self-employed (Preisendorfer, Bitz & Bezuidenhout, 2012; Storey, 1994). Earlier studies on the human capital theory suggests that the higher the education level, and the more closely matched with the requirements of entrepreneurship the type of education is, the more successful the venture will be (Becker, 1964; Block & Sandner, 2006; Schultz, 1961).

The theory of absorptive capacity (Cohen & Levinthal, 1990) further suggests that the greater the ability to recognise the value of external information and use it commercially, the more success an entrepreneur will experience. Education, in this case, should have a positive impact on the success of the undertaking to the extent that this ability is correlated with education (Block & Sandner, 2006).

According to Preisendorfer et al. (2012), the need to enhance the low level of formal education for the black population is now a widely accepted goal in South

African politics. This will address, among other socio-economic problems, the impact that apartheid education had on its people. Apartheid education not only damaged people's confidence and self-esteem but also deliberately inculcated a kind of passivity and learning helplessness, which is inimical to the drive and initiative required by successful entrepreneurs (Western Cape Youth Commission, 2008). The report also states that apart from vast numbers of people, particularly blacks, missing the opportunity for decent education, people's general ability to interact with the mainstream economy was severely affected. Education pre-1994 was authoritarian and inflexible. Critical thinking and enquiry were not encouraged and no entrepreneurial education was evident (Western Cape Youth Commission, 2008).

Preisendorfer et al., (2012) placed emphasis on the general improvement of educational opportunities for black South Africans citing that the most serious obstacle to an increased participation of blacks in entrepreneurial activities is the skills component. They discount the historical apartheid explanation for the lack of black entrepreneurship in South Africa, stating that it merely underpins other explanations, the main one being its contribution to and responsibility for unfavourable preconditions for blacks to start their own businesses, namely the lack of financial, human, cultural and social capital.

Learning is defined as a regular shift in behaviours or knowledge informed by prior action (Argote, 1999; Cyert & March, 1963; Levitt & March, 1988; Miner, Bassoff & Moorman, 2001, cited in Bingham & Davis, 2012). It is suggested that organisational learning is a central means by which enterprises generate innovations, adapt to environments, take advantage of emergent market opportunities and create competitive advantage (Argote, 1999, cited in Bingham & Davis 2012). Studies have shown that organisational learning takes place to diversify into new countries and product markets, to capture scale and scope economies, to expand work through acquisitions and alliances, and to create corporate value. While other research reveals that firms learn in order to disseminate knowledge, augment throughput, reduce defects, and improve pricing and productivity (Bingham & Davis, 2012).

Included in the noticeably different learning processes that organisations use are trial and error learning, vicarious learning, experimental learning and improvisational learning (Bingham & Davis, 2012). Furthermore leaning can be direct or indirect. Direct learning occurs where an enterprise learns from its own experience (Schwab, 2007) such as in trial and error learning – the process by which enterprise executives undertake a course of action, the consequences of which lead to change in the enterprise's action and knowledge base. Hence, in response to prior performance outcomes, organisations change their subsequent behaviour (Bingham & Davis, 2012). Experimental learning also constitutes direct learning and takes place in a controlled situation that organisations use to test casual propositions and create new knowledge (Cook & Campbell, 1979). It is argued that new knowledge of relations and insight are gained and ad hoc reflection on outcomes is high (Miner et al., 2001).

Using improvisation, learning occurs in real time in that design and action come together to solve emergent problems while taking advantage of whatever opportunities may arise. Bingham and Davis (2012) suggest that a likely consequence of this feature sets improvisational learning apart from experimental and trial and error learning in that solving unexpected problems during improvisation results in knowledge peculiar to a particular time or place. This is in contrast to deliberate formations of contrasting situations during experimentation. Improvisational learning is also noticeably different in that consequences of past actions are not waited upon. Rather, changes in action or cognition are made 'on the fly' as planning and doing take place simultaneously. In trial and error learning, prior experience plays a vital role in changes to action or cognition as learning takes place after the consequences of past action. As such improvisational learning may represent the first step in longer-term trial and error learning as firms often retain and repeat successful activities found out after an improvised outcome (Miner et al., 2001, cited in Bingham & Davis, 2012).

Indirect learning is learning from the experience of others (Ingram, 2002, cited in Bingham & Davis, 2012) also known as vicarious learning which occurs as firms observe actions by other enterprises and then change their own behaviour or

beliefs as a consequence. This frequently results in the imitation of seemingly successful practices. Enterprises benefit from accumulated knowledge while avoiding the expense of accumulated experience. As enterprises may lack sufficient information for learning from their own experience, they thus rely on others' experiences to cover their deficit in understanding. Other research suggests that this can only hold for mature and experienced enterprises as new and inexperienced ones lack the 'absorptive capacity' to learn from others, as they are unable to internalise and leverage the knowledge gained (Bingham & Davis, 2012).

What is not known is whether enterprises use these learning processes together over time, in ordered ways, and if it is at all relevant despite it being known how each of these processes is used individually. Baum and Dahlin (2007, cited in Bingham & Davis, 2012) established that both direct and indirect learning occur concurrently in organisations or even partially in view of interactions (Chuang & Baum, 2003; Shaver, Mitchell & Yeung, 1997, cited in Bingham & Davis, 2012).

Gibb (1993), as well as Kuratko and Hodgetts (2001), differentiate three dimensions of skills, i.e. technical skills, business management skills and personal entrepreneurial skills which is summarised in the model shown in Figure 2. According to the model, technical skills cover aspects such as written communication, oral communication, environmental change, technological development, work organisational skills, situational leadership, interpersonal relationships, teamwork, mechanisation and geological skills. Business management skills encompass goal setting, work planning, decision-making, financial management, accountability, organisational management, supervision, negotiation skills, venture creation, business development, and marketing management. Personal or entrepreneurial skills touch on issues of and abilities in self-development, self-discipline, risk taking, innovativeness, change orientation, work persistence and leadership.

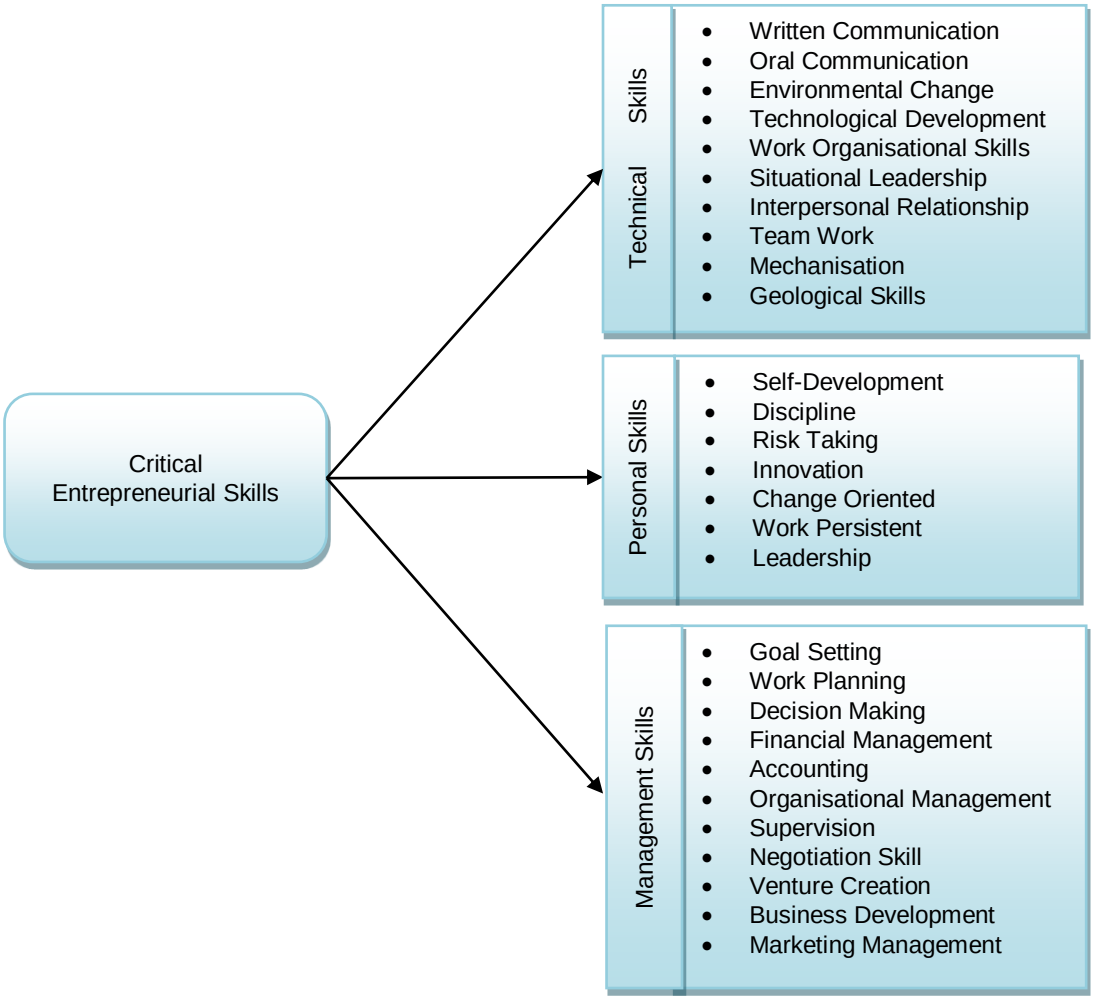

Figure 2: Three dimensions of critical entrepreneurial skills

(Gibb, 1993; Kuratko & Hodgetts, 2001)

Preisendorfer et al. (2012) stated that "the main problems of black South Africans are: a low level of self-confidence and risk propensity, a culture of dependency and collectivism, missing strong and weak ties to the 'business world' and a shortage of entrepreneurial role models" (p. 15).

The migrant labour system, colonisation, urbanisation and globalisation assisted in exacerbating the disruption of black family units thus weakening them, as people moved away from previously closed family units. This affected their levels of self-esteem, confidence, and ability to deal with hardships, among other factors (Western Cape Youth Commission, 2008). Whether completely or in part, it can be argued that the aforementioned phenomena can be traced back to apartheid –

the Afrikaans word for ‘segregation’ (Laverty, 2007) – in one way or another. Preisendorfer et al. (2012) state that psychological traits, the mindset, role models, social networks and other elements of social capital, such as trust, are difficult to change, and have become ingrained in people and cultural settings. These are not objects of straightforward political manipulation, yet it can be argued that largely, apartheid did exactly that, given the length of time it was in place, the resources that were available to keep it in place and the political will of its enforcers.

> “Because of South Africa’s colonial and apartheid history there is a high degree of correlation between race, location, education, self-awareness, and gender elements of disadvantage. Earnings regression show – even after controlling for education, age and location – race was by far the most important predictor of earnings, which is related in part to differences in the quality of education and the legacy of discriminatory access to jobs in the past” (Urban, 2006, p. 175).

The GEM report was launched to study entrepreneurship with the aim of fully understanding the factors that enhance or inhibit it so that countries are in little doubt about what policies are the most enabling (Bloom, 2009). The GEM report 2001 (Driver, Wood, Segal, & Herrington, 2001) shows that problems with education and training (skills development) are a major inhibitor of entrepreneurial growth in the South African economy. The GEM Report 2002 (Foxcroft, et al., 2002) states from findings that a strong positive relationship exists between the level of education of the entrepreneur and the level of business success. According to Block and Sandner (2006), affirmation is provided by the human capital theory that a higher knowledge stock provides individuals with a higher cognitive ability, which leads to more productive and efficient activity. As such those with more knowledge or with a higher quality stock of knowledge are better at perceiving and exploiting entrepreneurial opportunities than are entrepreneurs with less human capital, which includes experience and practical learning. Other GEM reports highlight the intense range of problems in education and training,

which are the main inhibitors of entrepreneurial growth in South Africa, notably within the age range of 18 to 34 year olds.

> "The legacy of apartheid and the inferior quality of education given to black people in the past have meant that they have lost the opportunity to acquire skills that are required to drive entrepreneurial activities. Critical thinking skills were not encouraged and most entrepreneurial education was non-existent for black people" (Nicolaides, 2011, p. 1045).

According to Urban (2006), culture and social norms are stressed as the major strength of entrepreneurial orientation and appeared to be the differentiating factor for high levels of entrepreneurial activity. A study in Malaysia was carried out to identify and determine the entrepreneurial work culture, which in turn could be used to enhance and re-inculcate development and entrepreneurship among farmers. A policy was put in place to turn agriculture into a viable business by developing new entrepreneurs, strengthening small and medium scale entrepreneurs, and promoting agricultural exporters. This was done in line with the objective for the agricultural sector to be revitalised and to emerge as the third pillar of economic growth in the Ninth Malaysian Plan (NMP) for 2005 to 2009, by introducing a high level of professionalism, and the participation of entrepreneurial farmers and a skilled workforce.

This NMP program was to be undertaken with greater orientation towards more modern and commercial scale of agricultural produce, producing higher value added primary and agro-based products and a wider application of ICT. In a bid to realise these plans quickly, emphasis was placed on the use of biotechnology, better marketing approaches, and laying emphasis on products standards and farm accreditation. According to Mohamed, Rezai, Apriyanti, Abdullah, & Tamam (2011) the Farmers' Organisation Authority (FOA), an agro-based industry, was established to provide technical and motivational training to members involved in farming to become agro-entrepreneurs.

To highlight the importance of agriculture as an economic growth pillar, the Malaysian government provides special training, credit facilities and technical assistance as well as a vast amount of money towards the effort. The importance placed on agriculture as one of the new engines of growth for Malaysia's economy can been seen through the sheer amount and variety of supporting mechanisms and policies that exist for agro-entrepreneurs. The budget for the NMP entrepreneurial development was RM 511.9 million (USD 155.8 million) with 9 390 new agro-entrepreneurs expected to be created (Mohamed, Rezai, Aprivanti, 2011).

Despite the above, the presence or creation of agro-entrepreneurs appears to be lagging behind that of those in the manufacturing and services sectors due to, among other factors, the lack of formal education (Mohamed, Rezai, Aprivanti, 2011). It is posited by the authors that the key lies in the work culture of these farmers and could be used to enhance and re-inculcate the development of entrepreneurship among them. They state that entrepreneurial work culture comprises personal values, managerial skills, experiences and behaviours. These typify the entrepreneur in terms of a spirit of initiative, propensity for risk, capacity for innovation and ability to manage a firm in any given economic environment

Previous studies on entrepreneurship culture reveal that entrepreneurial skills are important because this skill implies the ability to innovate, motivate, be opportunistic, bear risk and pursue personality development. It also implies being active socially within society; it is a life-long learning process. Urban (2006) suggests that cultural traits influence entrepreneurial activity in society and explains that the difference in entrepreneurial rates among different ethnic groups is significant, and that this may occur despite relatively modest differences between their respective economic and institutional characteristics. He gives the example of how in the USA, African Americans display the highest entrepreneurial activity, followed by Hispanic Americans, then by Asian Americans, and the lowest by white Americans.

Covin and Slevin (1991), found that entrepreneurship initiation has its foundations in person and intuition, as well as in society and culture. Carter and Jones-Evans

(2006) indicate a significant relationship between entrepreneurship and cultural specificity. Urban (2006) states that entrepreneurship leads to more entrepreneurship, and as such the degree of entrepreneurial activities is the outcome of a dynamic process in which social habits (entrepreneurial memory) are as important as legal and economic factors. He notes that entrepreneurial history of a community is indeed important. “The imagery of African agriculture is the history of black dispossession and black detachment from the land” (Sherry, 2012, p. 38).

Changes in work culture are important to improve productivity or the organisation as well as that of agriculture (Cheng, Chan & Mahmood, 2009). Pope (2000) posits that work culture is the main indicator to be taken into consideration to modernise the agricultural sector. The changes are in information sharing and knowledge development among workers. The variables that contribute to the success of small businesses are not unanimously agreed upon (Mohamed, Rezai, Aprivanti, 2011). A varied set of variables have been studied, which include psychological and personality traits, managerial skills and training, and the external environment.

A study conducted among Kenyans found that owner-manager‘s previous experience; an understanding of customer needs; access to capital; and hard work are viewed as important success variables. In another study the availability of capital, possession of business skill and previous experience and the support of family members are essential for business success (Pratt, 2001).

A study in Canada and the US found that the following factors contribute to successful small businesses:

- *Entrepreneurial values*: intuition, extroversion, attitude toward risk, flexibility and sense of independence;
- *Managerial skills*: having a niche strategy and effective budget system, experience, education and a simple organisational structure; and
- *Environmental values*: attractive interest rates, taxes and governmental assistance (Ibrahim & Goodwin, 1986).

- More recently, in a study of small business owners in Pakistan, three factors were rated as important to business success namely: hard work, good customer service and good product quality (Coy, Shipley, Omer & Khan, 2007). Notably government programs and training programs were not considered important. A similar finding was shared in Malaysia, where informal entrepreneurship education is unable to provide the entrepreneurship skills acquisition as expected among Malaysian farmers. As such, it was recommended that extension and training courses should focus on the fundamental changes in farmers' attitudes towards farming (Mohammed, Rezai & Shamsudin, 2011).
- In Turkey, a study on entrepreneurs found that business management training and financing are significantly related to SME owners' expansion plans. It was noted that they required market information, technical assistance, information resources and training in finance and marketing to gather the resources needed for expansion. As such, formal education in business or entrepreneurship is viewed as an influencing factor that affects entrepreneurial growth in developing economies (Mohamed, Rezai & Aprivanti, 2011).
- For the purpose of this study, the dependent and independent variable principle of entrepreneurship and perceived success were used to argue that there is a dedicated set of skills that agricultural entrepreneurs are required to possess in order to be successful. The analysis of conventional thinking around entrepreneurship and Lotz and van der Merwe's (2013) hypothesis helped to underpin a theory that it is not only entrepreneurial flair but also a dedicated set of skills that are imperative for successful agribusiness, especially for emerging farmers, a level into which most black farmers fall.
- This study therefore suggested that among the different conceptualisations of entrepreneurial orientation and characteristics, those that are regarded as generally accepted essential characteristics of entrepreneurs, regardless of the industry they operate under, were therefore concluded to be:

- Autonomy;
- Innovativeness;
- Risk-taking;
- Pro-activeness; and
- Competitive aggressiveness (Covin & Slevin, 1989; Covin, Green & Slevin, 2006; Frank, Kessler & Fink, 2010; Gurbuz & Aykon, 2009; Lumpkin & Dess, 1996; Morris et al, 2008; Richard, Wu & Chadwick, 2009, Wiklund & Shepherd, 2005).

Ramme (2000), in his book, depicts entrepreneurs' characteristics as

- Being creative and innovative;
- Having the ability to take risk;
- Dealing with uncertainty;
- Creating wealth; and
- Striving for independence.

All of which corroborate those depicted by Lotz and van der Merwe (2013) in Figure 3.

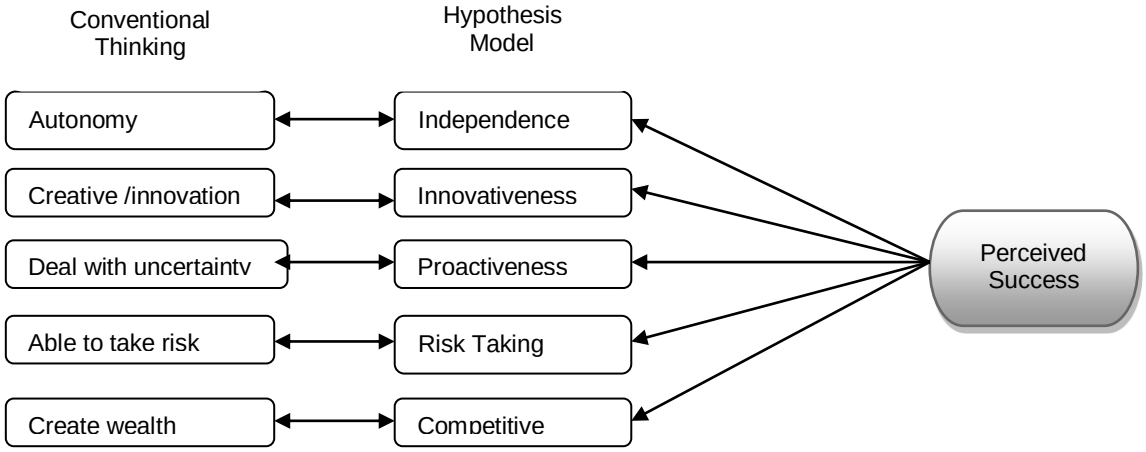

Figure 3: Entrepreneurial hypothesis model

(Lotz & van der Merwe, 2013)

There is general agreement in management literature suggesting that performance is a multi-dimensional concept (Lumpkin & Dess, 1996; Madsen, 2007; Rauch, Wiklund, Lumpkin & Frese, 2009) and that multiple performance measures must be used rather than a single dimension, as is here suggested. There is an unfortunate downside as there is no consensus on the appropriate measures of performance (Wiklund, 1999) and various literature supports a large variety of performance indicators. This approach is also supported by Rauch et al. (2009), who state that common distinction should be made between financial and non-financial performance measures.

2.5 Innovation

Agricultural entrepreneurs are oriented to a specific industry and sector, which implies, among other things that they should be committed to innovation and must be at the heart of their strategic management process (Kuratko & Audretsch, 2009). In this regard, Collis and Montgomery (2005) argue that a consistent flow of expenditure needs to be directed towards innovation in order to ensure acceptable long-term levels of strategic intellectual stock that can ensure a sustainable competitive advantage to successful agribusiness. Terminating innovation as strategic input and effort during bad times may have the consequence of promising initiatives within agribusiness being cut off (Wolpert, 2002).

Knudson et al.(2004) argue in favour of public support for fostering innovation and entrepreneurial activity in the agricultural sector in order to see a shift in focus from a traditional commodity-orientated activity to one that is customer-orientated.

According to Schumpeter (2000, cited in Knudson et al., 2004), innovation is defined as:

> “The introduction of a new good or new quality of a good, the introduction of a new method of production, the opening of a new market, the acquisition of a new source of raw material or the carrying out of an alteration of an existing industry structure” (p. 1332).

He posited that innovation and the entrepreneur are central to economic growth and development and that innovation introduced by the entrepreneur is a source of creative disequilibrium, which forces less efficient firms out of business as firms adopt the innovation until a new equilibrium is reached (Schumpeter, 1961). This is one major school of thought in economics with respect to innovation and entrepreneurship.

Under the Austrian school of thought, theorists emphasise the entrepreneur's ability to take advantage of imperfections in information to make innovations (Knudson et al., 2004). This is explained by the use of superior information by the entrepreneur to introduce an innovation that earns profits. Hence, it increases the amount of knowledge in the market, thus moving it towards a new equilibrium.

According to Knudson et al. (2004), in theory, entrepreneurship and innovation interact to form a grid with four different possibilities namely:

[1] *Master entrepreneurs* are skilled managers and risk bearers but not innovators. They see market gaps and fill them with existing business models, products and services such as privately held grain merchandising firms and food manufacturers. Entrepreneurial in approach they lack innovation as they follow corporate guidelines and make the most out of given resources.

[2] *Master innovators* are skilled innovators, but not entrepreneurs. Although they see market gaps, they are not driven to take new ideas to the market despite developing new business models, products and processes.

[3] *Innovative entrepreneurs* are skilled entrepreneurs; they are also innovators in that they portray primary entrepreneur traits first then secondary innovator traits. They look for new ways of doing things and are not content to use tried business models, products and processes. Driven to improve these products and processes they aim to carve out a niche in the market place.

[4] *Entrepreneurial innovators* are skilled innovators that are also entrepreneurs. They portray primary innovator and secondary entrepreneur traits. Seeking out change, they are driven to take risks that see their

innovation reach the market place. They fill market gaps with new business models, products and processes that they are willing to take personally to the market place (Knudson et al., 2004).

