

## An Investigation into Graduates' Perceptions of Entrepreneurial Opportunities at an Agricultural College

Saziso Ernest Madoda Keswa<sup>1</sup>, Professor S. Ngcobo<sup>2</sup>

<sup>1</sup>Graduate School of Business, Management College of Southern Africa (MANCOSA)

<sup>2</sup>Graduate School of Business, Management College of Southern Africa (MANCOSA)

Corresponding Author: Saziso Ernest Madoda Keswa

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**Abstract:** Graduates with the National Diplomas in Agriculture have experienced a shortage of employment opportunities in both public and private sectors. This has resulted in a need for such graduates to look into alternatives in terms of utilising their qualifications elsewhere. Most of the current students and graduates chose agriculture because of the love of it, while some chose agriculture because it was one of the careers they could just explore after matriculating. With dwindling opportunities in terms of formal employment the next best alternative was entrepreneurial agriculture which prompted this study. The study focused on students and graduates' perceptions regarding entrepreneurial agriculture as career prospects after having qualified as trained agriculturalists. This study had the following objectives: investigation of the possible reasons for successes and failures in entrepreneurial agriculture, weighing-up of graduates and students perceptions on entrepreneurial opportunities in northern KwaZulu-Natal and the understanding the reasons for students and graduates perceptions towards entrepreneurial agriculture. The questionnaire had 5 major themes of academic information, curriculum/content information, entrepreneurship learning scope, entrepreneurial development scope and entrepreneurial opportunities and challenges. Data obtained from 133 respondents made up of graduates and students was analysed, discussed and interpreted accordingly.

**Keywords:** Entrepreneurial agriculture, education, perceptions, students and graduates

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### I. Introduction

Agriculture students and graduates from a college in KwaZulu-Natal are currently facing the challenge of utilizing their knowledge and skills gained from the college after they have completed their national diplomas. The college, established in 1968, used to produce graduates that would be absorbed into the labour market as extension officers. But over the years the college's theme and focus has shifted towards producing students and graduates who will have to stand on their own by becoming farmers and agricultural entrepreneurs. This shift towards the production of entrepreneurs has been as a result of the drop in employment opportunities provided to graduates by the government. From the summit organised by the KwaZulu-Natal Department of Agriculture and Rural Development (KZN DARD) on the 19th of January 2016, it appeared that most recently qualified agriculture graduates in KwaZulu-Natal (KZN) are unemployed. This has prompted the Member of the Executive Council (MEC) for Agriculture and Rural Development in KwaZulu-Natal (KZN DARD), Mr Cyril Xaba, to emphasize the importance of developing opportunities for agriculture graduates in order to become farmers and agriculture entrepreneurs. Since the college's current students and graduates are the reason for the college's existence, then their perceptions, viewpoints and theoretical approaches towards the entrepreneurial opportunities determine their acceptance level of this invitation by the MEC. This study therefore sets to achieve the objective of whether the college is offering the right approach when it comes to exploring opportunities that are available in agriculture outside formal employment. The perceptions will therefore determine the extent to which both students and graduates associate their education with the entrepreneurial agriculture and to determine the direction to be taken by the college to prepare and structure its graduates for future roles in agricultural entrepreneurship.

#### 1.1 Research context: Background

Agriculture training has been going on for years and there are 11 colleges of agriculture in South Africa (SA) that offer 3-year courses that make a student qualify for a diploma certificate. The current courses offered by the college are the production courses and to a certain extent the agricultural economics courses where part of that course structure is in entrepreneurship. The question is whether that course is wide enough to cover the relevance of agricultural entrepreneurship and also if it is in line with what is happening in the business world? The primary objective of the college was to train students in agriculture, and home economics with special

emphasis on extension and rural development. The extension and rural development as emphasised could only be practised once the graduate is employed on a full-time basis by the employer who in this case was the government and other private sector employers. Even though the college through word of mouth emphasises the fact that it is training and will continue training farmers, the curriculum itself might still have areas of concern in as far as entrepreneurship is concerned. Entrepreneurship although being emphasised by the college plays a questionable role in the college curriculum. The college's approach seems to be purely focused on providing training for farming entrepreneurs. However, this approach might be viewed negatively by students and graduates themselves especially when there are still few employment opportunities available. Such limited employment opportunities might change their perceptions and somehow influence the way graduates and students view entrepreneurship in agriculture. Farming is an extensive operation, therefore, the targeted group of students and graduates from UThungulu District Municipality will be required to look into whether the northern KZN region comprising of UThungulu, Zululand, UMzinyathi and UMkhanyakude District Municipalities do offer enough entrepreneurial opportunities for them in relation to what the college offers. The entrepreneurial opportunities might be available, but the commitment level of the graduates and students to exploit them is unknown and that is what warrants this study.