With caution, Knudson et al. (2004) adds “the existence of an effective entrepreneurial/innovation type or mix of types may be necessary in order for entrepreneurship and innovation to take shape in a particular situation, but it is not likely sufficient” (p. 1332). Individuals are not expected to be stuck in one type, as firms that are flexible enough are able to switch between types. Capabilities required in addition to necessary training depend on which of the types an individual [enterprise] falls into most naturally (Knudson et al., 2004). What type of strategies would black South African farmers, who fall into these segments, require to succeed? In what type of environment are they operating? Are there barriers confronting farmers in their environments? A barrier is defined as a political, economic, social, technical or personal phenomenon that poses a restriction, either temporarily or indefinitely, on the capacity of the farmer to develop the business, (McElwee, 2005). In addition, specific potential barriers to the development of the farm enterprise include:

- Economies of scale;
- Capital requirements of entry;
- Access to distribution channel;
- Position on the experience curve;
- Retaliation of existing businesses to new entrants in the market;
- Legislation and regulation;
- Poor management skills of farmers;
- Lack of entrepreneurial spirit;
- Limited access to business support; and
- Geography and proximity to markets.

Other barriers to growth of business put forward by McElwee (2005) can be found in the farmers themselves:

- Level of education;

- Readiness to cooperate;
- Poor and inconsistent advice;
- The use of a very small group of trusted advisors; and
- Lack of use of social networks for financial advice.

Entrepreneurial identity was explored in Finland by Vesala, Peura and McElwee (2007) and compared on-farm business diversifiers, conventional farmers, and non-farm rural entrepreneurs, using nine dimensions of entrepreneurial identity. The study revealed that two dimensions, namely economic utility and own independence, were equally important for all Finnish groups. Major findings about the group of business diversifiers suggest as a likely consequence that they have a strong entrepreneurial identity, see themselves as growth orientated, prone to taking risks, innovative and have faith in the success of their enterprise.

McElwee (2005) distinguishes the difference between running a small business and being an entrepreneur, positing that they are not the same thing. Being able to operate an organisation requires skills and abilities that are different from those of an entrepreneur, suggesting that managerial skills are required for a successful long-term operation of a business while being an entrepreneur requires innovation skills. McElwee (2005) supports this view for the following reasons:

- The methods used to analyse business entrepreneurs in other sectors can be applied to farmers;
- Farmers have traditionally been entrepreneurial ;
- Farmers are primarily business owner managers and that farms can be characterised as businesses; and
- Parallels can be drawn between portfolio entrepreneurship in non-farm (business) sectors and pluriactivity, suggesting that farmers have multiple business interests, which foster employment creation and rural economic development.

The importance of innovation, with regard to character of entrepreneurs and entrepreneurship, was emphasised by Lumpkin, Dess and Ramme (1996). The authors propose that innovation is the single dimension that has to be employed

by all entrepreneurial business, including agri-business run by black farmers. It can therefore be argued that, even in the presence of the other dimensions, if innovation is not employed there is no business level entrepreneurship (Gurbuz & Aykol, 2009). Even in agri-business, innovativeness reflects a business tendency to encourage, engage in, and support new ideas, novelty, experimentation and creative process that may result in new products, services or processes (McFadzean, O'Loughlin & Shaw, 2005). Mechanisation in agri-business is definitely an innovative result. Product and services innovation presents a change in the product or service range that a business takes to the market and has proved to be a potentially significant source of strategic advantage (Cooper, 1998). An innovative example in agri-business was a farmer by the name of Vivian Beukes who introduced his 'BioBoost Solution' into livestock feed. This innovation is proving to be revolutionary in intensifying the red colour of meat, and reducing the odour in pork. From a market point of view these qualities are highly advantageous when meat is displayed in shelves and boost sales dramatically (BioBoost Solutions, n.d.).

Product or services innovation is most clearly understood from innovation and consists of disruptive, radical and incremental innovation (Schilling, 2005). This process of innovation can also apply to systems development. Most process innovations result in incremental improvement in key performance parameters, for example cost reduction, quality enhancement and time reduction. Disruptive process innovation are radical shifts to new process routes for the business and perhaps, for the industry (Bessant, 2003). The relationship between innovativeness and agri-business performance presents the greatest degree of consensus (Casillas & Morena, 2010), with most studies finding a positive relationship. Rauch et al. (2009), Morena and Casillas (2008), Subramanian and Nilakanta (1996), and Kleinschmidt and Cooper (1991) all found a positive relationship between innovativeness and business performance and growth. As a result, there is a growing recognition that innovation has become the only sustainable source of growth, competitive advantage, and new wealth (Dreyer, 2006). According to Wiklund and Shepherd (2003), innovative business can

generate extraordinary performance and has been described as the engine of economic growth

2.6 Autonomy

Many businesses have engaged in actions such as flattery hierarchies and delegating authority to operating units. While entrepreneurs or founders of business think that those moves are intended to foster autonomy, the process of business autonomy requires much more than a change in design, it takes a lot of courage and willingness on the part of entrepreneurs. Business must promote autonomy and individuals must be encouraged to exercise it. (Mumford, Scott, Gaddis & Stange, 2002). Autonomy constitutes one of the bases for innovation and entrepreneurial behaviour (Casillas & Morena, 2010) and business that relies on entrepreneurial orientation to create new value and growth must encourage entrepreneurial behaviour by allowing employees to act and think more independently (Gurbuz & Aykol, 2009). Autonomy is therefore essential to the process of leveraging a business' existing strengths, identifying opportunities and encouraging the development of new ventures (Lassen, Gertsen & Riis, 2006). It is not farfetched that prior research (Brock, 2003; Rauch et al., 2009) concurs with a view that autonomy encourages innovation, promotes the launching of new ventures and increases the competitiveness and effectiveness of the business.

2.7 Risk taking

Risk taking, growth orientation and innovativeness are prominent in economic theories of entrepreneurship, suggesting an expectation that a 'proper' entrepreneur is engaged in active dynamic and competitive pursuit of opportunity and economic growth (McElwee, 2005). De Lauwere, Verhaar and Drost (2006) is of the view that entrepreneurs have always played an important role in economic practice, as they are held responsible for economic development by introducing and implementing innovative ideas (product, process, market and organisational innovation). Hashemi et al. (2012) acknowledge the importance of entrepreneurship to economic and social development, while Urban (2007) notes

that entrepreneurs act as catalysts of economic activity. Whether this can be said about agricultural entrepreneurs is debatable. Policy makers and scholars are thus turning to entrepreneurship as a solution to organisational performance and economic prosperity (Urban, 2007).

Agricultural entrepreneurs should operate independently and deliver high quality products. These should be produced in a manner that respects social values and these entrepreneurs should receive social appreciation in return (de Lauwere et al., 2006). Despite the dependence of economic results of agricultural enterprises on internal and external conditions, the role of the agricultural entrepreneur as a risk taker is critical (de Lauwere et al., 2006).

Not too differently, Caliyurt (2001) defines innovation as being positively related to business performance in small firms, whether demonstrated by the introduction of new products, services and processes or by the re-invention of existing products and processes. A competitive edge in innovation is extended to companies that are able to harness all of their internal resources and that extend sources of support (Caliyurt, 2001). It therefore stands to reason that agricultural entrepreneurs, compared with other types of entrepreneurs in other industries and sectors of economy, cannot be indifferent about innovation or taking risk .

Dewett (2004) defines the term ‘risk taking’ as the extent to which there is uncertainty about whether potentially significant and/or disappointing outcomes of decision will be realised. In this regard, Mullins and Forlani (2005) characterised risk as either the potential to act too quickly on an unsubstantiated opportunity or the potential to wait too long before activity. Risk is inherent in the operations of any business and almost every decision taken by entrepreneurs involves risk (Von Stamm, 2008). Often, corporate entrepreneurial business that has an entrepreneurial orientation, like agri-business, is typified by risk-taking behaviour, such as incurring heavy debt or making large resource commitments in the interest of obtaining high returns by exploiting opportunities in the market place (Bhardwaj, Agrawal & Momyaya, 2007).

Another aspect of risk-taking is the assumption, which is often made, correctly so, that innovativeness and risk taking are directly correlated, and that being more innovative involves taking higher risks. According to Morris et al. (2008), this relationship is more complex. Risk is also high when business ignores new product/service opportunities and engages in little or no innovation. In this regard, Burns (2008) notes that while not innovating presents a minimal risk in the short-term, it does create a high risk in the long-term. In essence, businesses that do not innovate are faced with high risk of not perceiving market and technology shifts that are capitalised on by competitors. The converse to this theory is also true. To be successful in future, business will need to exploit an entrepreneurial orientation with the ability to rapidly sense, act and mobilise under high risky conditions (McGrath & MacMillan 2000). Given factors such as globalisation, deregulation, technology, social change and information technology that businesses are facing, it is important to cope with rapid and unexpected change, which has long been central to theory of entrepreneurship (Shane, Locke & Collins, 2003). The relationship between risk-taking and success of a business is not clear. Rauch et al. (2009) and Wiklund and Shepherd (2005) argue that while tried-and-true strategies may lead to performance, risky strategies may lead to performance variations since some projects fail while others succeed. 'The higher the risk, the higher the return' is a slogan widely used by investors and brokers in the financial market.

2.8 Proactiveness

According to Madsen (2007), proactiveness refers to a posture of anticipating and acting on future wants and needs in the market place, thereby creating a first-mover advantage. As a first-mover, business can control access to markets by dominating distribution channels, charging high prices and 'skimming' the market ahead of competitors (Wiklund & Shepherd, 2005). Furthermore, they must secure access to rare resources, gain new knowledge of key factors and issues, carve out a market share and be in a position that is easy to defend and costly for competitors/rivals to overtake. First-movers, on the other hand, may not always be successful due to the introduction of new products/services, which is essentially a

change factor from the market point of view. Therefore, careful analysis of the market environment and feasibility studies are needed for proactive strategy to lead to competitive advantage (Dess & Lumpkin, 2005).

Apart from innovativeness, Rauch et al. (2009) found that proactiveness is the other integrating dimension of entrepreneurial orientation that offers a more intense positive relationship with business performance. Casillas and Morena (2010) also found that proactive businesses reveal greater performance and growth.

2.9 Competitive aggressiveness

Competitive aggressiveness refers to an entrepreneurs' propensity to challenge its competitors, directly and intensely, (Lumpkin & Dess, 1996) in an attempt to improve position in the market place (Chang et al., 2007). It is important to note that within the context of entrepreneurial orientation and skills requirement, Competitive aggressiveness is a reaction to competitive trends and demands that already exist in the market place (Lumpkin & Dess, 2001). It therefore translates into a response to threats from competitors and rivals. Competitively aggressive entrepreneurs are characterised by responsiveness, which may take the form of head-to-head confrontation. This happens when a business enters a market that another competitor has identified (Lee & Sukoco, 2007). Responsiveness may also take the form of a business being reactive such as when business lowers prices in response to a competitive challenge. Furthermore, competitive aggressiveness reflects a willingness to be unconventional rather than relying on traditional methods of competing. This includes, among others adopting unconventional tactics to challenge a competitor's weakness and focusing on high value-added products (Lumpkin & Dess, 2001).

Competitive aggressiveness has generally not been intensely investigated. Lumpkin and Dess (2001) believe there are two reasons for this. First, similar to autonomy, competitive aggressiveness does not form part of the 'original' dimensions of entrepreneurial orientation, and second, prior theory and research have often treated proactiveness and competitiveness as if they were

interchangeable (Lumpkin & Dess, 2001). Competitive aggressive behaviour is less related to a strategy oriented to growth and since Casillas and Moreno (2010) argue that it is reactive behaviour to competitors or behaviour in defence of a market position. Consistent with their view, they found no relationship between competitiveness and growth.

2.10 Business strategies of diversification, specialisation and pluriactivity

In this section the importance of business strategies to farmers are considered. These strategies are farm diversification, pluriactivity, and specialisation. A study in England described farm diversification as a strategically planned systemic movement away from the core activities of the farm, in an effort to grow the business. This diversification is usually as a result of external pressures (McElwee, 2005). Diversification is one way for farmers to reduce the risk of being too dependent on one product to satisfy customer needs, to use spare resources, and to benefit from synergies from products, markets or technology (McElwee, 2005). The Dutch agricultural experience is characterised by improved quality and reduced prices, food safety and environment requirements. Because of this, entrepreneurs have experienced increased difficulty in obtaining their income solely from primary production. Examples of non-agricultural activities, which can be found in farming companies, include rural nature conservation, education house sales, recreation and tourism, and energy provision. The Dutch governments' discernment of diversification in farm entrepreneurship is that it should be stimulated due to the contribution to vitality of both farming sector and rural area. McElwee (2005) further suggests this is done to increase farmer's income and to develop the quality of the customer/producer relationship. In view of the above a likely consequence is that diversification is the normative strategy.

High specialisation though has been put forward as the most appropriate strategy to ensure business success and survival of the farm business. Research carried out in Finland on all Finnish farms, revealed that agriculture and forestry have traditionally been important income sources in the rural areas (McElwee, 2005).

Until the late 1980s, Finnish farms attained some degree of diversification in agriculture (dairy, pigs, poultry, etc.). Increasing specialisation however, occurred despite most farms being pluriactive in the sense that they have forestry activities as well. Adding that with the increase of specialisation, most farms typically have one of the most important lines of production, such as crop or dairy production, along with additional supporting services. He points out that earlier studies show that specialisation increased as farm sizes grew. The number of farms has steadily decreased, along with the number of people employed in agriculture. Productivity on the other hand has increased and the remaining farms are bigger. Notably, relatively large portions of Finnish farms are pluriactive (McElwee, 2005).

With regard to Finnish farmers, it is argued that neither diversification nor specialisation alone is the best solution for farmers, as they tend to be complementary to each other, using each other's products and services (McElwee, 2005). This appears to follow through the value chain. An initial position would be that there might be similar constraints and barriers placed on farmers who wish to embrace a specialisation strategy as there are for those who have engaged in a diversification strategy (McElwee, 2005)

The following observations are made in light of the aforementioned strategies: In line with the conclusions in other countries it appears that farms have diversified in those areas where customers and markets are geographically near. Diversification can be considered a strategy out of agriculture although pluriactive farms in the future will stay diversified due to the linkage between non-agricultural activities that are closely associated with agriculture. Although this is not fully understood, large groups of farms that have diversified will re-focus on agriculture.

Pluriactivity is considered a mechanism to attain growth through a portfolio of businesses, if individual firm growth is restricted for sectoral reasons (Carter, 1998). Farms are considered to be pluriactive when they have diversified their activities outside of agriculture (McElwee, 2005). Carter (1998) divides the Finnish proactive farm activities into three parts,

[1] Farm centred diversification activities;

[2] Additional business ownership, on and off the farm; and

[3] External businesses located on the farms.

There are unique barriers for small farmers that are rethinking their business strategy to take advantage of new opportunities. In much the same way there are barriers to diversification for small business (McElwee, 2005). Barriers to diversification for small business are listed: (DGIII of the European Commission, 1996).

- Uncertainties about appropriate business frameworks;
- Concerns over total costs, equipment and training;
- Security;
- Interoperability of systems; and
- Legal issues.

2.11 Successful/unsuccessful farming entrepreneurship

McElwee (2005) is of the view that over the years the definition of entrepreneurship in agriculture has changed. A good entrepreneur in the past was synonymous with being a good craftsman while striving for a high level of production and product quality, and the efficient use of inputs. A study by McElwee (2005) in South-East Finland suggests that the business of rural entrepreneurs active in food processing, wood processing and tourism aimed at exploring factors that influence start-up and success of rural enterprises. This view supports the stereotype that entrepreneurship could only be associated with craftsmanship.

A successful entrepreneur was discerned from one that is not successful by the reasons to start a business. These were subjective evaluations of both researchers' and entrepreneurs' based on the income derived from the business. Hashemi et al. (2012) suggest assessing the contribution of entrepreneurship to economic development by creating employment activities, innovation and creativity. It is by their very nature and characteristics that entrepreneurs are creators of wealth in any economy. It therefore suggests that high return on

investment is a key factor to be considered if they are to be successful. It is not surprising that other studies like Hashemi et al. (2012) found that successful entrepreneurs were motivated by market related factors such as demand, favourable location and recognition of a market niche, while unsuccessful entrepreneurs were motivated by income related factors such as unemployment, need for compensating income and factors relating to health. The main difference between the two groups was that the former appeared to benefit from favourable external circumstances related to product demand, while the latter appeared to have started the business because of external pressures. Empirical studies show that labour market experience, management experience and indeed previous entrepreneurial experience all impact strongly on entrepreneurial success (Gimeno, Folta, Cooper & Woo, 1997; Robinson & Sexton, 1994, cited in Block & Sandner, 2006).

Kirzner (1973) provides the best analysis of the role of the entrepreneur in the market process. Kirzner (1973) argues that market equilibrium is a theoretical abstraction that is reached when all buyers and sellers decisions are dovetailed. If however, it is assumed that there is a certain level of ignorance either based on lack of education or technology, as we have here with black agricultural entrepreneurs because of unjust historical past, a competitive process will be expected to transpire in which buyers and sellers continually revise their positions in search of greater returns. Opportunities for the above-normal profits exist because of the initial ignorance of market participants, but there are opportunities and profits, which are competed for. Kirzner (1973) postulates that market opportunities are not static, so that competing for the profit becomes a never-ending cycle.

Kirzner (1973), like Schumpeter (1961), emphasises that entrepreneurship is a function, so the entrepreneur is any individual who carries out this function of risk taking for high return on investment. Entrepreneurship essentially becomes the driver of the market process, for without it no progress is made towards the bridging or dovetailing of supply and demand.

With regard to farming entrepreneurs, five groups of farmers are hence distinguished: economical entrepreneurs, socially responsible entrepreneurs, traditional growers, new growers, and doubting entrepreneurs (Kirzner, 1973). Another study of farmers in Finland, by Kallio and Kola (1999), sought to determine factors that gave farmers competitive advantage and suggested the following characteristics of a successful farm and farmer:

- Profitable production linked to continuous follow-up of production, incomes and expenditures (good finance management);
- Constant development of cognitive and professional skills (education, skill development);
- Strong self-belief and readiness to work hard (commitment);
- Having goal-orientated operations (proper planning);
- Using up-to-date information relevant to the farmers' circumstances and needs;
- Favourable starting point for the enterprise – good condition of machinery, buildings, and land; appropriate proportion between pricing of the farm and investments in production; and
- Utilisation of corporation (team building/work).

Locus of control of reinforcement – belief in the ability to control events, problem solving abilities and social initiative – was shown by Schiebel (2005) to be the success factor that prosperous entrepreneurs have. In a study of weaknesses in entrepreneurship, seven critical success factors were under examination: management and strategic planning, ecosystem, staff, chain perspective craftsmanship, search and learned behaviour, and personal characteristics (McElwee, 2005).

2.12 Management of finances and entrepreneurship success

Financial know how/management is one of the vital tools required to execute entrepreneurial activity economically, efficiently and effectively. Caliyurt (2011) posits that financial management is indispensable for all companies and should

be done according to financial management science. Schoombee (2000) put forward the proposition that South Africa's well-developed and sophisticated formal financial sector positively contributes to the country's economic growth and development. Micro and very small enterprises that have received bank finance have experienced high failure rates because, among other reasons, they have applied for insufficient finance when starting up a business or submitted over-optimistic business plans. This affirms the importance of mentorship when preparing business plans for finance to ensure viability and sustainability for the proposed venture (Schoombee, 2000). Currently many farming entrepreneurs in South Africa get help from government development finance to meet their goals.

2.13 Redirection of credit

Credit redirection may be achieved in two ways, through legislation or through government-owned financial institutions. By implementing the first option, it is argued that this will not conform to the ideology of a liberalised market-oriented approach to policy to which South Africa lends itself. This may lead to financial market inefficiencies, which will in turn limit economic growth. With the second option, it is common in developing countries for banks to commit to directing a certain percentage of their loan portfolios to particular sectors of the economy, hence requiring a redesign of the existing creditworthiness assessment that is biased towards the traditional customer base (Schoombee, 2000).

The Promotion of Equality and Prevention of Unfair Discrimination Amendment Act 52 of 2002 Section 29 provides an illustrative list of unfair practices in certain sectors, which the Act serves to prevent. Subsection 9(b) of the Act includes imposing terms and conditions, or practices that perpetuate the consequences of past unfair discrimination or exclusion regarding access to financial resources.

This bill, in Schoombee's (2000) view, by default may indirectly redirect bank funds to black people as it prohibits discrimination in banks' lending to individuals who live in 'certain areas' on the premise that they will be bad debtors without carrying out the required creditworthiness assessment.

Nieuwenhuizen and Kroon (2003) suggest that banks consider providing finance to entrepreneurs who have little security but who comply with important criteria affecting their success. They observe that financiers mainly use the success factors that are directly related to functional management skills, planning of the enterprise; knowledge of competitors; being mainly market-focused; high quality work enjoying priority; client service; financial understanding; financial management knowledge; and skills with regard to the enterprise and the utilisation of experts. While those factors that relate to personal characteristics are only creativity and innovation; and commitment to the enterprise, without taking into account leadership. This is because financiers do not evaluate human relations nor a positive attitude and approach.

Nieuwenhuizen and Kroon's (2003) research identified three factors that financers must focus on namely

[1] *Ingenuity*: an indication of knowledge, skills, understanding and creativity.
[2] *Leadership*: whose basis is sound human relations with a positive attitude and approach.
[3] *Calculated risk-taking*: indicating the preparedness of entrepreneurs to take risks, evaluated by the help of experts to ensure objectivity and careful evaluation.

This led to the formulation of recommendations for criteria to evaluate (a broad framework) financial applications by small and medium enterprises (SMEs) by financiers under the following headings:

- Leadership;
- Knowledge, skills and the use of experts;
- Market orientation;
- Financial insight and management;
- Creativity and innovation; and
- Risk orientation.

This is a shift from the traditional requirements of the availability of collateral and the applicant's creditworthiness to those that comprise better qualitative criteria and can determine the potential of the owners of the enterprise, thus shifting the focus from the performance of the enterprise to that of the owner – the entrepreneur. This allows for more entrepreneurs with little security, but who comply with other important criteria affecting their success, access to much needed funding. "In this way, persons with sufficient success factors relating to the ownership of small enterprises but who do not necessarily measure up to traditional criteria of creditworthiness can obtain financing" (Nieuwenhuizen & Kroon, 2003, p. 129).

According to Schoombee (2000), Khula was a suitable policy option that did not live up to its expectation. In 1995, the South African government set up Khula Enterprise Finance Limited (Khula) for the purpose of directing credit to micro-entrepreneurs. As such, it would operate as a wholesaler by providing services to retail financial intermediaries (RFIs) that include established banks, new or established non-bank lenders, such as non-governmental organisations (NGOs) that serve small, medium and micro-entrepreneurs (SMMEs). An array of loan products were on offer including seed loans that were interest-free to new RFIs and could be used to finance the loan portfolio and the initial operating expenses. If certain pre-agreed performance targets were met these loans could be converted to grants (Schoombee, 2000).

The creation of specialised development banks, often government-owned, was the predominant manner in which credit, mainly at subsidised rates, was directed to agriculture, small industry and housing in developing economies during the 1950s and 1960s. These institutions were found to be ineffective and inefficient and were criticised during the 1970s, as the expected development had not materialised (Schoombee, 2000). The World Bank (Schoombee, 2000) at one time reported that more than half of a sample of 44 development financial institutions worldwide had arrears rates in excess of 50 percent. In addition, failure was recorded due to huge loan losses. Schoombee (2000) argues that because of the failure of these institutions a shift in the focus of development finance took

place to what is known today as the financial systems approach to development finance in which sustainable access to financial services for micro-entrepreneurs is ensured. In this way, formal financial institutions would supply their services on an ongoing basis if clients (including micro-entrepreneurs) are willing to pay prices that ensure profits.

In South Africa, the Strauss Commission (1996) found that the provision of rural financial services and local development finance institutions had a poor track record in service delivery and financial sustainability. However, Coetzee (1998) argued that rather than it being the state of ownership that led to the poor performance of (agricultural) development banks, it was the lack of autonomy.

Schoombee (2000) is of the view that if sound financial practice is not adhered to, the solution does not lie in making more money available as was experienced throughout the developing world during the 1960s and 1970s. He adds that the State, as such, failed in its role as the retailer of money despite its critical role in getting banks to serve micro-entrepreneurs. Worthy of note was a shift from directing subsidised credit micro-entrepreneurs to supporting financial institutions that served this market segment.