### **1.2 The research problem**

Currently the state of the students' commitment towards their future in agriculture is not known. Their views on agriculture in general and the scope of the opportunities available to them is not known. If formal employment opportunities are limited, what alternatives are available for graduates? The views of both current students and graduates are of importance in determining levels of concern they have about opportunities in agriculture. The students will leave the college as graduates. In view of the above statement, the study will have to unearth the knowledge that students do have about entrepreneurship opportunities in agriculture. Furthermore, the concerns that students and graduates have will be revealed and the means to address them be known and tabulated.

### **1.3 Research questions**

- What are students and graduates' viewpoints on contributory factors leading to successes and failures when pursuing their goals of becoming entrepreneurs?
- What perceptions do the college's students and graduates hold towards the agricultural entrepreneurship and opportunities around Northern KZN?
- What are the reasons for the students and graduates' perceptions towards agricultural entrepreneurial opportunities?
- What recommendations can a study make to college management that can empower students with entrepreneurial principles and soft skills at the completion of the agricultural qualification?

### **1.4 Significance of the study**

This study for current and former college students is significant and for the college and its stakeholders in particular because it seeks to:

- Reveal the importance of emphasising the studies of entrepreneurship and entrepreneurial agriculture with the view to possibly improving on the curriculum;
- Analyse and find the right percentage to the whole population of the students and graduates that are prepared to be beneficiaries of all current government programmes towards the empowerment of up and coming agricultural entrepreneurs. Such information will be shared by the college and other stakeholders;
- Benefit the college management and administration in terms of restructuring the curriculum that will address the students' perceptions and again influence their thinking when they first get admitted at the college;
- Benefit the government authorities who will be in a position to understand what the impact of the call to prospective and future entrepreneurs will be;
- Enable the government to rightly allocate the resources to colleges and this one in particular that will help the graduates fulfil their ambition of becoming entrepreneurs in line with addressing the imbalances of the past;
- Further promote further investigation and expand the knowledge base given the current trend of land reform, as well as the failures of most of the farming programmes that have over previous years been run by previously disadvantaged individuals who did not have farming knowledge and expertise.

### **1.5 Conclusion**

Students and graduates of the college have ahead of them a dilemma where there are limited employability opportunities. The research problem suggests an alternative way of pursuing their agricultural careers through entrepreneurship.

## **II. Literature Review**

The agricultural entrepreneurial scenario is no different to most other entrepreneurial scenarios. Every year in South Africa a sizeable number of students register for their higher qualification education in agricultural sciences with the hope of being employed or becoming entrepreneurs. These institutions include the traditional research universities, universities of technology, technical and vocational education training colleges, colleges of agriculture, sector education and training authorities, as well as other non-profit organisations. Despite these entrepreneurial opportunities that are available it is, however, unclear about the commitment level of the graduates and students to exploit them. Mujuru (2014) states that agricultural entrepreneurship is a new concept in developing countries as opposed to the developed economies. Nieuwoudt, Henning and Jordaan (2015) echo the same sentiments that even though entrepreneurship receives good attention in developed economies of Europe, it is still a very new concept to the South Africa producers. It is a concept that might be new to South African academic circles as well. This would therefore make it essential, as the current study intends, to investigate entrepreneurial agricultural.