> "There has therefore been a noticeable shift from directing subsidised credit to micro-entrepreneurs through government-owned financial institutions, to supporting the development of commercially viable financial institutions that serve this market segment. This support (e.g. technical assistance) does not include funding for or lending to micro-enterprises at subsidised rates" (Schoombee, 2000, p. 755).

Klodziński (2001) argues that the most significant barriers to growth of the business are not in the lack of their physical resources but rather in the farmers themselves, sighting their level of education and readiness to co-operate as factors. His reasoning is that farmers do not systematically access business advice networks but rather have narrow social networks, which they rely on and consequently have limited access to opportunities. Lowe and Talbot (2000) support this contestation showing that farmers first consult their accountants and

bank managers rather than support groups. Furthermore, support is more likely than not to be sought from family and friend networks before public sector agencies. In addition, it found that poor and inconsistent advice prevents many farmers from trying to expand their business. Farmers do not use social networks for financial advice they rather use a very small network of trusted advisors.

Lowe and Talbot (2000) also found that the farmer's second most popular point of contact is government agencies and farmers' unions. In view of diversification, many small-scale farmers may not have the entrepreneurial skill to enable them to do so, while those who have the ability to employ innovative diversification strategies are limited to a small number of actions due to restrictive practices through tenancy agreements or interventionist policies of NGOs. In view of the above, an understanding of farmers' decision-making attitudes and perceptions over schemes run by the government along with their implementation would be valuable for policy development (Falconer, 2000).

Research indicates that some small farms have been owned or managed within the same family for generations and as such is part of a family tradition that goes back, for some, three generations. The owner/management role as a result hinders farmers from being entrepreneurial as they have been locked into a way of being, having enjoyed a secure pattern of work. It is posited that historically the motivators for farmers have been overtly financial, as owning a farm and bearing the full responsibility for the well-being of their own endeavour has been a major determinant of personal success. To add to this, a historical vacuum of strategic planning by the farmers compounds the pressures of the prevalent socio-economic factors. This relative safety had changed as now the primary motivator for many if not most farmers is one of business and personal survival (McElwee & Robson, 2005).

2.14 Gender and entrepreneurship in agribusinesses

Agribusinesses play an important role in the development of the country's economy as a supplier of farming requisites, marketers of agricultural commodities and provision of services within their sector, which is not immune to

agricultural approach to success (Ortmann & King 2007). The many challenges that agricultural entrepreneurs face in South Africa include policy reforms, increasing global competition, a changing social and political environment, and complex consumer demands (Doyer, Haese, Kirzten & van Rooyen, 2007) and will certainly include our democratic dispensation and change in the country's approach to business. The latter demands that an agribusiness and consequently entrepreneurs should consider as a legislative imperative, issues of gender equality and broad-based black economic empowerment (BBBEE) score card and related code of good practice; when they either applying for finance, Department of Trade and Industry (DTI) grants or supplying government. The other challenge demands that decision makers effectively manage uncertainty and associated risk in order to adapt smoothly to these economic and legal factors. An entrepreneur's orientation may therefore, provide a tool for agri-business development, revenue growth, enhanced profitability and methods of production and/or mechanisation that could lead to a sustained competitive advantage (Baran & Veliekaite, 2008).

McElwee (2005) is of the view that farmers who participate in diversification activities tend toward reactive rather than proactive strategies, and that many of these activities tend to be instigated and managed by female partners. They comprise activities traditionally associated with the role of the female on the farm such as running farm accommodation or a farm shop. McElwee's (2005) study of Dutch farmwomen's entrepreneurial activity showed that women entrepreneurs follow only small-scale activity ensuring that new activities supplement their existing work so as not to trouble the family or farm by their activities. Bock (2004) encourages taking a more positive attitude towards women farm entrepreneurs. He argues that understanding this group will help in the provision of their support. McElwee (2005) further argued in support of women farm entrepreneurs stating that the prolonged success of farming as an enterprise can be considered a major activity and the economic significance of women's activities is vital. This suggests that the current farm support policy, which may develop entrepreneurialism in men rather than in women, has gaps that need to be addressed.

A study in Turkey by Caliyurt (2011) aimed at measuring the financial knowledge that women entrepreneurs, who own businesses, possess. It revealed the incompetence of women entrepreneurs in new trade codes and financial management. Of the reasons that people start-up businesses, push and pull factors were identified to commonly explain the different motivations for women entrepreneurs to start a business, with push factors ranging from elements of necessity like insufficient family income, salaried job dissatisfaction, difficulty in finding a job and the need for a flexible work schedule, due to family responsibilities. Pull factors recorded include independence, self-fulfilment, entrepreneurial drive along with a desire for wealth, social status and power (Caliyurt, 2011). However, the same study noted a difference in the type of businesses that women tend to get involved in as being mostly in the service sector. This is because they tend to relate to occupations that are considered feminine. When compared to their male counterparts, female businesses tend to be characterised by less start-up capital and financial credibility, lower profit, smaller size and shorter times of business survival. Developments in regulation nationally and internationally were however, seen to affect women's contribution to the Turkish economy both negatively and positively with regard to participation and leadership.

2.15 Conclusion of literature review

This chapter discussed how government's efforts to redress past injustices of apartheid created unending entrepreneurial opportunities for previously disadvantaged citizens of South Africa. The chapter also identified the critical skills that black farmers need to become successful entrepreneurs as reviewed in literature. These include infrastructural utilisation knowledge, ICT skills, production and marketing expertise, enterprise and financial management competencies as well as positive attitude towards agriculture. It was also established from the literature that black farmers, just like any other entrepreneurs should have the following characteristics, risk taking, autonomy, innovativeness, pro-activeness and competitiveness. The following chapter covers the methodology applied to this study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Research methodology/paradigm

A semi-structured questionnaire was used to collect primary data that was of both a qualitative and quantitative nature. Primary data refers to data that is originally collected for a specific purpose of investigation (Rajagopalan, 2009). The questionnaires were self-administered to 99 farmers, sampled in the Zululand District Municipality of KwaZulu Natal Province. Data was then analysed by use of Microsoft Excel 2010 as well as Econometric Views 7 statistical package. Results of the study were presented using descriptive statistical methods, marginal tabulations as well as empirical analytical techniques.

3.2 Research design

This exploratory study sought to establish gaps in entrepreneurial proficiencies of black farmers in South Africa. Primary data was collected through a survey with the aim of describing the nature of entrepreneurial skills that are currently available as well as those that are lacking among most black South African farmers. This study yielded crucial information, which has not yet been clearly defined, in an attempt to propose a feasible entrepreneurial model that would improve the performance of the previously disadvantaged, inexperienced black owned agribusinesses. This study also wanted to establish potential relationships between farmers' scales of operations and the level of entrepreneurial skills that they possess and identify which skills are most crucial. To analyse the entrepreneurial skills that are required by South African black farmers in order for them to run successful commercial ventures, a Logistic (Logit) model was used. A Logit regression can be defined in the context of Bishop (2006) as a type of probabilistic statistical classification model that is used to predict a binary response from a binary predictor. This qualitative response type of model uses one or more predictor variables to empirically predict the outcome of a categorical dependent variable.

3.3 Population and sample

3.3.1 Population

According to Goddard and Melville (2001), a population is referred to as any group that is the subject of research interest. The authors argue about the impracticality or impossibility of examining an entire population in certain instances. It is therefore necessary to make general findings based on a study of only a subset of the population, which is called a sample. The population of elements of which certain characteristics are to be investigated is called the target population (Stoker, 1988) and the population of elements from which the sample is drawn is known as the sampled population. The target population therefore was a group of emerging farmers in the Zululand District Municipality of KwaZulu Natal Province of South Africa consisting 1 200 farmers. Out of this target population the sampled population consisted of 700 black farmers who happen to be beneficiaries of the 150 farms that were redistributed under the land reform program.

3.3.2 Sample and sampling method

According to Israel (2013), the most frequently asked question concerning sampling is perhaps, the size of the sample required. The answer to this question is influenced by a number of factors that include the purpose of the study, population size, the risk of selecting a 'bad' sample, and the allowable sampling error. Israel (2013) provides several approaches that are used in determining the sample size. These include using a census for small populations, imitating a sample size of similar studies, using published tables, and applying formulas to calculate a sample size. According to Goddard and Melville (2001), samples ought to be true representatives of the population being studied so that a general observation about the population can be made from studying the sample.

This study made use of simple random sampling to draw a true representative sample of the target population. Simple random sampling, according to Yates,

Moore, and Starnes (2008), is a probability sampling technique that seeks to choose a haphazard subset of individuals from a population where each element is selected entirely by chance. In simple random sampling, each individual has the same probability of being chosen at any stage during the sampling process. As such all of the 700 farmers were first assigned a number from 1 to 700. A list of numbers was then randomly generated in excel 2010 and the sample comprised those people whose respective assigned numbers were among the first 99.

3.4 The research instrument

This study employed a semi-structured questionnaire that comprised three sections, the cover letter, a section on demographic information of respondents and the last section where respondents provided their responses to given statements on a Likert scale. The last section consisted of several assertions that sought to establish the kind of skills that farmers possess or lack. These skills were subdivided into seven broad categories, enterprise management skills, marketing skills, production skills, infrastructural utilisation knowledge, information and computer technology skills, financial management skills and their attitude towards agriculture as a business.

3.5 Procedure for data collection

Data was collected using a semi-structured questionnaire by means of a self-administered survey. This was done to maintain anonymity of the respondents as well as provide them with ample time to give truthful, valid and independent responses at their convenience. Self-administration of questionnaires was chosen to eliminate interviewer error/bias. To ensure a higher response rate, a cover letter of appeal, explaining the importance of the research, accompanied each questionnaire and the researcher provided each respondent with his contact details to allow them to seek clarifications for any sections that were not clear. Face-to-face follow ups were done to ensure all the respondents submitted their completed questionnaires.

3.6 Data analysis and interpretation

Analysis of data was done through both descriptive and inferential statistical methods. Descriptive analysis was done with the aid of Microsoft Excel 2010 package to quantitatively summarise the sample findings by means of graphs and marginal tabulations.

In analysing the entrepreneurial skills that are required by South African black farmers in order for them to run successful commercial ventures, a Logit model was used.

The general model can be specified as:

$$\log\left(\frac{P_i}{1-P_i}\right) = B_0 + B_i \sum_{i=1}^{n} X_i + U_i \qquad \text{(Equation 1)}$$

Where:

P_i = Probability that a farmer runs a successful commercial entity

$1 - P_i$ = Probability that a farmer is fails to run a commercial entity

$\frac{P_i}{1-P_i}$ = odds ratio in favour of each black farmer being able to commercialise

B_0 = intercept

B_i = coefficients to be estimated

X_i = explanatory variables to be considered (Enterprise Management Skills, Marketing Skills, Production Skills, Infrastructure Utilisation Knowledge, ICT Skills, Financial Knowledge Skills, and Attitude to Agricultural Business)

U_i = Disturbance error term

Equation 1 was run repeatedly in E-views 7 to assess the separate impact on commercialising potential of each of the seven skills investigated. In simpler terms seven equations (each including variables for a specific skill investigated) of the binary response form as indicated in Equation 1 were formulated and estimated. Hypothesis testing was done through use of the z-statistic to distinguish significant correlations between variables from those that were insignificant. Much discussion was focused on those variables that exhibited significant relationships.

3.7 Limitations of the study

The major limitation of this study is its inability to cover more than one district due to time and budget constraints. Whatever findings thought to be applicable to the study area may not be 100 percent relevant to all the districts in the country.

3.8 Validity and reliability

According to Rowley (2002), the validity and reliability of a portion of research provides the basis upon which a decision can be made on whether it can be considered knowledge. This section discusses the external and internal validity as well as the reliability of the study.

3.8.1 External validity

According to Struwig and Stead (2001), external validity is the extent to which the findings of a study can be generalised to other populations. While it was practically impossible to exhaust all aspects of the black farmer population in South Africa, this research covered a broad range of entrepreneurial skills within the context of the study area. Recommendations were provided, based on the empirical results from relevant mathematical models. The inferences are therefore valid but should be applied with the understanding that circumstances facing black farmers in different regions of the country may vary.

3.8.2 Internal validity

Rowley (2002) defines internal validity as the extent to which it can be accurately stated that the independent variable produced an observed effect. The questionnaire was designed to capture all the relevant information pertaining to the farmers' entrepreneurial skill base against their scale of operations. The questions were further subdivided into several categories and classifications to gather the maximum possible information on each skill under investigation.

3.8.3 Reliability

Reliability, according to Rowley (2002), is the extent to which a study could be repeated and yield similar results. In identifying the target and sampled populations, the rich experience and knowledge of the study area and consultation with several governmental department experts provided an accurate sampling frame thus increasing the reliability of the study. The study also utilised relevant research methodologies and statistical methods, which increased the possibility of yielding the same results in the event that the study is repeated under the same conditions.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the findings of the study. It begins by presenting the demographic characteristics of the respondents before giving the findings in accordance with the various themes that guided the study.

4.2 Demographic characteristics of respondents

4.2.1 Gender of the respondents

The male respondents in the sample were almost equal in number to their female counterparts. Of 99 respondents, 51 percent were female, while males constituted 49 percent, as shown in Figure 4.

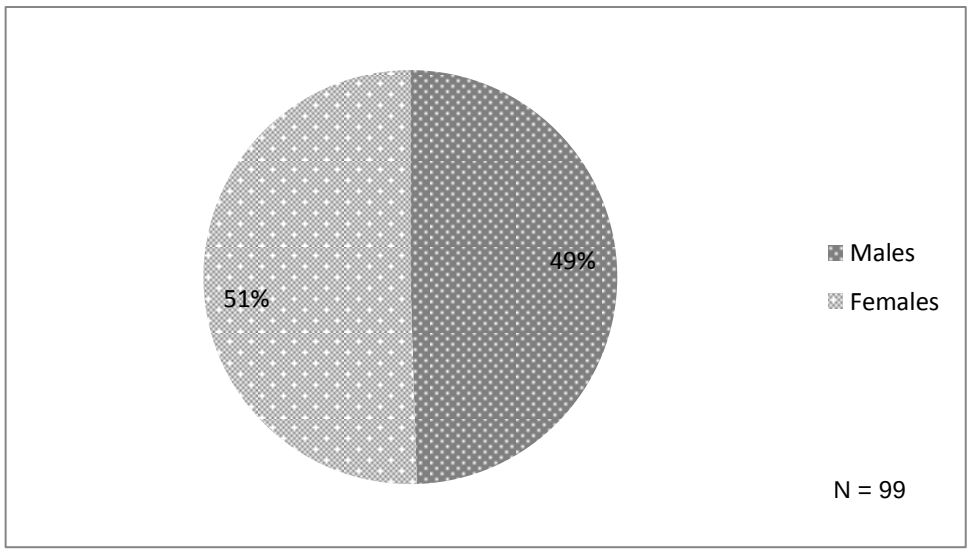

Figure 4: Gender of respondents

4.2.2 Age of the respondents

The majority of the respondents in the sample were aged between 22 and 34 years, representing 35.4 percent, followed by those respondents aged between

45 and 54 years (23.2 percent), as shown in Figure 5. Those respondents aged 21 years and under had the lowest representation in the sample (5.1 percent).

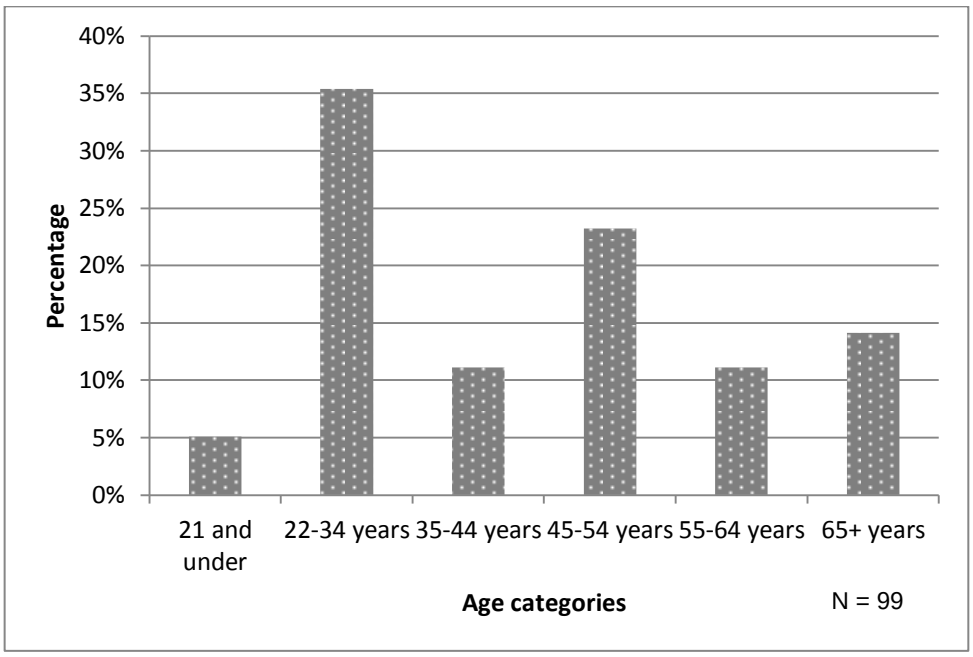

Figure 5: Age of respondents

4.2.3 Education of the respondents

As far as educational level of respondents is concerned, the majority of respondents (43.4 percent) had below Grade 12 education, as shown in Figure 6. Respondents with Grade 12 education represented 32.3 percent of the sample. Only seven percent of the respondents had graduate education.

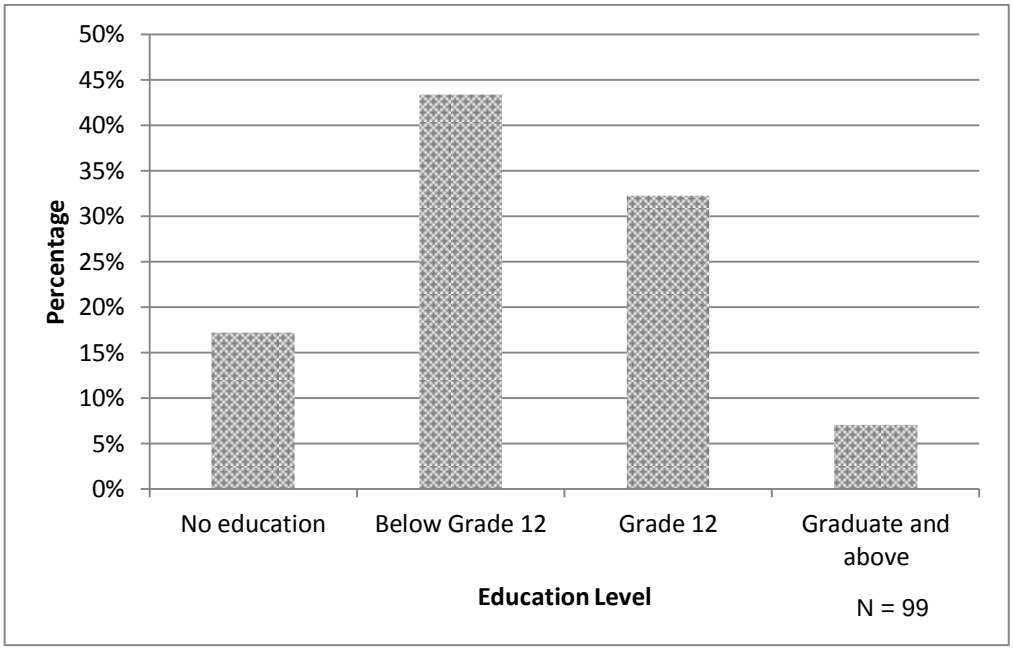

Figure 6: Education of respondents

The majority of the respondents (71.7 percent) had a non-agricultural type of education. Only 28.3 percent of the respondents underwent some agricultural education and training before venturing into agriculture as a business. This is presented in Figure 7.

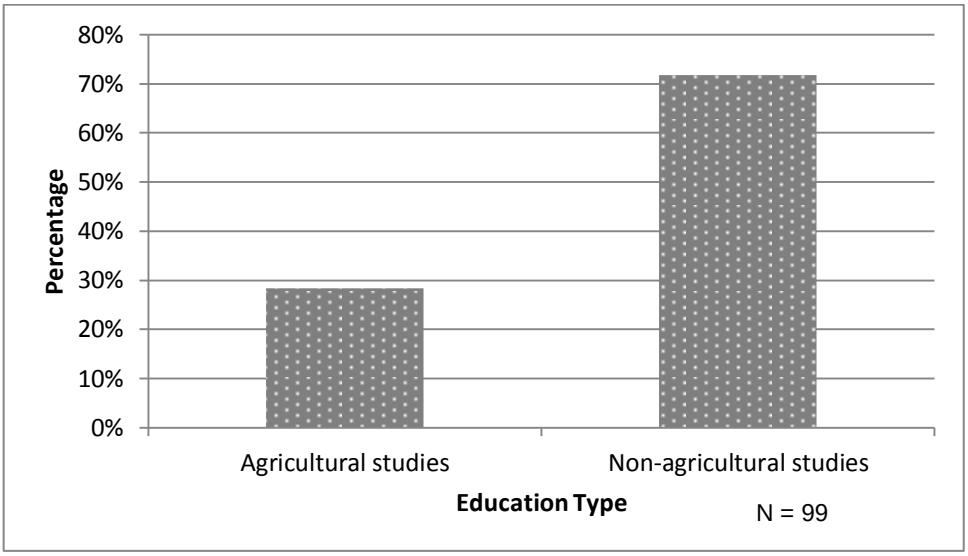

Figure 7: Education type of respondents

4.3 Enterprise management skills

4.3.1 Strategic management as part of respondents' farming enterprise

Of the respondents, 71.7 percent attested to making use of strategic management in their enterprises. However, 28.3 percent claimed that they were unaware whether they used strategic management as part of their enterprise, as shown in Figure 8.

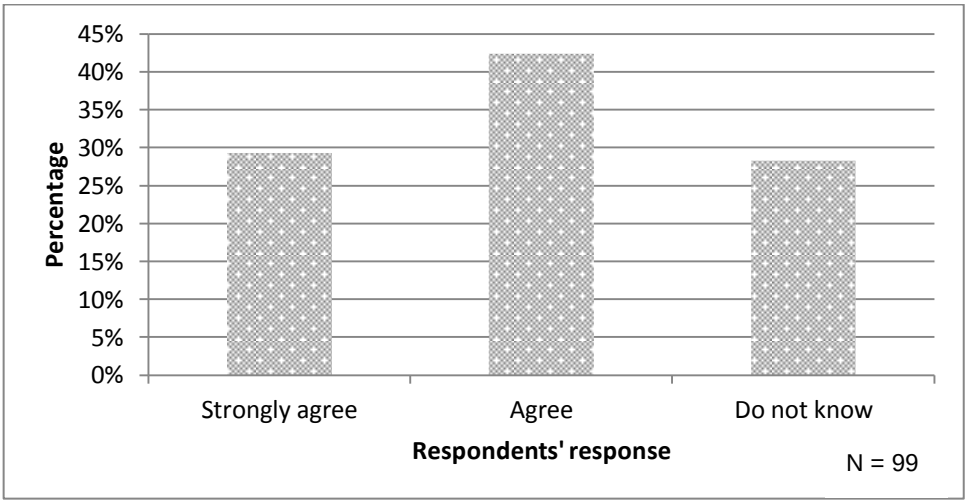

Figure 8: Strategic management as part of farming enterprise

4.3.2 Strategic planning as part of respondents' enterprise management

The majority of the respondents (79.8 percent) reported that strategic planning is part of their enterprise management while 20.2 percent reported in the negative, as shown in Figure 9.