### **2.1 South African labour market and its role in entrepreneurial agriculture**

Mohr, Fourie and Associates (2008) describe the labour market as a link between potential suppliers (sellers) and potential demanders (buyers) of labour services, where these services are hired at a wage which is the price paid by the purchaser. For graduates the purchaser (employer) buys or hires the skill and knowledge at a price (salary). Archer and Chetty (2013) state that a major motivator contributing towards students' entrance into tertiary education is access to the labour market. Furthermore Archer and Chetty (2013) argue that qualifications from the institutions of higher education increase the chances of attaining employment. However, Archer and Chetty (2013) maintain that the South African graduates' unemployment rate stood at 12.5% which was half of the national figure of 25%. Pauw, Osthuizen and van der Westhuizen (2008) argued that rising South African tertiary unemployment was as a result of the shortage of skills in demand. Graduates were offering skills that are not so much in demand from the employers. Compared to other professions and skills, skilled agriculturalists employment decreased from 115,000 in Quarter 2 of 2010 down to 75,000 in Quarter 1 of 2011 (Department of Labour, 2011). The figures show the dwindling employment opportunities in agriculture.

### **2.2 Entrepreneurial agriculture defined**

Entrepreneurial agriculture is defined by Mujuru (2014) as entrepreneurship models and skills incorporation to farming business where farming is the art and science of using the land for growing crops and rearing animals. Entrepreneurial farmer is defined by Mujuru (2014) as an individual's ability to be capable of developing a profit-generating agricultural business in a dynamic economic environment.

### **2.3 Entrepreneur defined**

Nieuwoudt et. al. (2015) define an entrepreneur as an innovative risk-taker capable of providing a business venture initiative with finance be its own capital and borrowed capital or both with an aim of generating profit. Nieuwoudt et. al. (2015) expatiate further by stating that an entrepreneur takes innovative strategic decisions enabling him/her to face the dynamic world market.

### **2.4 Role of formal education to entrepreneurial agriculture**

For all students and graduates the basis for acquiring skills is through formal education and training. Entrepreneurial skills shortage for any student or graduate of agriculture is a gap that needs to be filled. According to Santiago and Roxas (2015) this gap can be closed by administering relevant agricultural entrepreneurial skills education. Santiago and Roxas (2015) point out that the major contributor to government failure to develop the agricultural sector has been the compromising of entrepreneurial activities and growth by concentrating on productivity. Dolliso's (2013) view is that entrepreneurship is a teachable skill to be learned and students themselves should be actively involved and be under strict supervision. This view points out that entrepreneurship education is impossible without the full involvement of the student party as entrepreneurship education is more practical than theoretical. Agricultural education at all levels in general doesn't qualify any student or graduate to become a future entrepreneur, but it is only the entrepreneurial agriculture programmes that will shape graduates into the entrepreneurs.

## **2.5 Factors influencing and motivating youth to develop interest to choose agriculture**

Entrepreneurial agriculture modules and programmes at the institutions of higher learning are identified by most authors as one of the ways that ignite entrepreneurship and entrepreneurial zeal within the students. Graduates who have been exposed to such an education benefit greatly as they pursue their ambition of becoming entrepreneurs (Mianroodi, 2012). Once students graduate and finish their degrees and diplomas in agriculture, the knowledge and skill obtained during training will effectively enhance their innovative skill thus enabling them to start their businesses and take calculated risks to become successful agriculturalists (Sumberg, Anyidoho, Chasukwa, Chinsinga, Leavy, Tadele, Whitfield and Yaro, 2014). Movahedi and Charktabian (2013) have identified institutions of higher learning as having the role to develop entrepreneurial intentions among the youth and agriculture students and have explored the factors that influence the entrepreneurial behaviour among the students. Such a development of entrepreneurial intentions provide entrepreneurial education stimulation responsible for influencing students' intentions and attitudes towards entrepreneurship (Movahedi and Charktabian, 2013). The entrepreneurial spirit is psychological and emotional character in the form of attitude, acceptance and knowledge that is able to influence the youth in becoming agricultural entrepreneurs (Abdullah and Sulaiman 2013). Abdullah and Sulaiman (2013) emphasize further that character development in youth in the form of self-determination, intelligence management, working hard and agricultural knowledge lead to successful agricultural entrepreneurship, taking advantage of limitless energy and youth aspirations. When students have entrepreneurial motivation, their ultimate purpose will be to achieve the quest for economic independence, leadership, control, increased self-confidence level, self-esteem, determination to achieve and hard work, (Khanmoradi, Lashgaara and Omid 2014). While the above factors are future entrepreneurial motivation factors whereas the present motivation factors according to Khanmoradi et al. (2014) are education, loans availability, incumbent's age, personal factor records, risk-taking and required skills and qualifications to be achieved.