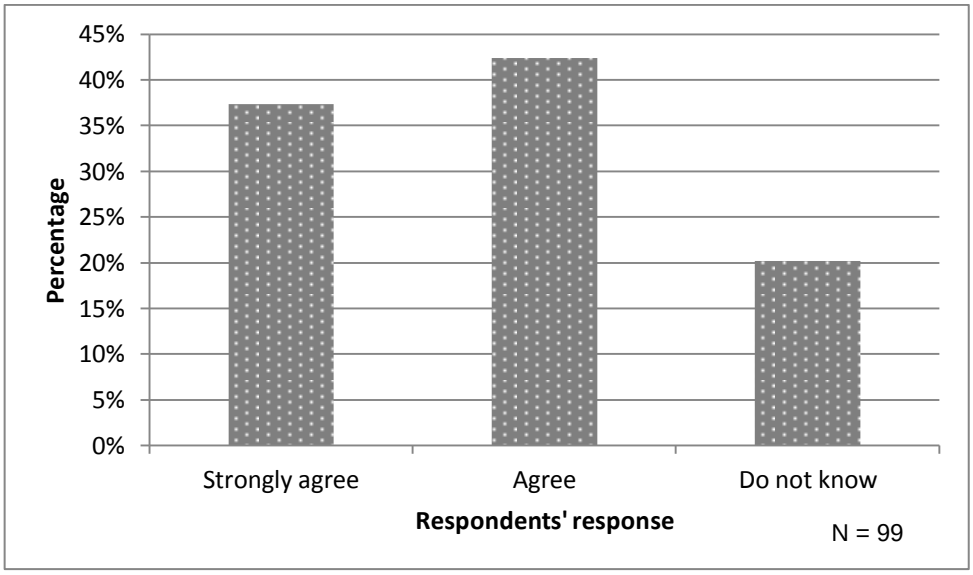

Figure 9: Strategic planning as part of farming enterprise

4.3.3 Definition of the organisation's vision

Accordingly, 69.6 percent of the respondents in the sample reported that the vision of their organisation is clearly defined, as shown in Figure 10. About 24.2 percent of the respondents reported that they were unsure whether the vision of their organisation is clearly defined. Approximately, nine percent of the respondents reported that their organisations' vision was not clear.

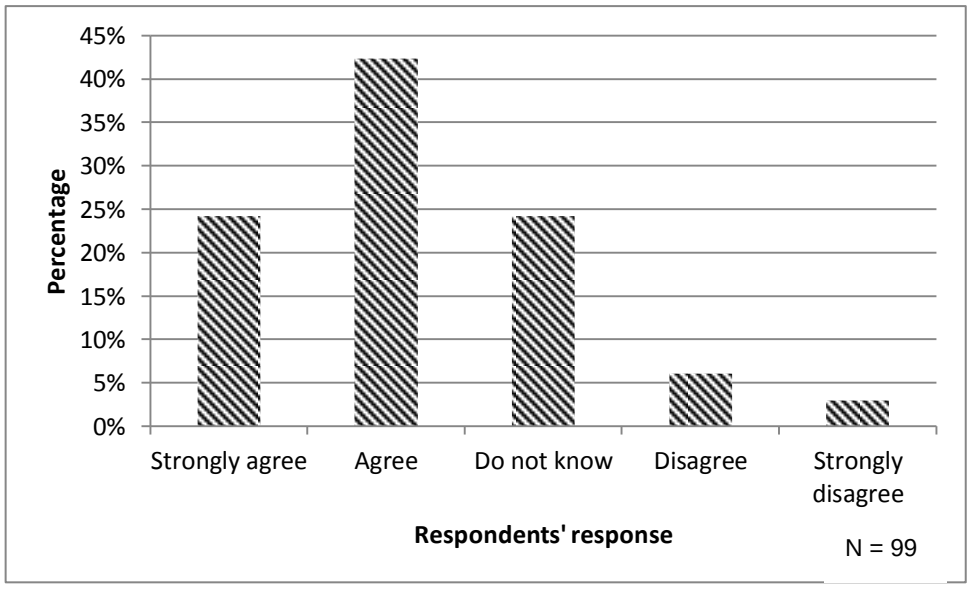

Figure 10: Organisations' vision is clearly defined

4.3.4 Communication of the organisation's goals and objectives

Interestingly, all respondents in the sample reported that they communicate their organisational goals and objectives to all.

4.3.5 Teamwork

In terms of teamwork, the majority of the respondents (83.9 percent) reported that they are able to work well with others while six percent reported that they cannot work well with everyone. On the other hand, 10 percent were unsure whether they are good team players, as shown in Figure 11.

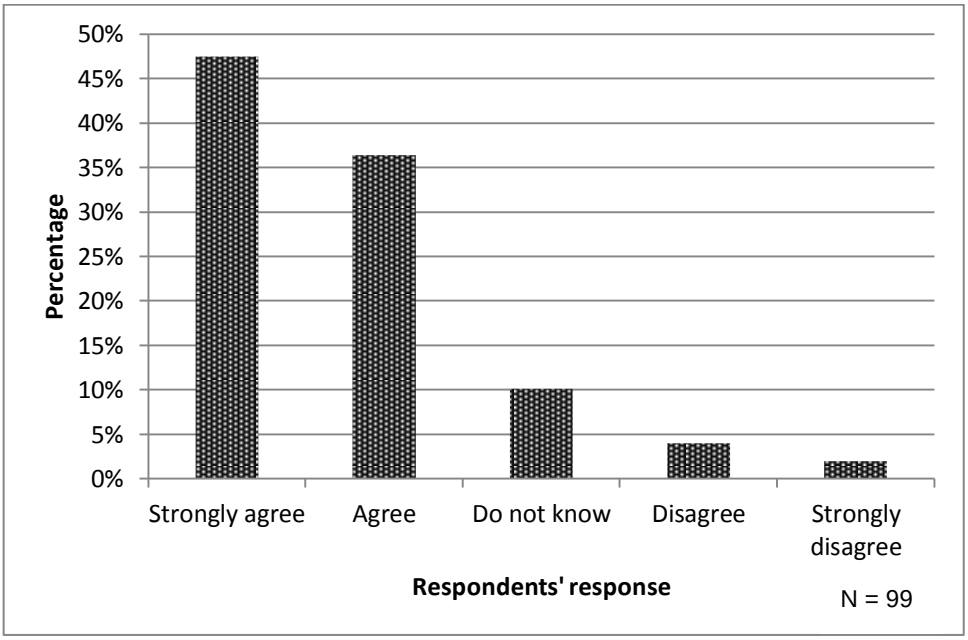

Figure 11: Working well with everyone

4.3.6 Knowledge of competitors

A large proportion, 83.9 percent, of the respondents reported that their knowledge about their competitors has helped them stay ahead of their game. On the other hand, 16.1 percent were uncertain whether they knew much about their competitors and whether the little knowledge they might have helped them, as shown in Figure 12.

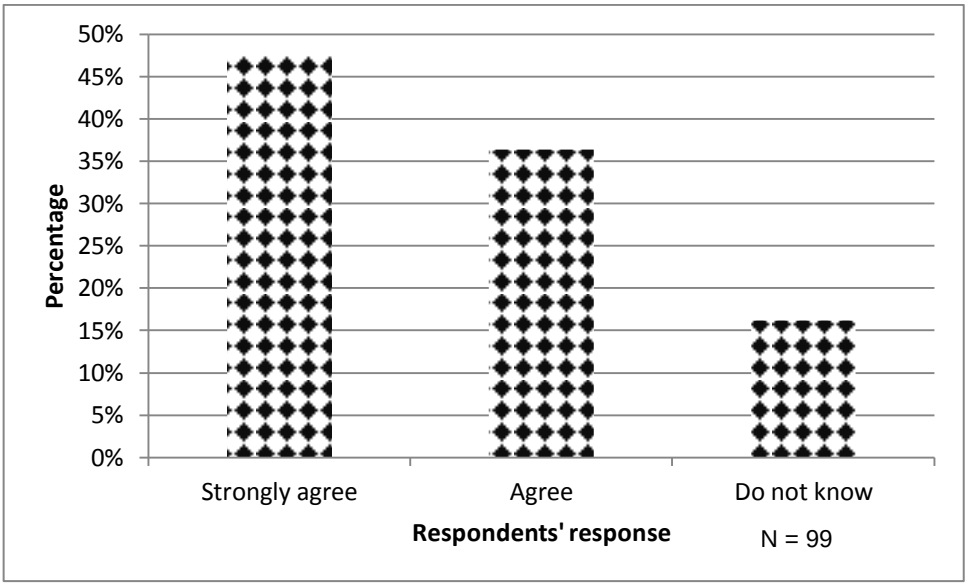

Figure 12: Knowledge of competitors

4.4 Marketing skills

4.4.1 Knowledge of market for the produce before planting

The majority of respondents (43.4 percent) did not have beforehand knowledge of the markets for their produce at planting. Twenty-six percent planted with enough information of where they would sell their produce in advance of the planting season, as shown in Figure 13. The rest are however unsure of their degree of knowledge pertaining to markets.

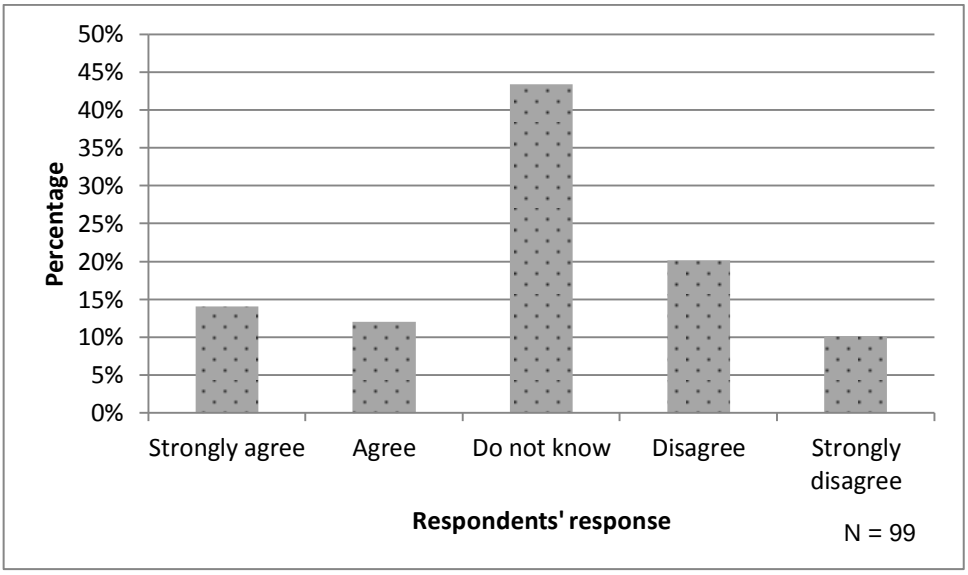

Figure 13: Knowledge of market for the produce before planting

4.4.2 Promoting own brands

Based on the analysis, the majority of the respondents (61 percent) reported that they strive to make their brands known, as shown in Figure 14. About 23 percent were unsure whether they strive to make their brand known or not, while 16 percent reported that they have no problem making their brand known.

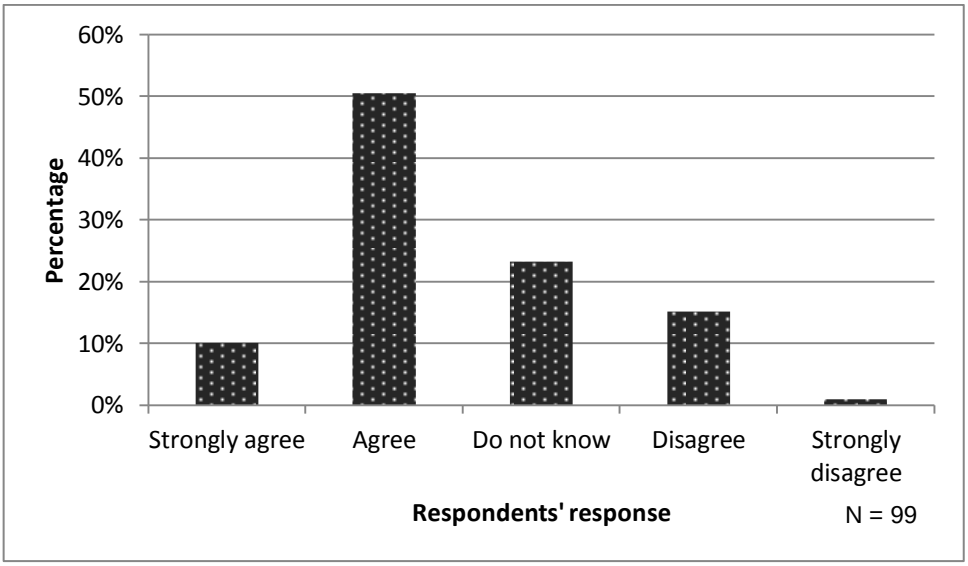

Figure 14: Promoting own brand

4.4.3 Availability of systems that help reach target market

While the majority of the respondents (42 percent) were uncertain about whether or not they had systems to help them reach their target market, about 37 percent had such mechanisms in place. The rest had no systems installed that could help them reach their target markets, as shown in Figure 15.

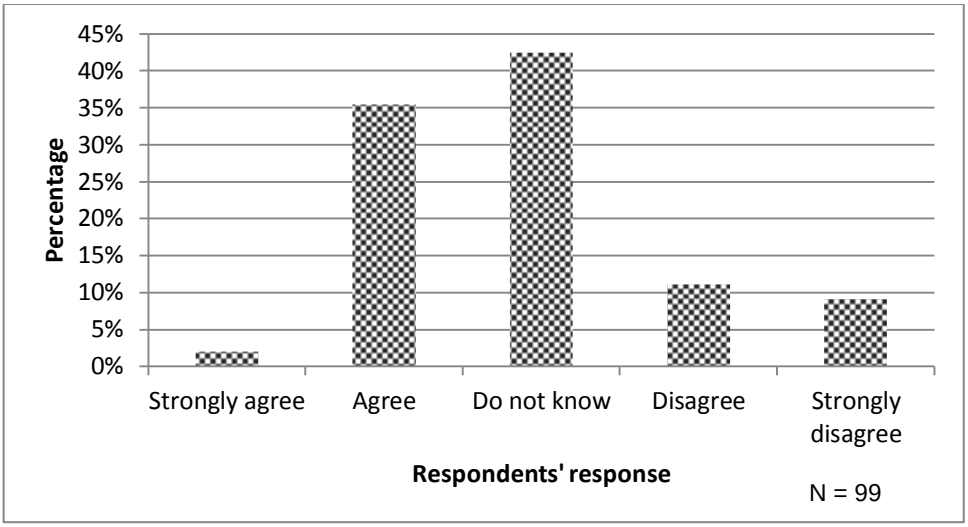

Figure 15: Availability of systems that help reach target market

4.4.4 The pricing of produce

The majority of the respondents (68 percent) reported that the price of their produce is competitive, as shown in Figure 16. About 23 percent of the respondents reported that they were unaware of the competitiveness of the price of their produce while nine percent reported that the price of the product was not competitive.

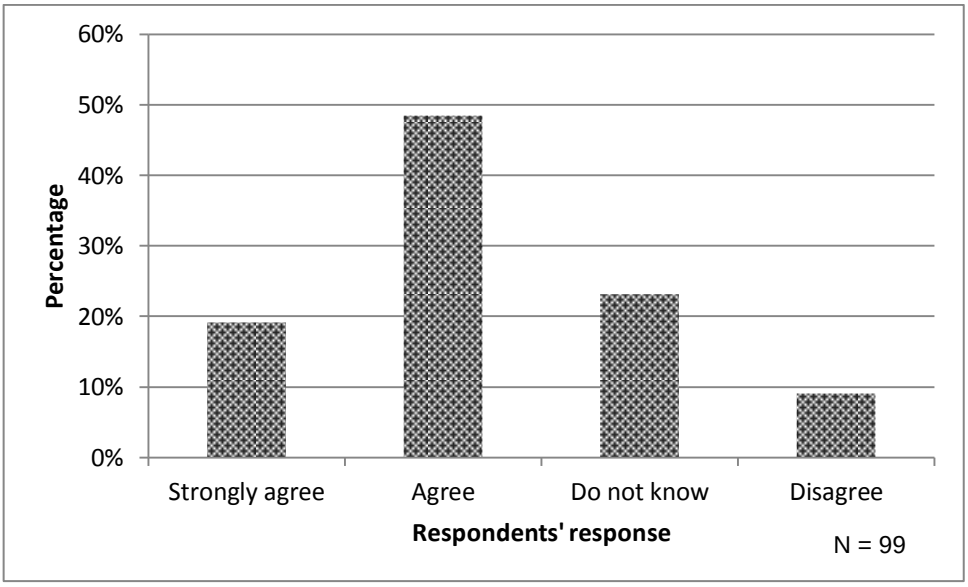

Figure 16: The price competition of produce

4.4.5 Market Access

Forty-six percent of the respondents reported that markets are accessible while 38 percent reported that they struggle to access markets, as shown in Figure 17. About 16 percent of the respondents reported that they did not know whether access to market is easy or not.

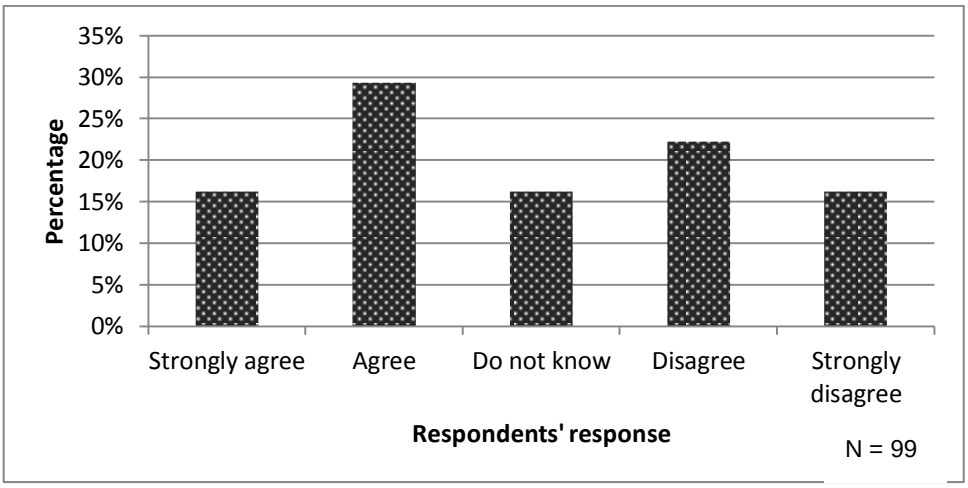

Figure 17: Market access

4.4.6 Understanding the market

The majority of the respondents (78 percent) reported that their understanding of market helps their business growth and expansion, as shown in Figure 18. About 18 percent of the respondents were unaware whether their understanding helps or not their business growth and expansion while four percent reported that understanding of the market does not help their business to grow and expand.

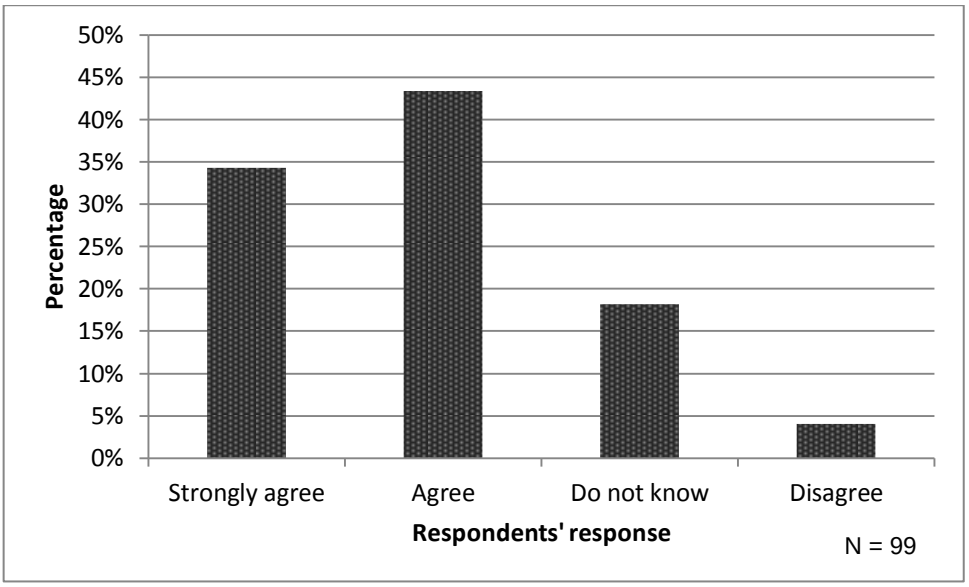

Figure 18: Understanding the market

4.5 Production skills

4.5.1 Alternating crops according to seasons, soil type and climate

Sixty percent of the respondents reported that they alternate their crops according to seasons, soil type and climate compared with 16 percent who do not, as shown in Figure 19. Twenty-four percent reported that they were unaware that they can alternate their crops according to seasons, soil type and climate.

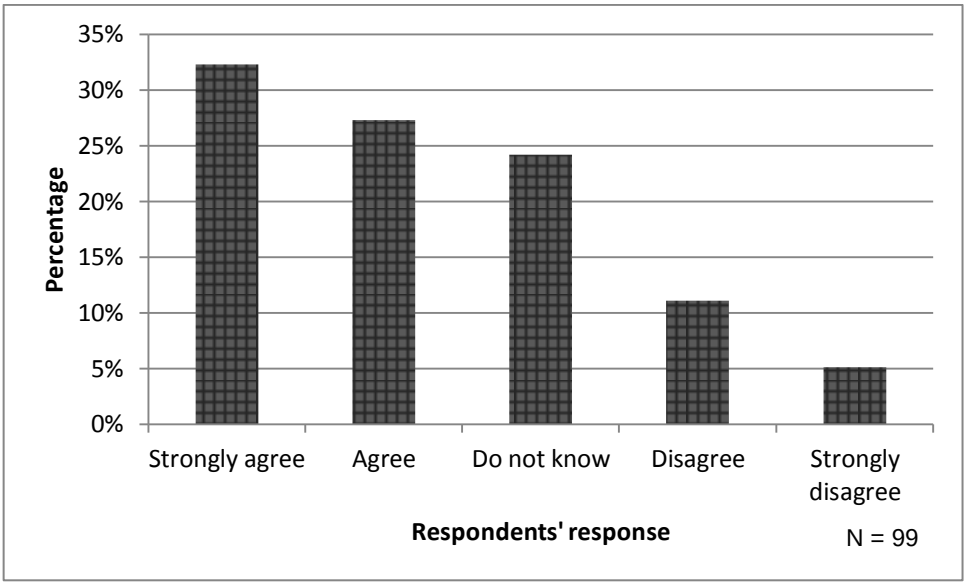

Figure 19: Alternating crops according to seasons, soil type and climate

4.5.2 Purchase of inputs ahead of planting

The majority of the respondents (62 percent) reported that they always buy their farming inputs ahead of planting season compared to 17 percent who do not, as shown in Figure 20. About 23 percent of the respondents were not consistent in their timing of input purchasing.

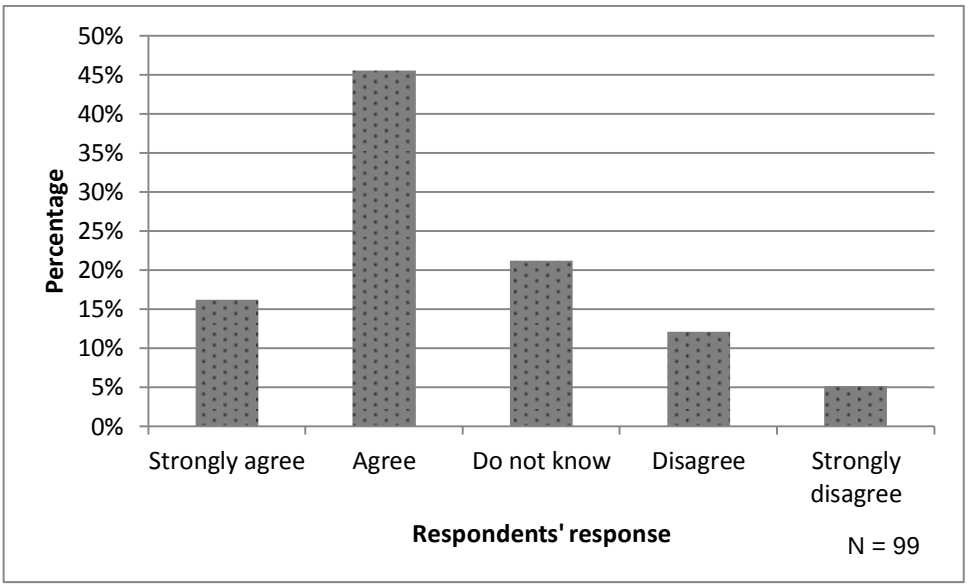

Figure 20: Purchase of inputs ahead of planting

4.5.3 Knowledge of what to plant when the planting season comes

The majority of the respondents (79 percent) reported that they always knew what to plant when the season comes compared to 14 percent who had no knowledge of what crops to plant and when to do so, as shown in Figure 21. About seven percent of the respondents were not confident with their knowledge of what to plant when the season comes.

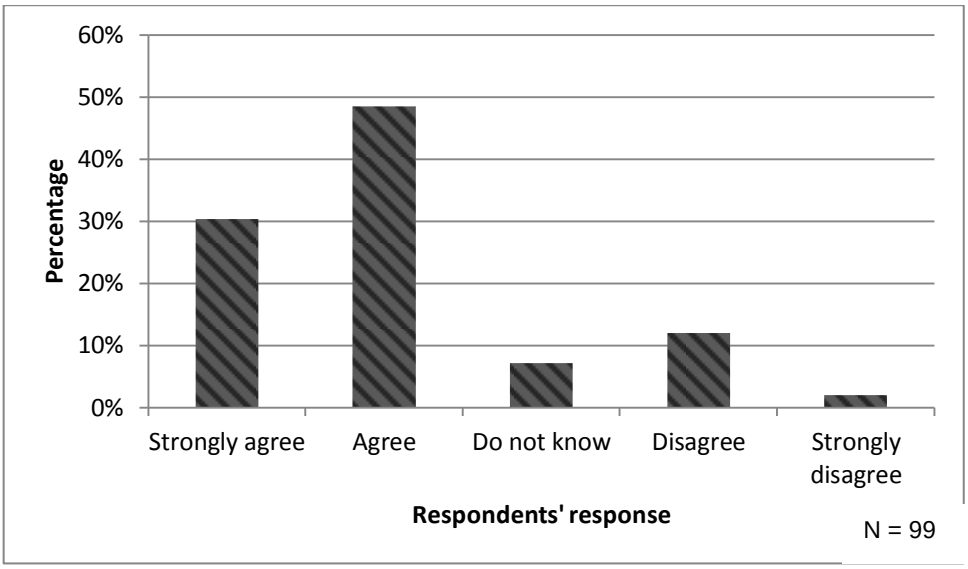

Figure 21: Knowledge of what to plant when the planting season comes

4.5.4 Producing according to market needs

Of the respondents, 62 percent reported that their produce met market needs compared with 18 percent whose produce fell short of market demands and standards, as shown in Figure 22. About 20 percent of the respondents were not sure if they had full understanding of what the market needs.

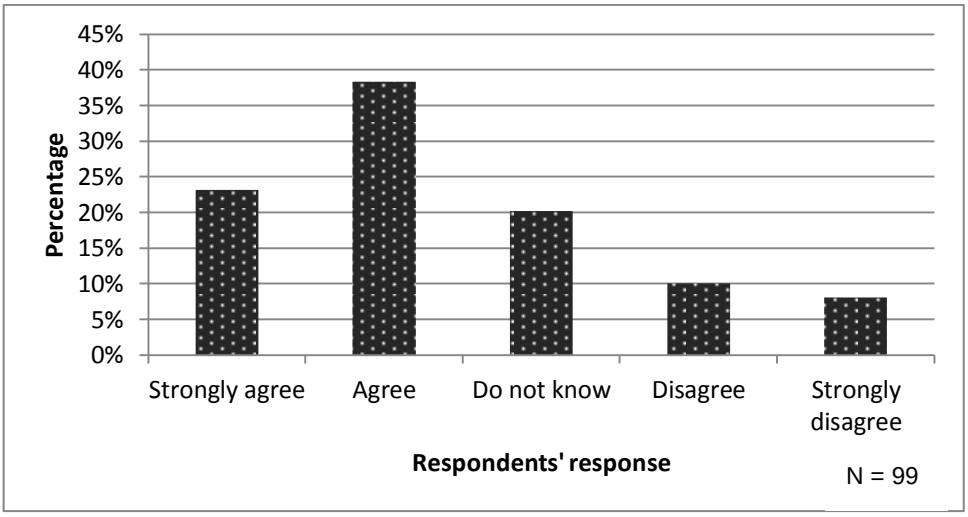

Figure 22: Producing according to market needs

4.5.5 Supplying agricultural produce on time

Fifty-one percent of the respondents believe that they can be trusted to timeously supply the market with agricultural products. While 38 percent of the respondents were not confident about their ability to satisfy the market on time, 11 percent stated their inability to supply the market on time, as shown in Figure 23.

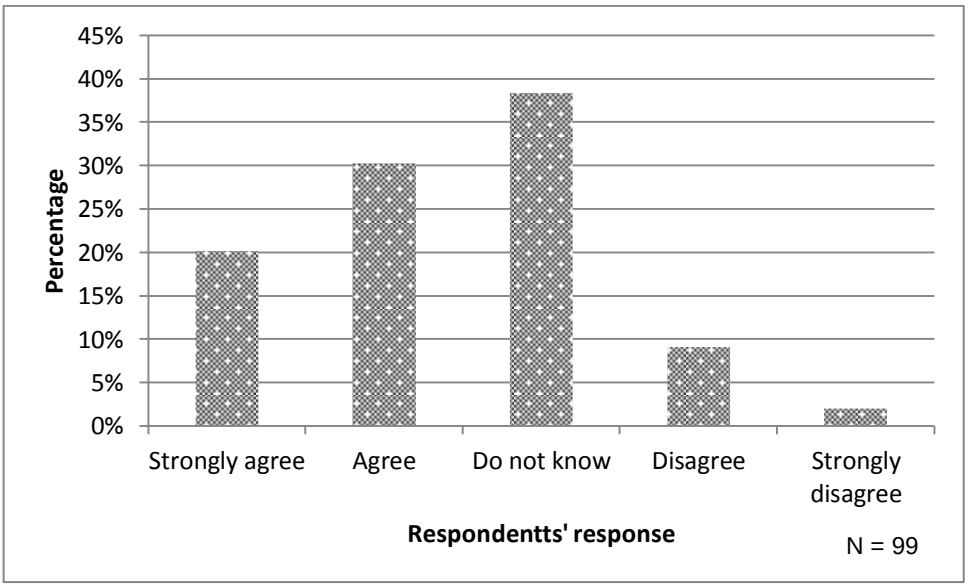

Figure 23: Supplying agricultural produce on time

4.5.6 Understanding of global trends in agricultural production

Slightly over half of the respondents (51 percent) reported that they understood the current global trends in agricultural production. Twenty-two percent did not understand these global trends while 27 percent of them were indefinite about their knowledge regarding the subject, as shown in Figure 24.

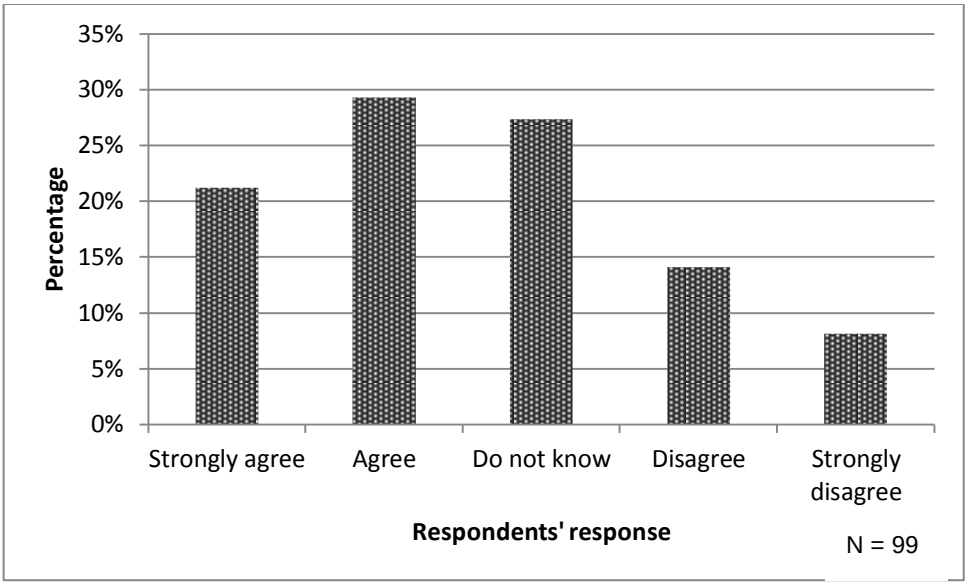

Figure 24: Understanding of global trends in agricultural production

4.6 Infrastructure knowledge utilisation

4.6.1 Adequacy of infrastructure in farming ventures

Infrastructure was found to be inadequate in the majority of the respondent's farms (71 percent), while 13 percent of the farmers have enough infrastructure for their farming ventures, 16 percent were not sure whether the resources they have at their disposal were sufficient, as shown in Figure 25.

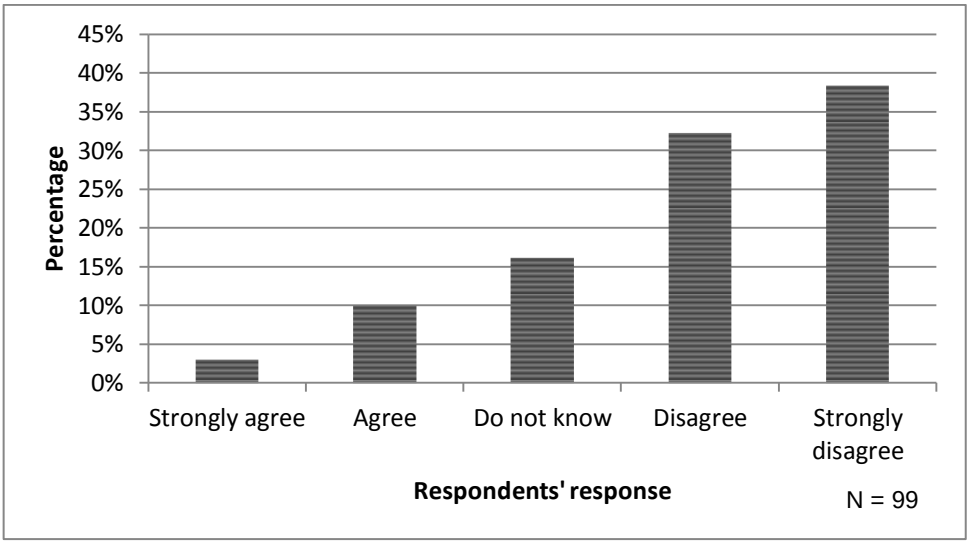

Figure 25: Adequacy of infrastructure in farming ventures

4.6.2 Utilisation of farm infrastructure

The majority of the respondents (73 percent) reported that they were not fully utilising their farm infrastructure. Only 14 percent were reported to use their farm infrastructure to the fullest while 13 percent were unsure of their level of infrastructural utilisation, as shown in Figure 26.

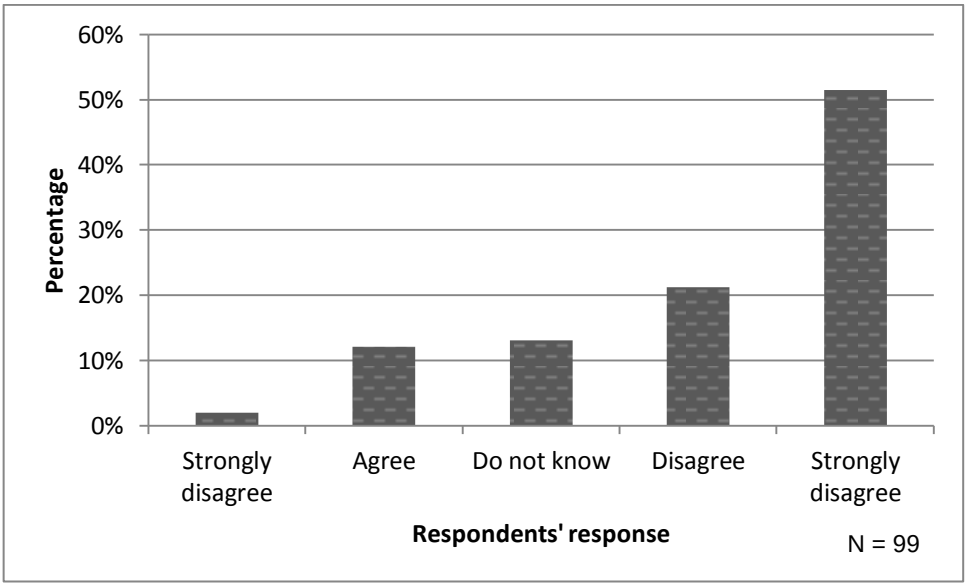

Figure 26: Infrastructural utilisation on the farms

4.6.3 Adequacy of finances to invest in agricultural infrastructure

As far as financial resources to invest in the infrastructure are concerned, 89 percent of the respondents reported that they did not have enough money to invest in their infrastructure, as shown in Figure 27. Only three percent of the respondents affirmed that they had adequate finances to invest in the infrastructure while eight percent were unsure.

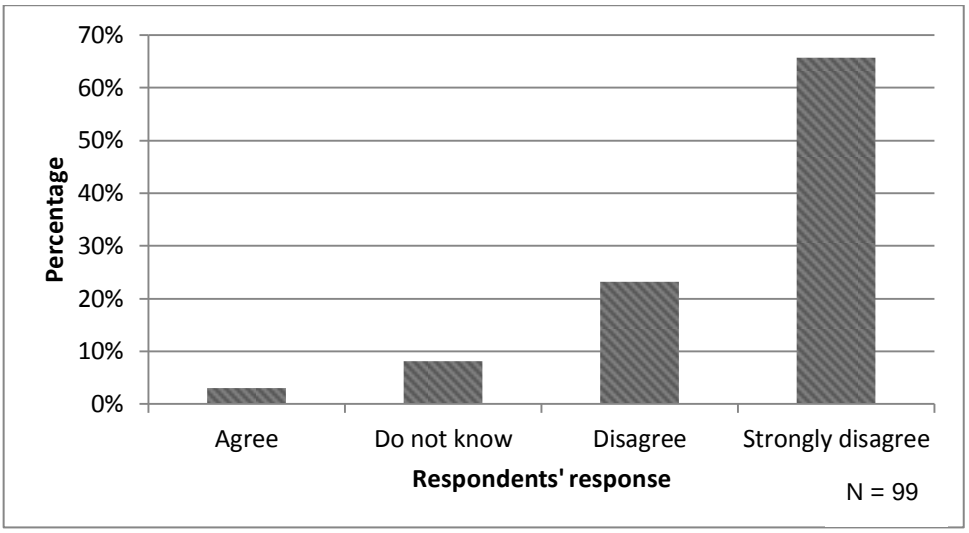

Figure 27: Adequacy of finances to invest in agricultural infrastructure

4.6.4 The necessity of maintaining the infrastructure

The majority of the respondents (81 percent) reported that it is noble to maintain the infrastructure as an organisation in comparison to four percent who claimed that it is not, as shown in Figure 28. About 15 percent of the respondents were unaware of the need to maintain agricultural infrastructure they had at their disposal.

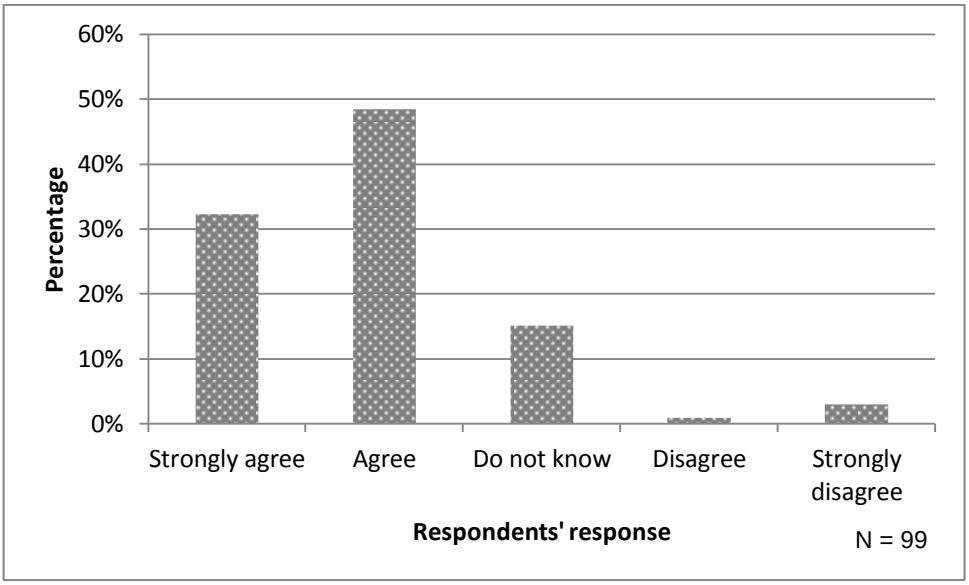

Figure 28: The necessity of maintaining the infrastructure

4.6.5 The necessity of linking infrastructure to production

Of the respondents, 77 percent reported that linking infrastructure to production helps overall production compared to four percent who opposed that view, as shown in Figure 29. Eighteen percent of the respondents were unsure whether linking infrastructure to production helps overall production.

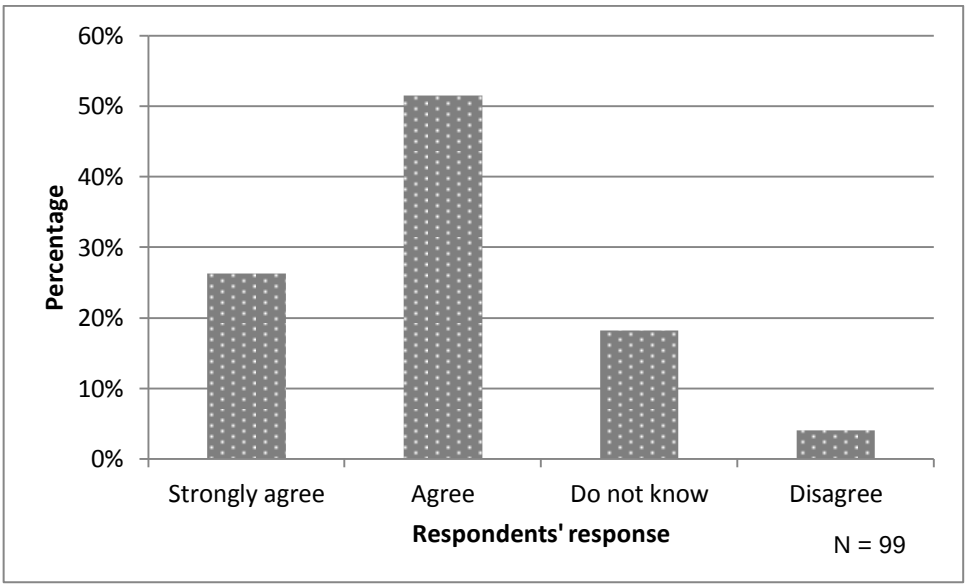

Figure 29: Linking infrastructure to production is beneficial

4.6.6 Adequacy of planting equipment

The majority (87 percent) of the respondents reported that they do not have adequate equipment to help them plant the crop for the market. Only six percent have enough planting equipment while the rest are not sure whether the equipment they have is enough or not, as shown in Figure 30.

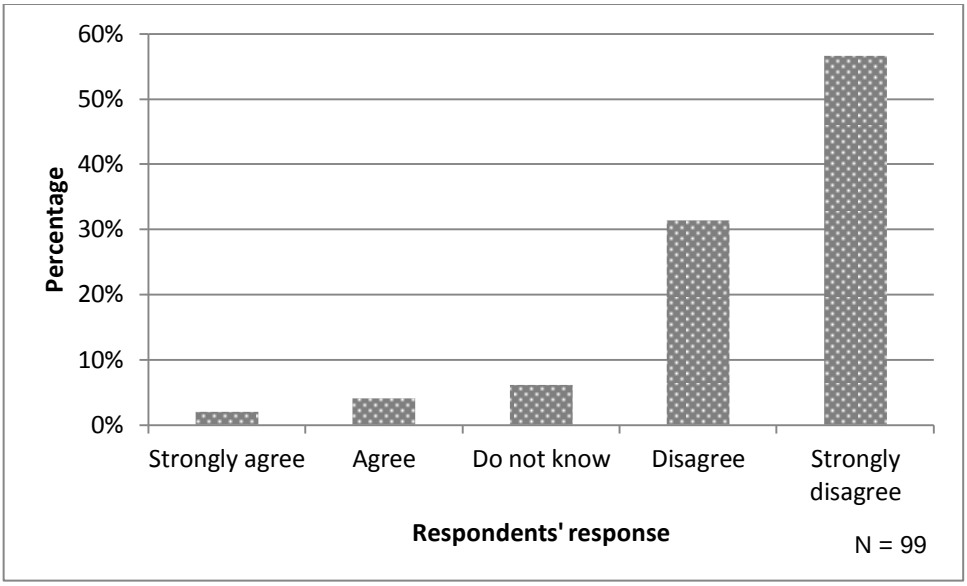

Figure 30: Adequacy of planting equipment

4.7 ICT skills

4.7.1 Availability of ICT for agri-enterprises

About 83 percent of the respondents have insufficient ICT facilities for their enterprises while only eight percent have already incorporated computer technology into their agricultural enterprises, as shown in Figure 31. About nine percent of the respondents were unaware of various information and computer technologies that can be used in their enterprises.

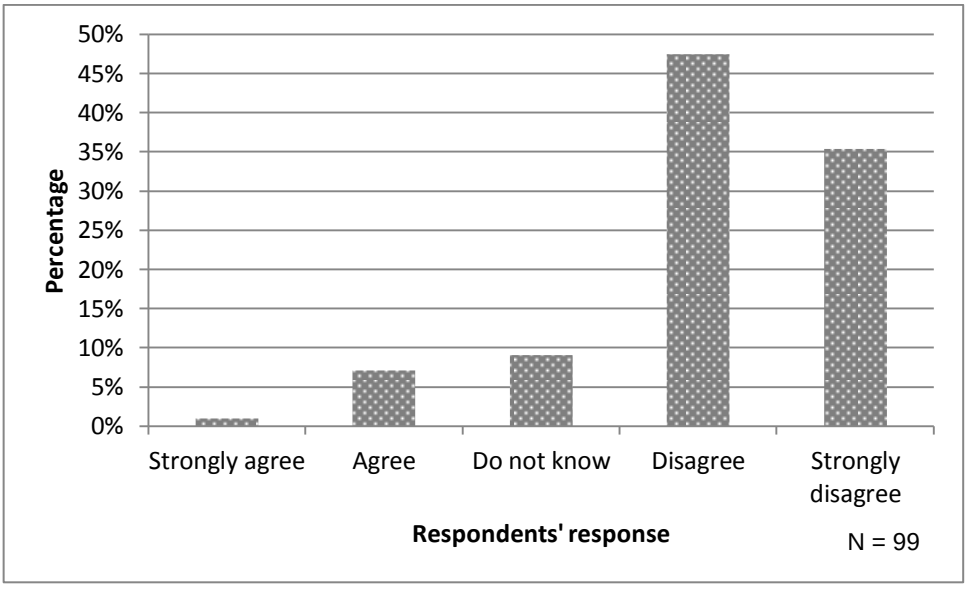

Figure 31: Availability of ICT for agri-enterprises

4.7.2 Existence of adequate information technology skills base

The majority of the respondents (72 percent) have an inadequate information technology skills base in their businesses whereas 15 percent have an adequate information technology skills base. About 13 percent of the respondents were unsure if the skill base they have for ICT is adequate, as shown in Figure 32.