## **2.6 Factors barring students and graduates' interest in entrepreneurial agriculture**

The agricultural students' main concern is the advancement of their career opportunities since they engaged themselves with agriculture out of the love of the subject. Some might have done agriculture at lower levels of their education such as the high schools. Kidane and Worth, (2013) found that in over 80% of high schools of KZN agriculture students enjoyed studying the subject. Love of the subject has led to student's perception being positive towards the subject even though some complained about the unavailability of the resources, practical materials and practical sessions for the subject (Kidane and Worth 2013). Kashani, Mesbah and Mahmoodi (2015) tabulates four major categories which are individual barriers, organisational barriers, social and cultural barriers as well as economic barriers as major factors that inhibit entrepreneurship development. These four categories of barriers basically encompass all barriers across entrepreneurial lines including the students, graduates and youth's views about barriers of entrepreneurship. These barriers uncategorised are:

**Land issues:** In South Africa young graduates are landless and land issues are the biggest barriers. In his 2015 State of the Nation Address, President Jacob Zuma (2015) stressed the importance addressing the land imbalances of the past on land matters and this led to the reopening of the window for lodging of the land claims. Esiobu, Onubuogu and Ibe (2015) are concerned that small scale farmers have the challenge of limited land area resulting in farmers unable to farm land despite the entrepreneurial spirit they have.

**Poor access to markets:** Thindisa (2014) mentions the importance of accessing proper markets by the entrepreneurs as this could lead to proper resource utilization, better production planning, better risk mitigation strategies and better pricing. This constraint was identified by the agricultural graduates who were of the opinion that market size determines the quantities of products consumed thus leading to the economies of scale, (Emerole, Dorcas and Kelechi 2014). For highly competitive industry like agriculture economies of scale for small scale farmers are a challenge.

**Capital availability a challenge:** A graduate who has recently completed any of the higher education programmes does not have enough capital resources to be able to start a highly capital intensive business venture like farming, (Emerole et. al. 2014). Massive capital injection for the acquisition of major depreciable capital goods and consumable capital goods is required. Any investment's worth should be backed by good capital source. Most of the students and graduates cannot afford it since most of them do not even have collateral that can be used to cushion borrowed funds.

**Returns volatility:** Emerole et. al. (2014) mentions that agriculture is a very volatile business in terms of resources and returns taking into consideration the environmental resources, prices of inputs, prices of other related commodities and fluctuating final product market prices due to forces of supply and demand. Weather patterns cause fluctuations in resources, and worst of all output prices and returns are severely affected.

**Poor government support for emerging entrepreneurs:** Poor government support for agricultural entrepreneurs is blamed since it is one of the macro-economic objectives of any government to provide support

for its emerging entrepreneurs so as to enhance economic growth. The government plays the role in ensuring that economic growth, full employment, price stability, balance of payments and fair distribution of income are met in order to judge the performance of the economy (Mohr, Fourie and Associates, 2008).

**Environmental issues:** According to Emerole et. al. (2015) natural environmental factors such as drought, natural disasters, and plant and animal diseases have severe impact on to the confidence of the would-be entrepreneurs. Would-be entrepreneurs shy away from investing in agriculture when seasoned agriculturalists start losing business because of these factors. According to the Pienaar (2016) the extent and impact of drought on emerging, small-scale, new commercial and tribal area farmers makes it difficult to see how they will survive under such dry circumstances without massive technical and financial support from the government. Because of environmental issues emerging entrepreneurs are given little chance of making it through.

**Socio-cultural issues:** According to Kashani et.al. (2015) social and cultural factors like lack of peer support, unfair competition, lack of psychological counselling services in case of failures and disapproval from parents are key elements that cause entrepreneurs to look at investing in agriculture in a negative way. All attempts can also receive negative reaction from the society.