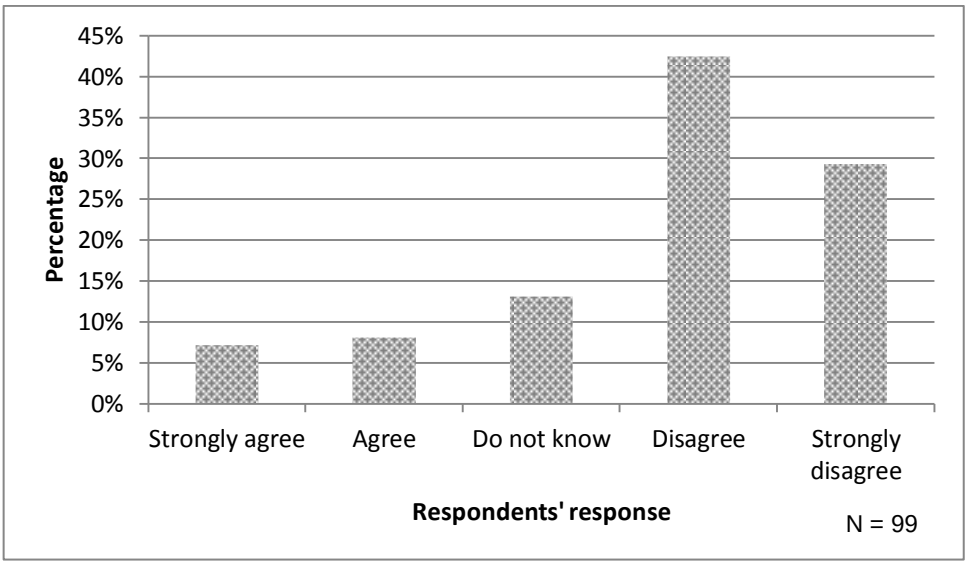

Figure 32: Existence of adequate information technology skills base

4.7.3 Access to public and private information sources

Fifty-eight percent of the respondents indicated that they do not have access to information sources like websites, compared with only 18 percent who do have access, as shown in Figure 33. About 24 percent were unsure of where to get useful information for their business development and had no knowledge of how to access such information sources.

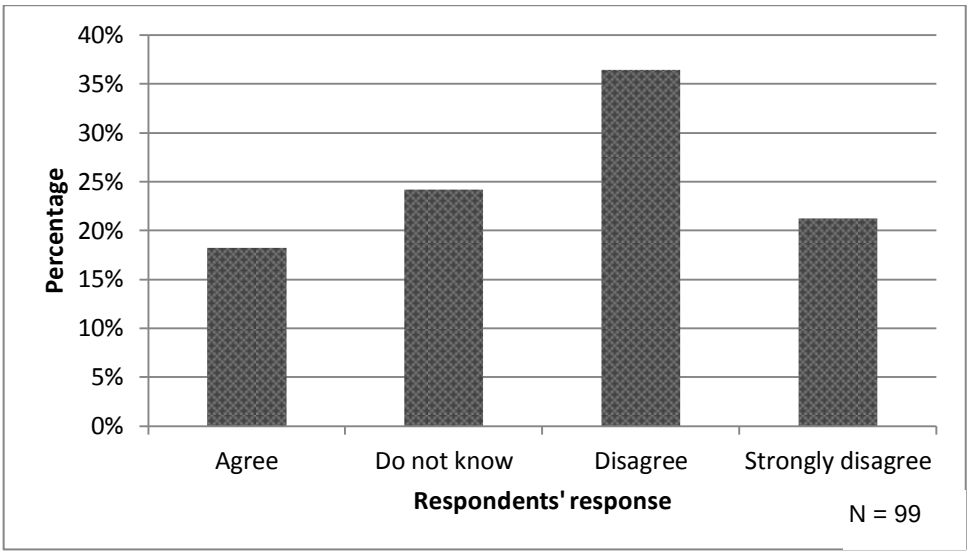

Figure 33: Access to public and private information sources

4.7.4 Information sharing among colleagues in a business venture

Slightly over half of the respondents (53 percent) reported that they were unsure whether colleagues in their business ventures share information among themselves. About 31 percent reported that there was sharing of information among colleagues in their business ventures while the rest indicated the existence of information asymmetry in their industry, as shown in Figure 34.

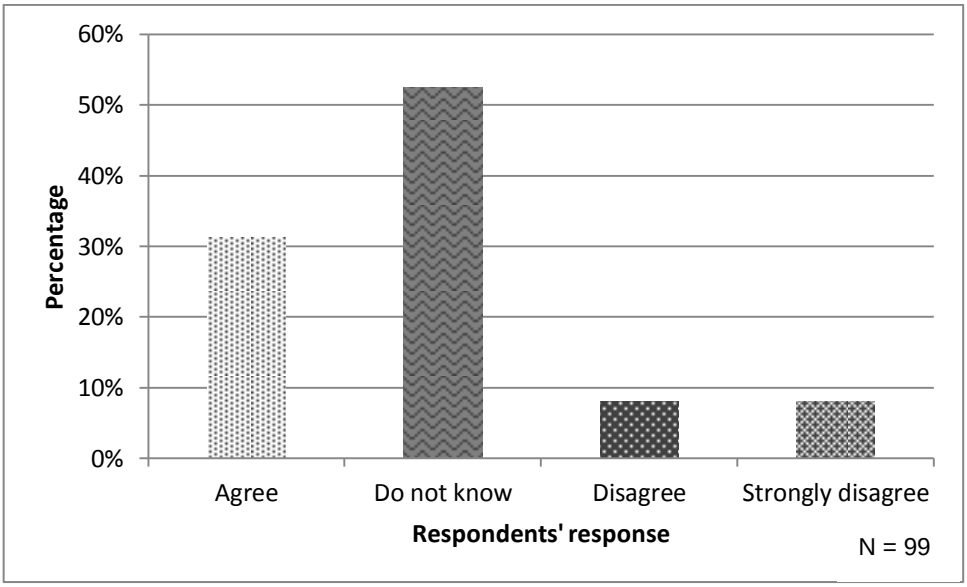

Figure 34: Information sharing among colleagues in business ventures

4.7.5 Capacity building initiatives to enhance staff abilities

Slightly over half of the respondents (53 percent) reported that they plan courses for their staff members to enhance their capacities, compared with 28 percent who do not, as shown in Figure 35. About 19 percent were not aware of possible capacity building courses that they can offer to their staff.

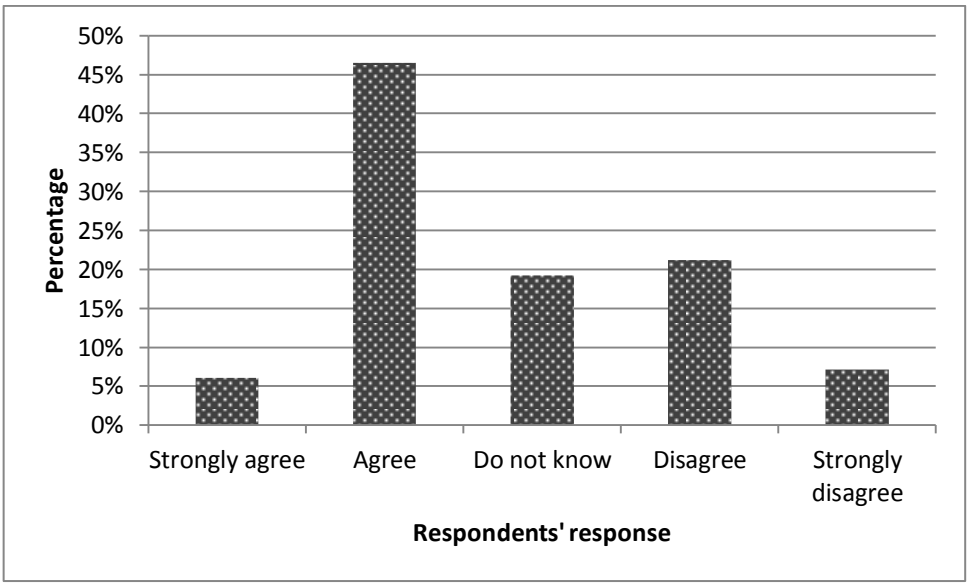

Figure 35: Capacity building initiatives to enhance staff abilities

4.7.6 Ability to keep up with new farming information and methods

Of the respondents, 41 percent are able to keep up with the latest farming information and methods compared with 25 percent who are not, as shown in Figure 36. Thirty-three percent of the respondents were ignorant about the new farming methods that exist in the industry.

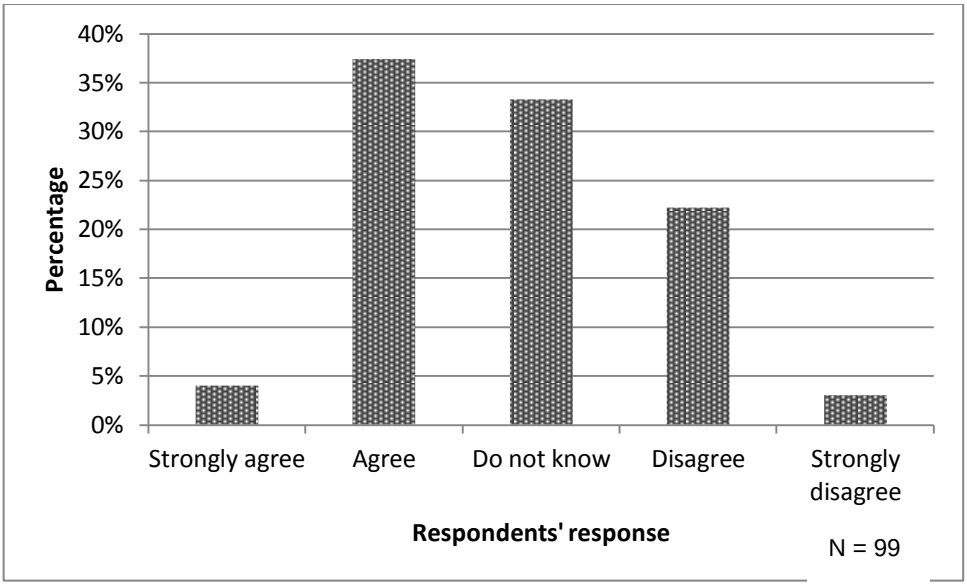

Figure 36: Ability to keep up with new farming information and methods

4.8 Financial knowledge and skills

4.8.1 Adequacy of financial support for business

The majority of the respondents (80 percent) reported that there are inadequate financial resources to support their businesses while only eight percent confirmed that they had adequate resources, as shown in Figure 37. The remainder reported that they do not know of any financial assistance in their area of business.

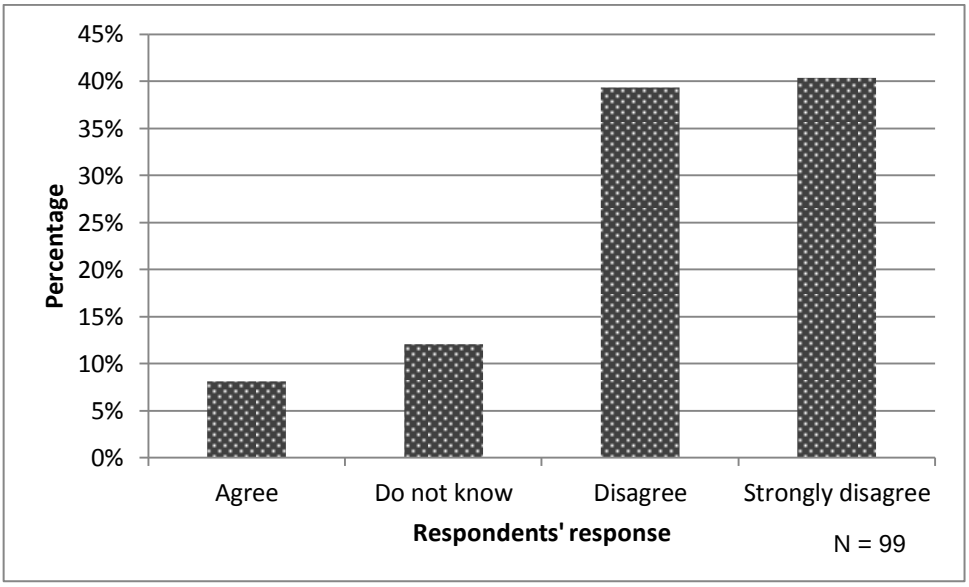

Figure 37: Adequacy of financial support for business

4.8.2 Ease of access to funding for business

Eighty-two percent of the respondents reported that it is not easy to access funding for their businesses. Only a small portion (eight percent) have access to financial services, while 10 percent were unmindful of various sources of finance capital, as shown in Figure 38.

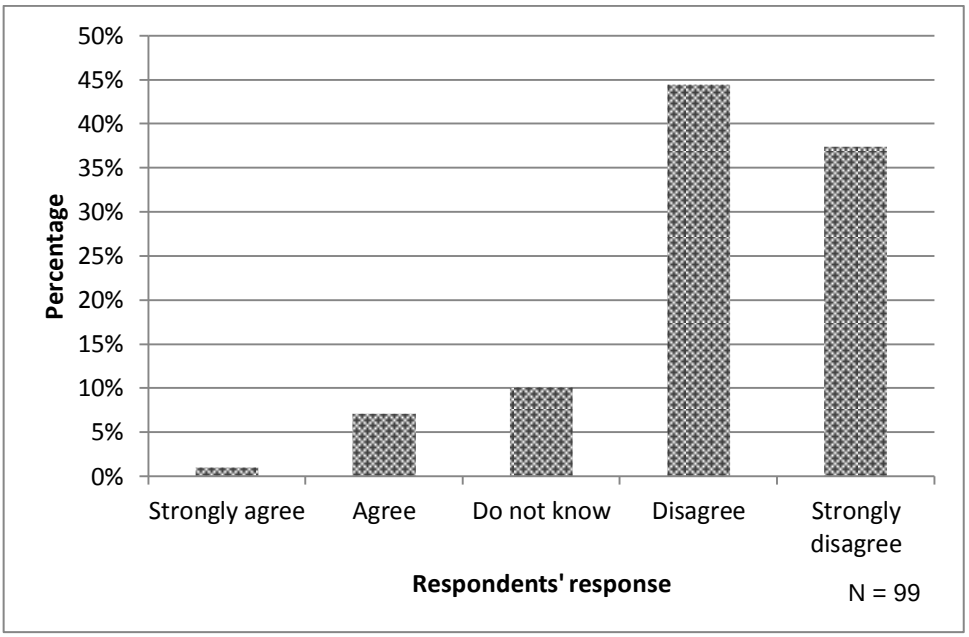

Figure 38: Ease of access to funding for business

4.8.3 Performance of agricultural ventures against source of start-up capital

Of the respondents, 58 percent believe that agricultural-based ventures work best when one has their own start-up capital. Eighteen percent of respondents think that the success of an agricultural venture is not dependent on the capital being self-sponsored, while 24 percent were uncertain about the impact of capital source on the triumph of a business, as shown in Figure 39.

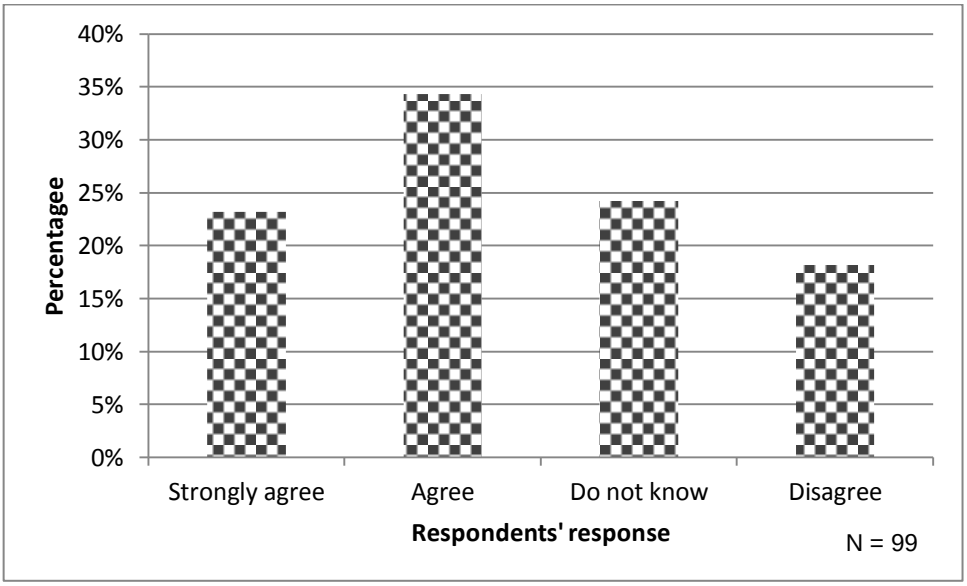

Figure 39: Performance of agricultural ventures against source of start-up capital

4.8.4 Necessity of a well-trained financial manager to a business

According to the data, about 58 percent of the respondents believe that having a well-trained financial manager is critical to the business success. About 18 percent of respondents do not recognise the need to employ a qualified head of finance while 24 percent do not know whether a business performs differently with or without a finance manager, as shown in Figure 40.

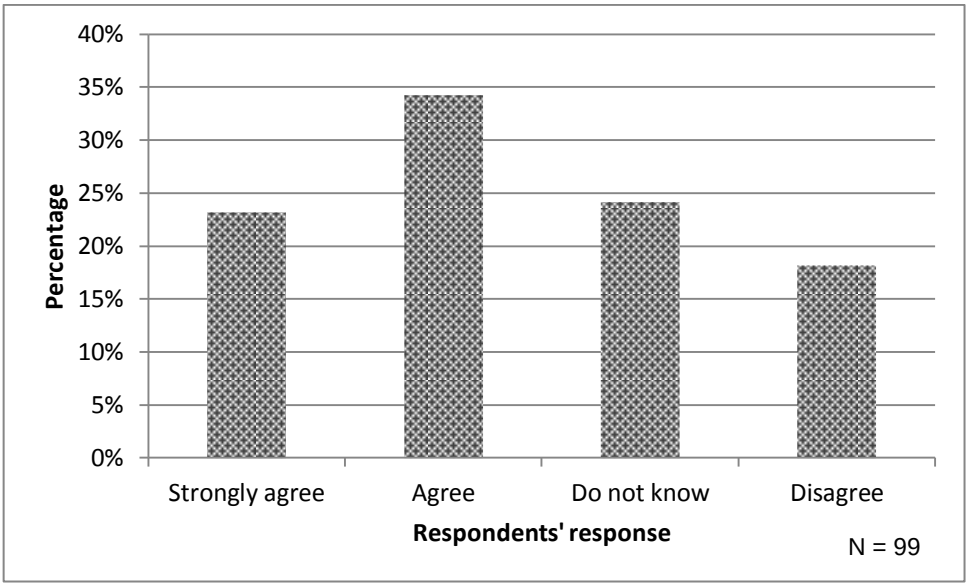

Figure 40: Necessity of a well-trained financial manager to a business

4.8.5 Use of banking facilities

Based on the data, 53 percent of the respondents reported that they deposit money into their bank accounts when they receive it compared to 38 percent who reported that they do not make the deposit, as shown in Figure 41. The rest do not know how to make use of banking facilities as way of safekeeping their money.

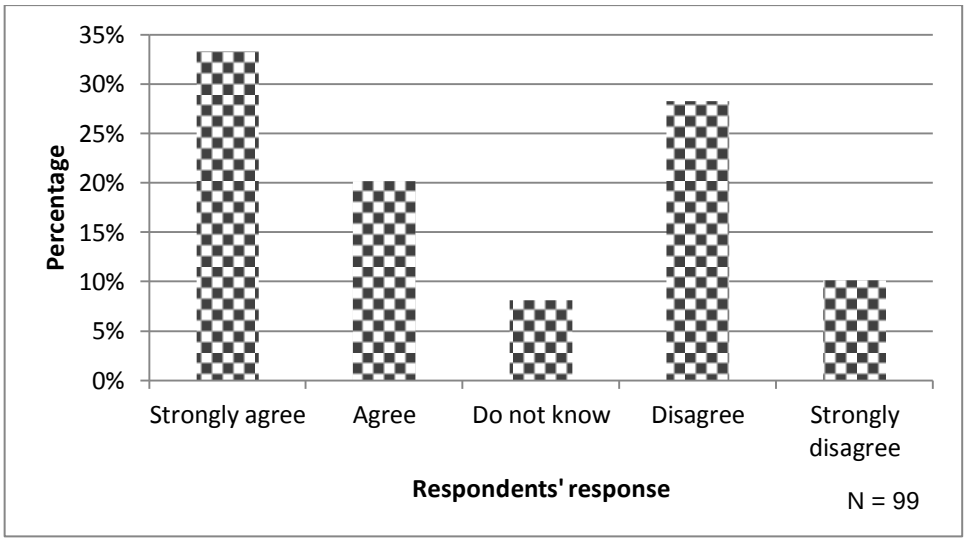

Figure 41: Use of banking facilities

4.9 Attitude to agriculture business

4.9.1 Possibility of making a living out of the agricultural business

The majority of the respondents (87 percent) reported that they could make a living out of agriculture compared with only one percent that claimed they could not. The rest were sceptical if one could earn a living solely from agriculture, as shown in Figure 42.

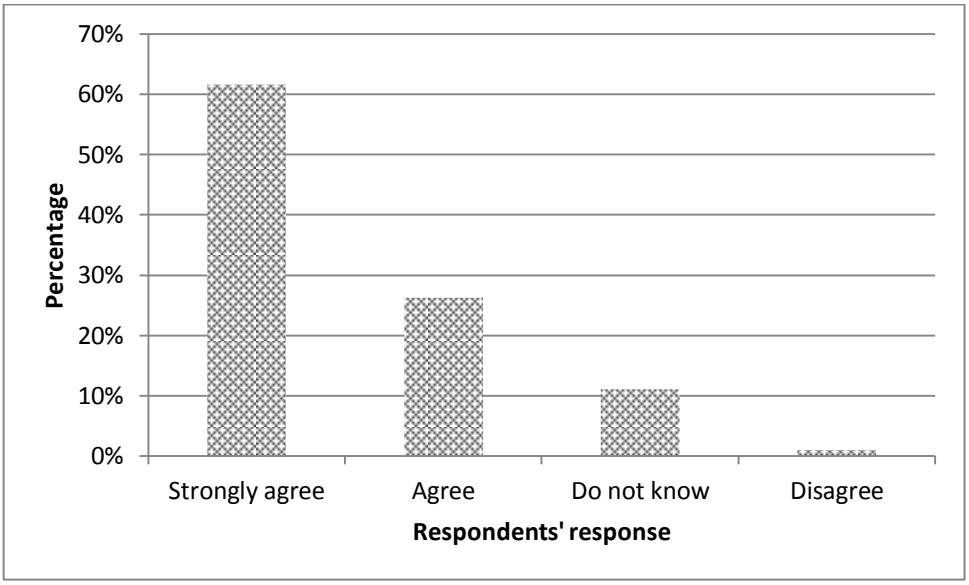

Figure 42: Possibility of making a living out of the agricultural business

4.9.2 Encouraging others to start an agri-business

While only three percent of the respondents would not encourage anyone to venture into agriculture, the majority of the respondents (90 percent) indicated that they would recruit more people to join the farming industry, as shown in Figure 43. However, some respondents (seven percent) are not sure if they would exhort anyone to form part of the agriculture industry.