**Lack of motivation:** Even if a student can graduate and complete a certificate in higher education, lack of motivation, zeal and will to venture into agricultural business severely affects those prospects. Khanmoradi (2014) concluded that students who were highly motivated displayed tendency of co-working, creativity, novelty, working independently and had general entrepreneurship abilities.

**Poor training, entrepreneurial skill, experience, and confidence:** The literature proves that good entrepreneurial training is what characterises entrepreneurial education. With good training there is skill development which leads to experience. A well approached training will make an entrepreneur to be experienced and that would consequently lead to confidence. According to Serfontein (2016) training that is provided in the classroom alone and missing field training results in that programme missing the mark. Confidence results from the willingness to undertake as well as execute a particular activity

**Poor infrastructural network:** For any farmer size (emerging or well established) infrastructure is a key to development and topping the agenda of poverty eradication mechanisms (Thindisa, 2014). Communications, water pipes, electricity, transportation of both inputs and outputs, proper buildings, and general farm convenience determine the extent and level of ease that a farmer will be able to produce and market product. It is the mandate of the South African government that the young agriculture graduates go and farm in rural and uplift the underdeveloped communities. In his 2015 State of the Nation address, President Zuma (2015) called for upliftment of food security through agriculture that will bring one million hectares of unused and underutilised land back into full production. Major projects in the previously underdeveloped rural communities are usually allocated to young farmers and graduates where poorly developed infrastructure is a challenge.

**Inability to withstand competition:** Agricultural products are examples of the perfect competition products where there is a large number of sellers, the characteristic of extreme producer competition irrespective of whether it is an emerging farmer or a well-established commercial farmer (Mohr *et al.*, 2008) The well-established farmers will do their best to outcompete the small farmers by undercutting them. The would-be entrepreneurs will fear being driven out of the business by the established farmers.

**Poor access to information:** Esiobu *et al.* (2015) mentions the importance of information as the enabler of the entrepreneur to determine how far the entrepreneur can know about the business and its requirements. Graduates usually fear that the lack of information will harm their business and usually withdraw from venturing into the business fearing failure.

## **2.7 General perspective on entrepreneurial agriculture**

From the literature it appears not only are the students and graduates with their own viewpoints on the issue, but other parties play a pivotal role and have their viewpoints as well. The government is the driver of all the programmes and related issues. Land reform platform is used by the Republic of South African (RSA) government to enhance the creation of opportunities for the graduates. According to Salami and Arawomo (2013) land beneficiaries and prioritized group like graduates are able to access a range of grants which are not only inadequate but, do not get used in the acquisition of resources

### **2.7.1 Access to finance**

This is difficult for the emerging farmer as government financing wing like the Land Bank does not support emerging farmers while other programmes like Micro Agricultural Financial Institution of South Africa (MAFISA) and the Comprehensive Agricultural Support Programme (CASP) have no proper direction thus making finance becoming inaccessible to young entrepreneurs (Serfontein, 2016).

### **2.7.2 Empowerment of an entrepreneurial farmer**

According to Ndlovu and KZN DARD (2016) the MEC of Agriculture for KwaZulu-Natal has reiterated the point of empowering graduates through proper empowerment channels. But, this article is in contrast with the statement on Serfontein (2016) where the viewpoint is that young farmers are misrepresented and disorganised because of the structures within the government that are corrupting the whole system by empowering the politically connected youth.

### **2.7.3 Entrepreneurship barriers**

According to Shambare (2013) a number of authors have expressed views on barriers hindering the entrepreneurship amongst the graduates who emerge from the institutions of higher learning. These entrepreneurial barriers are lack of exposure for students, lack of entrepreneurial support, misaligned teaching methods, and misaligned syllabi (Shambare, 2013). It is of a concerning view towards entrepreneurship when the curriculum is misaligned and inappropriate as students will not be able to match the skill to be learned.

### **2.8 Summary**

The literature shows the importance of an academic approach towards the making and development of entrepreneurs but there is a serious challenge as the literature reveals that appropriate skills should be administered to students in order for them to graduate and be ready to tackle the farming business. Entrepreneurship is viewed by most of the graduates as the key to financial freedom and independence from the yoke of the employers. However, the literature also shares serious concerns of some students who view entrepreneurship in agriculture as unsupported, risky, inappropriate way to career path as so much is attached to being an entrepreneur. In the case of the college the research will have to unearth how students' views align with those in general literature.