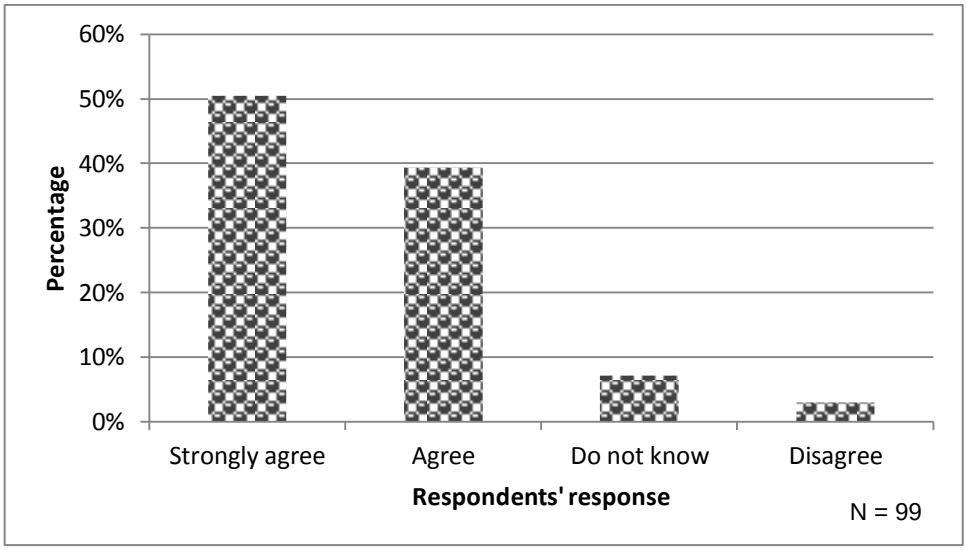

Figure 43: Encouraging others to start an agri-business

4.9.3 Whether fulltime commitment to agriculture is the key to success

Significantly, 94 percent of the respondents claimed that fulltime commitment to agriculture is the key to success whereas six percent were not sure, as shown in Figure 44.

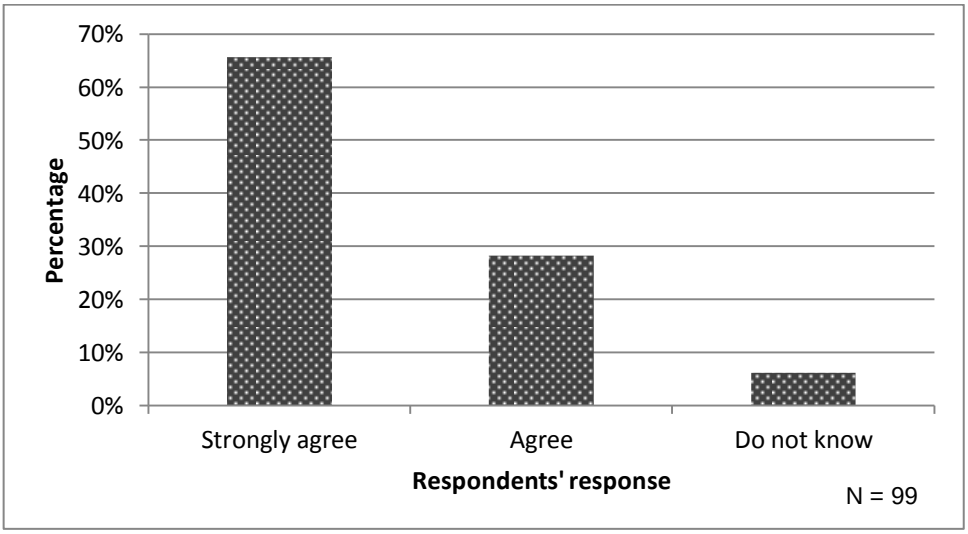

Figure 44: Whether fulltime commitment to agriculture is the key to success

4.9.4 Importance of agro-processing in agricultural business

The majority of the respondents (82 percent) appreciate the important role played by agro-processing in the development of agricultural businesses, while 18 percent differ in opinion, as shown in Figure 45.

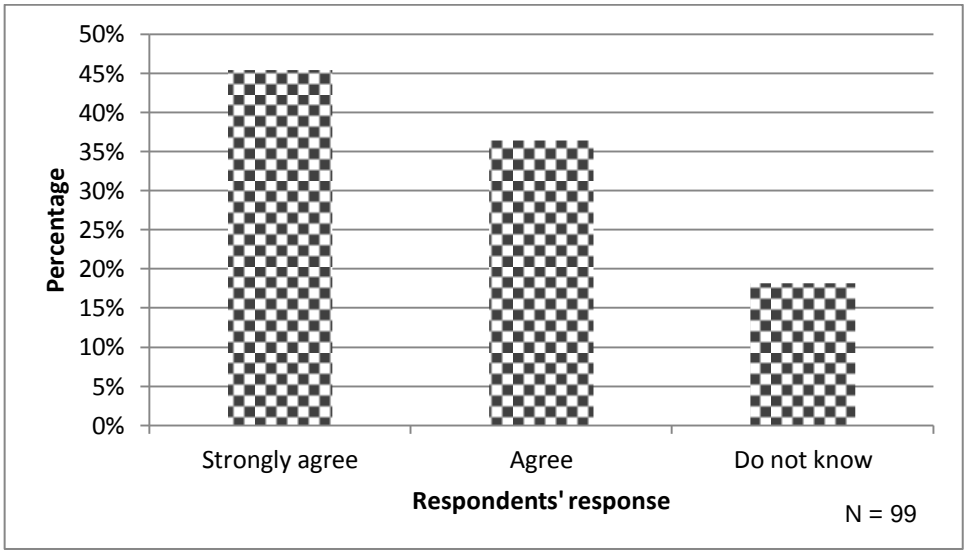

Figure 45: Importance of agro-processing in agricultural business

4.9.5 Importance of on-going professional development in agriculture

Almost all respondents (98 percent) reported that it is necessary to receive agricultural training on an on-going basis, as shown in Figure 46.

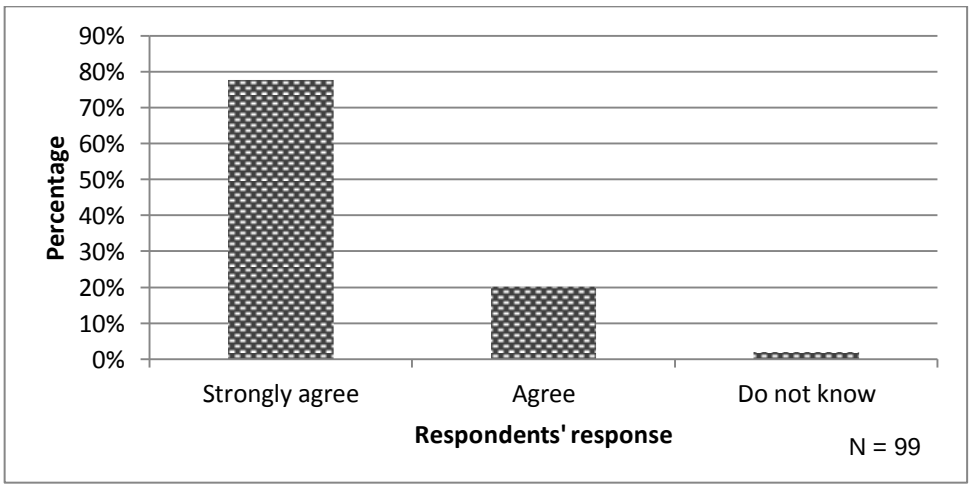

Figure 46: Necessity of receiving agricultural training on an ongoing basis

4.9.6 Consideration for further agricultural studies

The majority of the respondents (98 percent) reported that they consider studying further to enhance their agricultural knowledge, as shown in Figure 47.

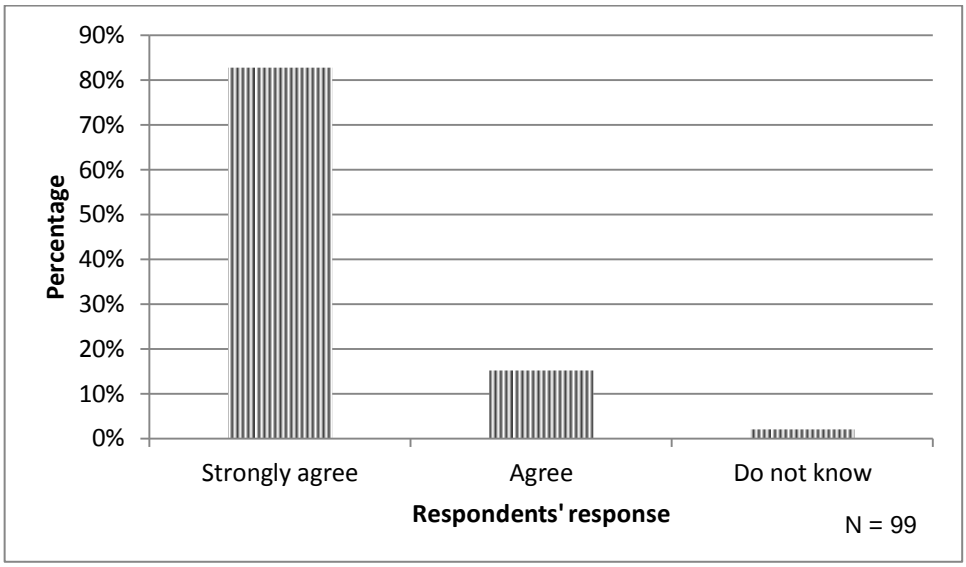

Figure 47: Consideration for further agricultural studies

4.10 Results pertaining to Hypothesis 1

H1: Enterprise management skills have no impact on the farmer's ability to commercialise.

In testing the influence of enterprise management skills on the farmers' ability to commercialise, the odds ratio in favour of commercialising was as the dependent variable, regressed against six explanatory variables. These explanatory variables were strategic management as part of farming enterprise, strategic planning as part of enterprise management, clear definition of organisation's vision, communication of organisation's goals and objectives to all, team work, and the knowledge of competitors. Results are summarised in Table 1:

Table 1: Regression results for an assessment of the impact of management skills on the farmers' ability to commercialise

Variable	Coefficient	Standard Error	z-Statistic	Probability
Strategic Management as part of farming enterprise	0.455733	0.319622	1.425849	0.1539
Strategic planning as part of enterprise management	-0.840305	0.357772	-2.348718	0.0188**
Clear definition of organisation's vision	-0.246900	0.275293	-0.896862	0.3698
Communication of organisation's goals and objectives to all	1.426305	0.448973	3.176818	0.0015***
Team work	-0.432908	0.281093	-1.540090	0.1235
Knowledge of competitors	0.015744	0.328918	0.047867	0.9618

* significant at 10%, **significant at 5%, ***significant at 1%

In analysing the enterprise management skills that are crucial to black farmers in Zululand District Municipality of KwaZulu Natal, only two dependant variables were found to be significant. Absence of strategic planning as part of enterprise management was found to be significantly inversely correlated with the probability of farmers to commercialise. The ability of farmers to communicate their organisation's goals and objectives to all was also found to have a significant positive impact at a one percent level on the farmer`s possibility to grow commercially. The rest of the explanatory variables were found to pose insignificant influences on the farmers' probability to commercialise successfully according to the data available.

4.11 Results pertaining to Hypothesis 2

H2: Marketing skills are not essential for commercialising an agricultural enterprise.

In determining the marketing skills that are crucial for commercialising agricultural enterprises, the odds ratio in favour of commercialising was regressed against six

marketing variables. The marketing variables that were included in the model as the explanatory variables were, beforehand knowledge of the market, availability of systems to help farmers reach the target market, promotion of own brand, competitive pricing of produce, ease of market access and the farmers understanding of the market. The results are summarised in table 2:

Table 2: Regression results for marketing skills that are essential for commercialising an agricultural enterprise

Variable	Coefficient	Standard Error	z-Statistic	Probability
Beforehand knowledge of market	-0.546302	0.225110	-2.426827	0.0152**
Availability of systems to help reach the target market	0.208204	0.250308	0.831789	0.4055
Promotion of own brand	0.658643	0.293780	2.241960	0.0250**
Competitive pricing of produce	-0.202467	0.278531	-0.726910	0.4673
Market access	0.529488	0.209407	2.528508	0.0115**
Understanding the market	-0.498085	0.258060	-1.930113	0.0536

* significant at 10%, **significant at 5%, ***significant at 1%

In analysing marketing skills that are necessary for the success of black farmers, three variables were found to be significant at a five percent level. Table 2 shows that there is a significant negative relationship between the farmers' inability to know their market beforehand, and the probability that they will succeed in commercial agriculture. Table 2 also shows a significant positive correlation between farmers' ability to promote their brand and the probability of them running successful commercial enterprises. The results show a positive relationship between farmers' ease of access to markets and their ability to commercialise.

4.12 Results pertaining to Hypothesis 3

H3: Whether an agricultural enterprise is commercial or subsistence unaffected by the level of production skills that the farmer possesses.

In assessing whether there are production skills that affect the farmer's possibility to commercialise, the odds ratio in favour of commercialising was regressed against a number of production related variables. The following were considered as explanatory variables, alternating crops according to seasons, soil and climate, purchase of input far ahead of planting, knowledge of what to plant when the season starts, producing according to market needs, supplying agricultural produce on time, and understanding of global trends in agricultural production. The results are summarised in Table 3.

Table 3: Regression results for production skills that are essential for commercialising an agricultural enterprise

Variable	Coefficient	Standard Error	z-Statistic	Probability
Alternating crops according to seasons, soil and climate	-0.546302	0.225110	-2.426827	0.0152**
Purchase of input far ahead of planting	0.208204	0.250308	0.831789	0.4055
Knowledge of what to plant when the season starts	0.658643	0.293780	2.241960	0.0250**
Producing according to market needs	-0.202467	0.278531	-0.726910	0.4673
Supplying agricultural produce on time	0.529488	0.209407	2.528508	0.0115**
Understanding of global trends in agricultural production	-0.498085	0.258060	-1.930113	0.0536*

* significant at 10%, **significant at 5%, ***significant at 1%

In analysing the production skills that affect the commercialising potential of farmers, four variables were found to be significant at five percent and 10 percent. There is a negative relationship between the farmers' reluctance to practice conservation agriculture (for example crop rotation) and their commercialising prospects. Knowledge of what to plant when the season starts was found to exert a positive influence on the farmers' probability to commercialise successfully. Timely supply of produce to the market also has a positive correlation with the probability of the farmers to run a thriving commercial business. Misunderstanding

of global trends in agriculture correlates negatively with the possibility to commercialise.

4.13 Results pertaining to Hypothesis 4

H4: The degree to which the farmer can or cannot fully utilise their farm infrastructure does not affect the enterprise`s commercialisation potential.

In assessing the impact on commercialising potential of the farmers, their infrastructural utilisation capabilities were regressed against the odds ratio in favour of commercialising. However, according to the data available, the results in Table 4 show no significant relationships among all investigated parameters.

Table 4: Regression results for infrastructural utilisation against enterprises' commercialising potential

Variable	Coefficient	Standard Error	z-Statistic	Probability
Adequacy of infrastructure in the farming venture	-0.134258	0.232992	-0.576236	0.5645
Full utilisation of infrastructure	0.084685	0.213915	0.395884	0.6922
Sufficiency of money to invest in infrastructure	0.268194	0.282639	0.948891	0.3427
Importance of maintaining farm infrastructure	0.243449	0.247507	0.983601	0.3253
Linking infrastructure to production	-0.226312	0.275916	-0.820222	0.4121
Adequacy of planting equipment	-0.077879	0.223504	-0.348447	0.7275

4.14 Results pertaining to Hypothesis 5

H5: Access to and the ability to utilise ICT facilities does not determine whether a farmer will go the commercial or subsistence route.

The commercialising potential of the farmers versus their command of ICT facilities was analysed by regressing the odds ratio in favour of commercialising

against six dependant variables. The six ICT related explanatory variables considered were, availability of ICT for agricultural enterprises, existence of adequate information technology skills base, access to public and private websites for information sources, access to public and private information sources, information sharing among colleagues in a business venture and capacity building initiatives to enhance staff ICT capabilities.

Table 5: Regression results for ICT skills essential for farmers' commercialising potential

Variable	Coefficient	Standard Error	z-Statistic	Probability
Availability of ICT for agricultural enterprises	0.593828	0.216267	2.745806	0.0060***
Existence of adequate information technology skills base	0.014988	0.186991	0.080155	0.9361
Access to public and private websites for information sources	-0.108051	0.222513	-0.485595	0.6273
Access to public and private information sources	0.211561	0.287928	0.734770	0.4625
Information sharing among colleagues in a business venture	-0.339998	0.239605	-1.418993	0.1559
Capacity building initiatives to enhance staff capacity abilities	-0.313481	0.237345	-1.320780	0.1866

* significant at 10%, **significant at 5%, ***significant at 1%

Table 5 shows that only one ICT variable was found to have a significant impact on the commercialising potential of farmers at the one percent level. According to the results in Table 5, adequacy of ICT on farms is positively correlated with the probability of the farmers to commercialise. The rest of the explanatory variables did not show significant impact on the dependant variable even up to the 10 percent level.

4.15 Results pertaining to Hypothesis 6

H6: The extent of the farmer's financial knowledge does not have an influence on their ability to commercialise their farming enterprises.

The influence of the farmer's financial management skills on their possible commercialisation was analysed by regressing the odds ratio in favour of commercialising against a number of financial related dependant variables. The explanatory variables considered included, adequacy of financial support for businesses, ease of access to funding, farmer's direct involvement with the business' finances, performance of agricultural-based ventures against source of start-up capital, availability of a well-trained financial manager to a business, and use of banking facilities. The results are shown in Table 6.

Table 6: Regression results for financial skills that are essential for commercialising an agricultural enterprise

Variable	Coefficient	Standard Error	z-Statistic	Probability
Adequacy of financial support for business	0.214987	0.234994	0.914862	0.3603
Ease of access to funding for business	0.376411	0.217707	1.728979	0.0838*
Farmers' full involvement with the business' finances	0.038783	0.214684	0.180649	0.8566
Performance of agricultural-based ventures against source of start-up capital	-0.134238	0.231247	-0.580496	0.5616
Availability of a well-trained financial manager to a business	-0.497494	0.242581	-2.050834	0.0403**
Use of banking facilities	-0.212926	0.162842	-1.307562	0.1910

* significant at 10%, **significant at 5%, ***significant at 1%

The analysis of the financial factors that affect the commercialising potential of farmers found two variables posing significant impact on the probability of farmers to commercialise. Ease of access to funding for businesses pose a significantly positive impact on the farmers likelihood to commercialise, at the 10 percent level.

The absence of a well-trained financial manager in an agri-business and the possibility of the farmers commercialising were found to have a significant negative relationship at five percent.

4.16 Results pertaining to Hypothesis 7

H7: There is no relationship between the farmer`s attitude towards agriculture and the possibility of them commercialising.

The relationship between the farmers' attitude towards agriculture and their probability to commercialise was examined by regressing the odds ratio in favour of commercialising against six attitudinal dependant variables. The results of the regression are shown in Table 7, where none of the investigated variables portrayed a significant correlation with the dependant variable.

Table 7: Regression results for farmers' attitude against enterprises' commercialising potential

Variable	Coefficient	Standard Error	z-Statistic	Probability
Possibility of making a living out of the agricultural business	-0.008062	0.313133	-0.025747	0.9795
Encouraging others to start an agri-business	0.203600	0.283371	0.718492	0.4725
Whether fulltime commitment to agriculture is the key to success	-0.001666	0.384875	-0.004328	0.9965
Importance of agro-processing in the agricultural business	0.362474	0.263541	1.375401	0.1690
Importance of on-going professional development in agriculture	-0.420951	0.437919	-0.961253	0.3364
Consideration for further agricultural studies	0.185057	0.483636	0.382636	0.7020

4.17 Conclusion

This chapter presented the findings of the study. Generally, respondents in the study demonstrated a good understanding of the various aspects of agribusiness such as the importance of on-going professional development, the value of investing in infrastructure for their businesses, the importance of developing a brand for their business and the importance of hiring a well-equipped financial manager, among other aspects. However, there are gaps among respondents regarding ICT, in terms of accessibility, utilisation and suitability. This is a major drawback to agribusiness entrepreneurs as it has the potential to limit their ability to maximise their production capacities due to limited information access. The next section discusses the results of the study.

CHAPTER 5: DISCUSSION OF THE RESULTS

5.1 Introduction

The study sought to gain insights into the entrepreneurial skills required by South African black farmers. This section discusses the findings in detail according to themes specified.

5.2 Demographic profile of respondents

According to the findings of the study, slightly over half of the respondents in the sample had a non-agricultural education background, with the majority having below matric education level. They were youthful, most of them between the ages of 22 and 34 years. This profile of the respondents portrays a populace largely unprepared to undertake the responsibilities that commercial farming requires. In summary, they are largely youthful, inexperienced in commercial farming and uneducated with relevant studies. One can argue that due to this background, chances for this populace to make a significant contribution through commercial farming are limited. A turnaround strategy is needed so that a significant intervention is made by the government, in collaboration with the private sector and institutions of higher learning to offer targeted services, such as appropriate training, financial resources and infrastructural development to mention a few. This should help this group of emerging entrepreneurs to be competitive at all levels of the economy, beginning locally, then nationally and ultimately globally.

Statistically, a large number of South African youth is less interested in farming (World Bank, 2007). This situation is further complicated by the fact that most of the South African black commercial farmers are in rural areas, located in provinces such as KwaZulu Natal, Eastern Cape and Limpopo. This rural dynamic makes it challenging for these farmers to access most of the economic advantages that their urban counterparts relish. To inspire young people to be interested in agriculture in general and commercial farming in particular, strategic policies must be used as drivers for encouraging the youth to see farming as a

career and productive industry (FANRPAN, 2013). However, systemic bottlenecks such as lack of appropriate agricultural information and lack of visible change from subsistence farming to commercial farming with clear support are some of the factors deterring young people from engaging in agriculture. Although the government has made a tremendous effort in enacting suitable legislation and progressive policies in the agricultural sector, with a focus on young people, much more work is still needed, especially with regard to influencing their mind-set towards agriculture.

5.3 Relationship between financial skills knowledge and efficient commercial farming enterprise

Black commercial farmers in the sample reported that agri-business ventures worked well when they had own capital and has a well-trained financial manager to take care of the financial matters of the business professionally. This finding indicates that even those commercial farmers with little or no agriculturally related training understand the importance of possessing financial skills for efficient commercial farming enterprise.

Boakye (2014) contends that every entrepreneur regardless of the business sector they operate in must acquire the pre-requisite financial knowledge for successful enterprises. This is important to reduce the risk of failure of the enterprise. It helps limit business capital exposure to negative economic fall-outs due to bad financial acumen on the part of the entrepreneur. Saint (2005) reinforced this point, stressing that for commercial farmers to prevent business failure or capital loss, they must possess adequate financial skills if they are to operate viable ventures.

According to McElwee (2005), a study of farmers in Finland found that farmers with financial skills had competitive advantage over other farmers in that they had:

- Profitable production that was largely associated with continuous follow-up production, incomes and expenditures;
- Astute problem-solving skills;

- Goal-oriented operation;
- Clear vision of where they wanted their enterprise to be in a specified period of time; and
- Proper utilisation of recent information that is relevant to their own circumstances and needs;

Using the above information as a base, South African black commercial farmers ought to acquire financial skills that will propel their enterprises to enviable heights of commercial viability. This acquisition must be seen as an imperative and a necessity rather than a compliance issue.

5.4 Influence of farmers' personal skills in operating successful commercial farming enterprises

As far as the findings of study are concerned, most of the respondents had non-agricultural type of education with below matric education background. Briefly, the respondents lacked the necessary pre-requisites to run viable commercial farming ventures. Empirical evidence suggests that the skills to improve productivity, increase adaptability to deal with change and facilitate diversification of livelihoods to manage risks and increase competitiveness are at a premium in rural areas. Providing these skills effectively is one key challenge in promoting commercial farming in rural areas. This is mainly because there exists a range of contextual factors such as, access to training, access to information, access to financial resources, illiteracy, poor rural transport infrastructure and inadequate entrepreneurial training, which prevents most South African black commercial farmers from competing effectively in the sector. These are factors that need to be addressed.

According to Barwa (2003), commercial farmers with appropriate training in agriculture have significant benefits in the overall business venture. Davis and Rylance (2005) contend that appropriate agricultural training is a necessary pre-requisite in influencing commercial farmers to think entrepreneurially. The authors further argue that with such knowledge, commercial farmers are able to analyse

their markets, use that knowledge to produce products that match their market needs. According to Collett and Gale (2009), commercial farmers equipped with the necessary farming skills are able to leverage key business networks to their advantage, whereby they are able to expand their market outside of their immediate environment.

South African black commercial farmers must endeavour to gain appropriate agricultural information if they are to operate viable commercial farming enterprises. However, personal skills alone are not adequate to make significant influence in the agribusiness sector.

5.5 Perceived farmers' risk-taking and business management skills

Given that the majority of the respondents in the sample had a non-agricultural type of education and below matric level of education, signifies a certain measure of risk venturing into commercial farming with little know how. While this kind of risk taking is not entirely dismissible, in order to maximise the benefits of venturing in a knowledge-driven enterprise, it is imperative that all practitioners in the sector have a minimum knowledge of business management skills.

Palmer (2007) emphasises that while there is a positive relationship between risk-taking and possession of requisite skills such as business, marketing and financial skills, commercial farmers with these set of skills lead thriving business ventures. However, the Inter-American Development Bank (IDB, 2000) report indicates that while risk-taking skills are important, they are however not enough to guarantee successful commercial farming businesses unless conditions for deployment of learnt skills are created for farmers in the sector. Thus, risk-taking goes hand in hand with acquisition of critical business skills and an appropriate business environment for commercial farmers to maximise their return on investment (Kaufman & Martin, 2000).

5.6 Relationship between farmers' own pro-activeness and entrepreneurial competitiveness in agribusiness

The role of a farmer in South Africa is changing very rapidly, as farmers have to develop new sets of skills and business acumen necessary to remain competitive in a hostile business environment. According to Vettas (2006), there is pressure for farmers to become all-round entrepreneurs in order to be competitive higher up the supply chain. Therefore, farmers ought to understand that farming is not a franchise; it is an occupation anyone can make a living from and become successful. Beedell and Rehman (2000) contend that in order to understand the phenomenon of pro-activeness and entrepreneurship it is necessary that farmers' attitudes and motivation be at an all-time high in this ever changing business environment.

Pro-activeness in this sense implies the ability of a farmer to be sensitive to his/her business environment, understand its dynamics and produce products that match the needs of the market (Meena, Jain & Meena, 2008). It also implies that farmers must have the ability to position their enterprises in a way that is aligned to the market needs. This calls for excellent leadership and managerial capabilities that should help an enterprise achieve clear, pre-determined and realistic goals (Covin et al, 2006). According to Schiebel (2005), proactive farmers have an ability to spot business opportunities in markets that they can exploit, even if it means transforming their operations to maximise on the opportunity. On his part, Okunade (2007) posits that proactive farmers possess strong relationship building skills; they are able to identify strategic relationships that would enhance the value of their enterprise. Further, de Lauwere et al. (2006) contend that proactive farmers continuously seek learning opportunities in order to improve aspects of their enterprises thereby help enhance their enterprise' value.

It is evident that pro-activeness is a necessary ability that South African black commercial farmers must develop if their businesses are to remain competitive in the long run. It is both a skill and a discipline, which are not mutually exclusive; they have to go together. This means that these farmers will have to harness a

particular mind-set to enhance their pro-activeness acumen, shift from a ‘wait-to-be-done-for-us’ attitude to one of ‘I-have-to-make-it happen’. This can be done in a variety of ways such as enrolling for particular training that will add value to their entrepreneurial acumen, or engaging in self-help networking groups where like-minded entrepreneurs meet often to explore possibilities and strategies to increase the market share of their produce. They could also explore markets to exhibit their produce without depending on government support, or identify strategic business relationships and pursue them with an intention to learn from other successful commercial farmers. Pro-activeness and successful commercial farming are synonymous with each other.

5.7 Commercial farmers’ own innovativeness and entrepreneurial competitiveness in agribusiness

Innovation is a critical aspect to any thriving business, regardless of the sector. According to McElwee (2005), innovative commercial farmers are constantly searching, developing and trying new products, markets and methods. Inherent in these dimensions is an expectation that innovative entrepreneurs are constantly engaged in active, dynamic and continual pursuit of opportunities.

Innovation is largely an attitude of mind, one that creates something from nothing or enhances what is already in existence (Kahan, 2013). Innovative commercial farmers respond to the changing farming environment using strategies to enhance the value of their products, and services as well as giving them a competitive advantage over other farmers (McElwee & Robson, 2005). Moreover, innovative commercial farmers are also risk takers in that they identify opportunities in the market and take the necessary steps to position their businesses appropriately to maximise such opportunities to make their farming enterprises profitable (Palmer, 2007).

Therefore, South African black commercial farmers need to be innovative in their own areas of speciality and create opportunities that will distinguish them from all other farmers. They must constantly be looking out for opportunities that will

enhance their business operations in the most efficient and effective ways. Being innovative is important especially in the current hostile business environment with fierce competition. Innovation for them may take the following forms (Ujwary-Gil, 2013):

- Diversification of production and exploration of other products that would enhance the value of their enterprises in the market;
- Risk-taking to relocate their businesses, if such a move means improving their market share. They are decisive, especially in complex competitive business environments;
- Seizing every moment and opportunity to make the best of it;
- Efficiency in utilising resources for maximum returns on investments; and
- Embracing of new technology faster in order to adapt to a changing market and economy.

5.8 South African black commercial farmers efficiencies in production

Generally, commercial farmers are always keen to explore ways to improve efficiency, cut-costs and increase productivity (Kahan, 2013). This efficiency improvement may take the form of changing the production process to one that is less costly; acquiring infrastructure that costs less while giving the same or better production results. Another option for the farmers could be sharing machinery to reduce ownership and benefit from better mechanical technology (Collett & Gale, 2009). In these kinds of arrangements, farmers agree to pay their own running costs and share repair and maintenance costs in proportion to their land use,

As such, South African black commercial farmers must strive to harness, develop and nurture relationships among each other so that mutually beneficial arrangements, such as the one above, can occur. This level of group ownership has its own merits and demerits. However, when group ownership is done in an atmosphere of transparency and trust, it yields extraordinary results for all involved. This is important for South African black commercial farmers, who from

the findings of the results, do not share information with each other and hence do not connect with others genuinely. This attitude is detrimental to the entire sector as it limits its impact and cuts off possibilities for growth in many dimensions.

5.9 Discussion pertaining to Hypothesis 1

H1: Enterprise management skills have no impact on the farmer's ability to commercialise.

This study found that there is a significant negative relationship between the lack of strategic planning and the possibility of farmers to commercialise. The fact that the coefficient for this variable was found to be significantly different from zero shows that possessing strategic planning skills is crucial for a thriving agribusiness. The negative correlation indicates that farmers who lack strategic planning in their enterprise management have a greater probability to fail in their quest to commercialise. In other words, the more the farmers apply strategic planning in their businesses, the less probability there is to fail in their commercial ventures.

The ability of farmers to communicate their organisation's goals and objectives to all was found to have a significant positive impact on the farmer`s possibility to grow commercially. While having a clear vision of the organisation alone was found to be insignificant, it was noted that communicating the vision is far more important. Sharing the organisation's vision within the company (farm) increases the possibility of success since it gives every team member a clear understanding of what the organisation seeks to achieve.

5.10 Discussion pertaining to Hypothesis 2

H2: Marketing skills are not essential for commercialising an agricultural enterprise.

This study found a significant negative correlation between farmers' inability to identify their markets beforehand and their possibility of success in commercial

agriculture. This means that the more the farmers are unaware of their markets before planting, the less likely that they will prosper in commercial agriculture. In other words, those farmers who go on to plant before they know where to sell their produce are less likely to thrive in commercial farming since there is a greater chance of them not meeting the specific needs and specifications of those markets.

The study also found a positive correlation between the farmer's ability to promote their brand and the probability of them running successful commercial enterprises. This indicates that the more the farmers are able to market their brand, the better their chances are to succeed as commercial entities. Farmers who do not strive to make their brands known to the market find it difficult to commercialise fruitfully. Customers usually want to deal with suppliers whom they trust and brand promotion helps gain the trust of these clients.

The study likewise found that the ease with which the farmers access the markets have a significant and positive impact on their ability to commercialise fruitfully. The more accessible the markets, the better the chances of black farmers blossoming in their endeavours to run commercial agricultural enterprises.

5.11 Discussion pertaining to Hypothesis 3

H3: Whether an agricultural enterprise is commercial or subsistence is unaffected by the level of production skills that the farmer possesses.

The study found an inverse association between the farmers' averseness to conservational agricultural practices and the probability of them commercialising. According to the results, the more the farmers diverge from good agricultural practices, the less likely they are to produce enough to allow them to commercialise. These results indicate the importance of farming practices such as crop rotation in maintaining the productive capacities of farmland and thus allow for sustainable output that can meet the market demands.

The study also established that knowledge of what to plant when the season starts has a positive relationship with the farmers' probability to commercialise. Farmers who have an understanding of the seasons and a better knowledge of the kind of crops adaptable to the area in which they farm have a better chance to produce optimally thus allowing them bumper harvests and marketable surpluses.

Another positive correlation was detected between the farmers' odds to commercialise and their ability to supply the market on time. Farmers who are consistent at delivering their produce on time have a better chance to lead successful commercial ventures. Markets usually prefer to deal with reliable suppliers. Therefore, the more timely a farmer can convey their produce to the market the better their chances to run a thriving commercial business, thus explaining the positive correlation.

The study found a negative relationship between the level of misunderstanding of global trends in agriculture and the possibility to commercialise. What this means is that farmers who have a minimal understanding of their industry's global indicators are less likely to succeed in commercial agriculture. A misunderstanding of global agricultural trends means that the farmers may not be able to identify and take advantage of new opportunities. Without information on, for example, historical productions and prices these farmers may find it difficult to properly predict future prices for planning reasons regardless how important this aspect can be in running a commercial farm. The lack of understanding of global trends may imply that farmers cannot quickly react to the ever-changing business environments in which they find themselves.

5.12 Discussion pertaining to Hypothesis 4

H4: The degree to which the farmer can or cannot fully utilise their farm infrastructure does not affect the enterprise`s commercialisation potential.

Based on the data available, this study fails to reject the null hypothesis that there is no significant relationship between farm infrastructure utilisation and the farmers' commercialising potential. This is because all the calculated z-values

failed to exceed the z-critical values for rejection of the null hypothesis across all infrastructural utilisation variables. However based on experience we cannot fully dismiss the importance of installing, fully utilising and maintaining farm infrastructure in commercial agriculture.

5.13 Discussion pertaining to Hypothesis 5

H5: Access to and the ability to utilise ICT facilities does not determine whether a farmer will go the commercial or subsistence route.

The study established a positive correlation between ICT sufficiency on farms and the farmers' possibility to commercialise. The more the farmers adopt electronic means to store, retrieve, manipulate, transmit or receive digital data, the better are their chances to go commercial. The use of computer technology in irrigation, soil sampling, communication, research and so on, improve the efficiency of agribusinesses and thus improve their prospects of producing at a scale large enough to allow them to commercialise.

5.14 Discussion pertaining to Hypothesis 6

H6: The extent of the farmer's financial knowledge does not have an influence on their ability to commercialise their farming enterprises.

The study found a positive correlation between access to funding for businesses and the farmers likelihood to commercialise. The easier the farmer gets financial support, the better their chances are to invest in sufficient and good quality implements and inputs that allow them to produce enough to meet the market demands.

The study also found an inverse correlation between the unavailability of a financial manager on a farm and the possibility of a thriving commercial agribusiness on that same farm. Not having a properly trained finance manager on a farm reduces the chance of a successful commercial undertaking on that respective farm due possible maladministration of funds.

5.15 Discussion pertaining to Hypothesis 7

H7: There is no relationship between the farmer`s attitude towards agriculture and the possibility of them commercialising.

Based on the data available, this study fails to reject the null hypothesis that there is no significant relationship between the farmers' attitude towards agriculture and their possibility to commercialise. This is because all the calculated z-values failed to exceed the z-critical values for rejection of the null hypothesis across all attitudinal variables. Based on experience however, the importance of having a positive attitude in pursuit of a successful business cannot be disclaimed.

5.16 Conclusion

This chapter discussed the empirical results of this study and explained the relationships between the possibility to commercialise agriculturally and several entrepreneurial skills. The next chapter covers conclusions and recommendations.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This study was aimed at examining the challenges experienced by black entrepreneurs in the farming sector in South Africa. The central research objective was to unearth the principles required to integrate black farmer entrepreneurs into the South African mainstream economy so that they can actively contribute to economic development in the country. This chapter aims at giving the conclusions and recommendations based on the findings of the study.

6.2 Conclusions of the study

This study confirmed that some South African black farmers in the agribusiness sector lack sufficient knowledge on how to run commercial agricultural enterprises effectively. The study found that some farmers are deficient in entrepreneurial management skills regardless of their importance towards the success of agribusiness ventures. According to the findings of this study, farmers should be able to plan strategically for them to succeed in running their activities at a commercial level.

It can also be concluded that marketing skills coupled with adequate knowledge of the market for the product enhances agribusiness competitiveness. Marketing skills such as market characteristics and demands are crucial before the farmer can start production. Promoting their brands was also found to be an important marketing aspect of successful agro-entrepreneurship. The ease with which farmers access their markets is also an important prerequisite for thriving commercial agro-enterprises.

It is imperative for each black farmer to be productively efficient and it can be concluded from this study that farmers require production skills to make it in agricultural businesses. Production skills enhance the farmers' ability to supply the right qualities and quantities to the market. Farmers who apply good

agricultural practices and conservation farming are preferred, even on the international markets. This sparks the need for black farmers to improve this aspect of their husbandry if they are to lead thriving commercial entities. There is need as well for black farmers to seek a deeper and broader understanding of global agricultural trends before they engage in production so that they are up to date with current issues in the industry.

It can be concluded that ICT skills are paramount in modern day commercial agriculture. The study proved the need for farmers to acquire electronic means to store, retrieve, manipulate, transmit or receive digital data, to better their chances of success in their commercial undertakings. The use of computer technology in irrigation, soil sampling, communication, research and so on for instance, improve the efficiency of agribusinesses and thus improve their chances to produce at a scale large enough to allow them to commercialise.

It is important to have a sufficient grasp of financial issues related to agriculture if a farmer is to succeed in commercial agriculture. Skills such as bookkeeping and financial reporting are crucial in tracing the direction of a business venture on a day-to-day basis. Good financial management also enhances the sustainability of a farm and improves the farmers' understanding and realisation of their profit motives. It can be concluded that financial knowledge and skills as well as access to financial resources are critical for viable black African-owned commercial farming ventures.

6.3 Recommendations

In the light of the above discussion, the study recommends the following measures:

6.3.1 A workable entrepreneurial model for black farmers in Zululand District Municipality

While there may be some generic factors that are important for an entrepreneur to succeed in business, those that require urgent attention may vary from one

businessperson to another. The case of black farmers in the Zululand District Municipality presents yet another unique society of potential entrepreneurs who as a business community have their own special needs. Figure 48 summarises the proposed entrepreneurial model that was developed in line with the findings of this study in an attempt to correct skills gaps in a quest to assist black farmers in the Zululand District Municipality to thrive in converting their farming enterprises to successful commercial ventures.

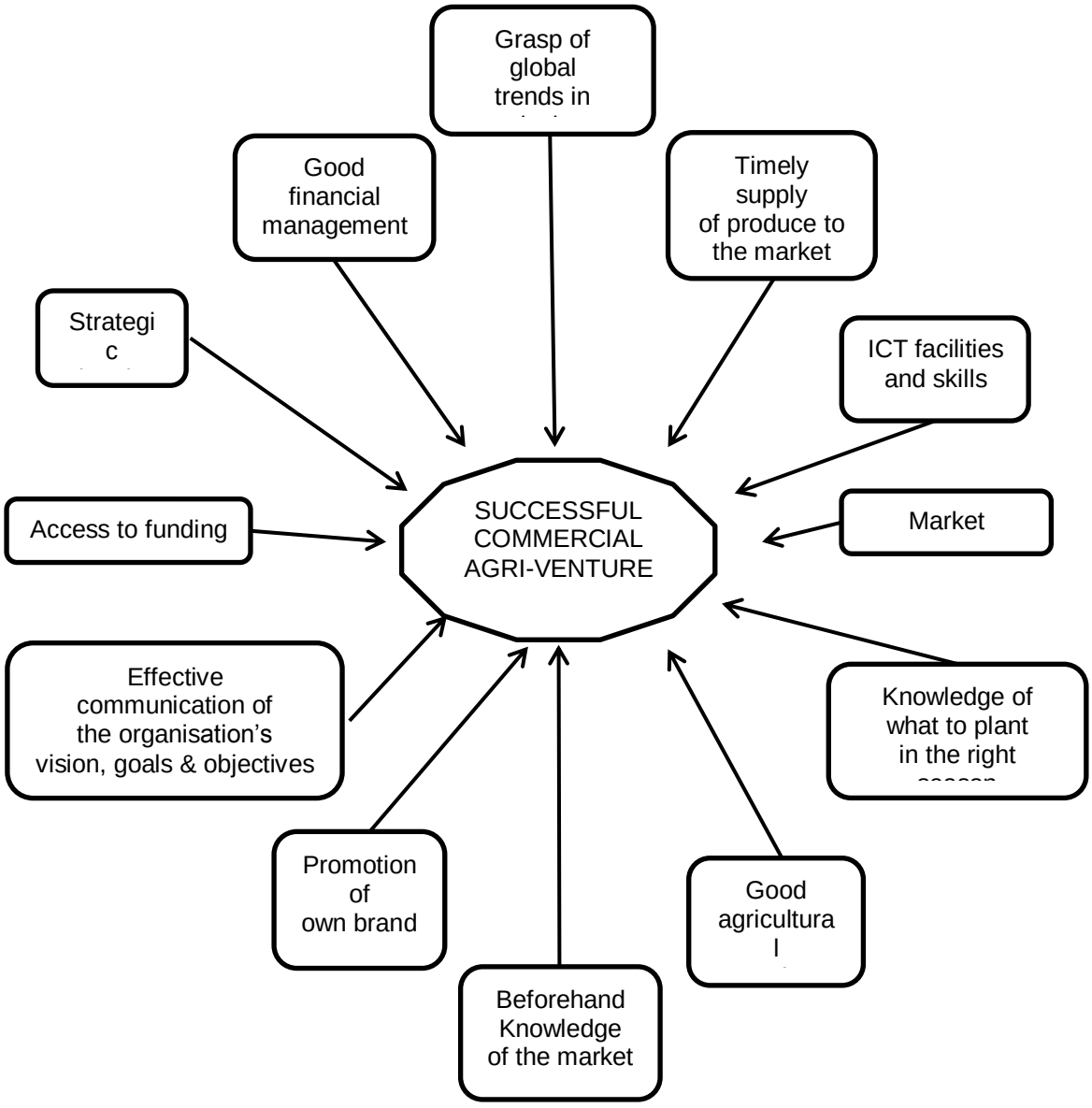

Figure 48: Proposed entrepreneurial model for black farmers in Zululand District Municipality

As shown in Figure 48, there is a wide range of skills that are ingredients for the success of black-owned commercial farming enterprises in the Zululand District Municipality. These skills were classified into broad categories, enterprise management, marketing competency, production proficiency, ICT, and financial management. It is suggested that black farmers be trained in areas such as strategic planning, effective communication, financial management, marketing research and management, conservation agricultural management, ICT management and supply chain management. In addition to training, the government is advised to foster partnerships with the private sector in improving the black farmers' access to funding, breaking their barriers to entry to both local, regional and global markets as well as installing modern infrastructure for development of the farms.

6.3.2 Building South African black farmers knowledge capacity through collaborations

Based on the findings of the study, the majority of the South African black commercial farmers possess non-agricultural education, which potentially limits their ability to compete effectively with their established white commercial farmer counterparts. In addition, the findings showed that they do not possess the essential financial and marketing skills, although they acknowledged their importance. This capacity challenge is further compounded by the fact that they do not have the requisite information technology skills as well as a general lack of access to the internet.

One way to address this challenge is for the government, together with the agricultural association of South Africa, to explore possibilities of collaborating with the private sector to provide South African black commercial farmers with essential business skills and knowledge. This should include the establishment of information hubs loaded with essential agricultural information, which farmers could access at a nominal or no fee. The motivation for this collaboration is to enhance farmers' own capacity to comprehend the complex and often dynamic

sector they operate in, with a view of increasing their ability to operate their enterprises more effectively and efficiently.

Moreover, the association of agricultural farmers of South Africa could partner with various agricultural and research institutes, based in the institutions of higher learning, to provide their members with technical skills. These could include basic financial literacy, marketing and business management skills as well as monitoring and evaluation skills, so that on a regular basis farmers can measure their own performance against a set of realistic and measurable goals with clear indicators. A composite of such essential skills is highly likely to improve their production capacities, enhance their understanding of their markets as well as promote the culture of on-going professional development as commercial farmers.

Black entrepreneurs operating in the farming sector require a cohesive approach in addressing the issue of skills. Among these, is the identification of already existing skills for persons such as agronomists, agricultural economists and, horticulturists. Once such a skills base has been identified, it must be harnessed and aligned with the trajectory of international skills base and developed to create the intellectual capital base. This base will serve the growth of black farmers from operating at subsistence levels to operating at a commercial scale, thus fast tracking the process towards taking advantage of global economy and integration into the 21st century agricultural economic methods.

6.3.3 Government to provide after-care support to South African black farmers

The majority of South African black commercial farmers do not share information among themselves. This is a concerning set back that largely limits their ability to compete effectively in the global market as well as denying them opportunities to interact with other players in the agribusiness sector including their own staff teams. It is imperative that the government, in partnership with the private sector, provide a range of after-care services such as structured interaction opportunities and other information exchange forums, specifically made for their needs. This move will create confidence among the farmers to interact and share their

experiences and challenges thereby learning from their peers. The move will create meaningful networking opportunities that might lead to enhanced collaboration of certain aspects of their businesses, which might result in higher returns on their investments, a positive spin for their businesses.

6.3.4 Establishment of an infrastructure development fund for South African black commercial farmers

As the findings of the study showed, the majority of the farmers lack adequate infrastructure for their enterprises. The government, through its Industrial Development Corporation as well as its private sector partners, could establish an infrastructure development fund to help farmers access finance for their business infrastructure. This is imperative for increased productivity due to better mechanisation by the enterprises.

However, this fund will need to be regulated by the government through the Department of Agriculture guided by a secretariat made up of representatives from the South African black farmers association and development finance institutions, among other key representatives. Essential controls and systems should be established to guide financing of the farmers' infrastructural requests as well as to ensure good financial governance and accountability.

6.3.5 Establishment of mentorship programmes for South African black commercial farmers

Mentorship is a necessary service needed for this group of farming entrepreneurs. Mechanisms should be set up in such a way that established commercial farmers provide complimentary mentorship to emerging farmers on a variety of aspects such as financial and business management, new business acquisitions and identification of new business opportunities and markets to mention a few. It is imperative to ensure complementarity regarding cultural and operational norms in an effort to aid meaningful value-add alliances within the sector among farmers themselves. This way, skills and techniques are passed on to the new generation

of commercial farmers thus ensuring long-term sustainability and viability of the sector.

6.3.6 Providing a financial safety net to South African black commercial farmers

Like any business group, South African black commercial farmers are vulnerable to various economic conditions that affect their financial bottom-line. As such, these farmers need to be financially supported on a regular basis to cushion them against global economic shocks that sometimes affect the local economy. As such, the government, through its infrastructural budget allocated to the Department of Agriculture, could set up a fund that aims to address this challenges as they happen, to ensure that no South African black farmers close down their business due to financial problems.

Similarly, organised formations such as the black Farmers Association and Agriculture SA can lobby the private sector and set up a financial safety net mechanism to introduce controls to formalise its operations. This type of initiative will boost the farmers' morale and confidence to persevere in their business, even in economic downturns. Overall, this is good for the local economy, for promoting sustainable economic development of the country and for ensuring a food secure nation.

6.4 Suggestions for further research

This study has contributed to the existing body of empirical knowledge that relates to South African black commercial entrepreneurship. Though the findings of the study cannot be generalised to other black commercial farming communities in the country, it provides an insight into the issues that South African black commercial farmers are grappling with. Similar studies can be repeated in other district municipalities, provinces, and the whole country or even abroad to check if similar results will be obtained. This will assist in the design of a model that is

relevant to addressing skills-based challenges of all previously disadvantaged farmers at a broader view.

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