## **III. Research Design And Methodology**

Saunders, Lewis and Thornhill (2012) define research as "the systematic collection and interpretation of information with clear purpose to find things out". Gupta and Gupta (2011) refers to research as having two basic approaches which are quantitative and qualitative. Quantitative approach is described by Gupta and Gupta (2011) as involving data generation in quantitative form subjected to harsher rigid and informal analysis and classified into three approaches which are experimental, inferential and simulation. Gupta and Gupta (2011) thereafter concludes that inferential approach uses those characteristics of the sample to create an overall population characteristics, while experimental approach has much to do with the research environment where some variables are manipulated for observing effects on other variables, whereas simulation approach is good for understanding future conditions as it is a numerical model that is representative of a dynamic process structure. However, Williams (2007) mentions quantitative, qualitative together with mixed methods as usual and most used approaches in conducting a research.

### **3.1 Quantitative research methodology**

Citing Creswell (2003), Williams (2007) describes quantitative research as encompassing data collection so as to quantify that information for statistical review in order to reject or support other claims of knowledge in the field concerned by using mathematical models as analysis of data methodology. Creswell (2002) as cited by Williams (2007) mentions three trends as concerning to quantitative research as research design, measurement and testing procedure together with statistical analysis. Williams (2007) classifies quantitative research under three broad categories which are experimental research, descriptive research and casual comparative research. The methodology used was analytical quantitative method since the sample was a large one made of students and graduates. In this quantitative methodology casual comparative research methods were used. The use quantitative method in the as a preferred research method and methodology is justified since over 1000 graduates have graduated from the college in the past 20 years alone. The number is fair enough for a bigger sample of 133 individuals. Even though there are over 1000 graduates produced by the college since it was established in 1968, most of them are spread all over South Africa. Our study actually looked at a population of 200 individuals spread around Uthungulu district in the northern KwaZulu-Natal. The quantitative research method has been used because the approach of this study is of social and human nature (Creswell, 2003)

### **3.2 Research design**

Creswell (2003) identifies research design as an all-encompassing approach from where qualitative research, quantitative research and mixed research methods could be used. The research design acts as a guide towards the whole research process. Each research carries its own research design and this depends on the simplicity as well as complexity of the research in hand (Saunders, Lewis and Thornhill, 2007).

### **3.3 Research philosophy**

Research philosophy is described as thoughts that form the basis for various ways of doing research or thoughts justifying a particular research methodology. In the research philosophy research itself is classified as for the positivists where the key to positivism is that there is an external existence of the world whose properties are measured through objective methods (Knox, 2004). In the social arena as is the case with this research, positivism and quantitative methods are used together.

### **3.4 Sampling strategy**

One of the components of research methodology was sampling. The basic sampling aim and objective was to have a representative sample or a collection of relevant cases from a bigger population which was either impossible or too costly to study. Sample method takes representative group from the population and thus use data collected as information for research (Latham, 2007). Sampling is conducted in order to get the actual feel and the representativity of the population under review by having each sampled unit having basically all characteristics of known number of population units (Latham 2007).

#### **3.4.1 Population and the sample**

This study thus looked at the population of over 200 individuals which was composed of students and graduates of the college in and around UThungulu District Municipality. A technique used in order to sample had to enable the representative sample to look very much like its population. Because of the population size and the similarity of the characteristics of the individuals concerned a bigger sample was warranted. Sampling was random whereby individuals in a particular population group had equal chance of being selected and receive appropriate questionnaire. The researcher focused on the ways, techniques and methods that brought a sample very much the representative of the population. Because of the vast size of the population and the preferred research method outlined in the research methodology above, the sampling technique was thus of quantitative nature. Delice (2010) is of the opinion that quantitative research method needs to emphasize the importance of reliability and generalizability with the aim of applying obtained relationships among the population.

### **3.5 Data collection instruments**

The data collection instrument used was a questionnaire used for a survey. The questionnaire was linked to the research objectives and research questions. The questionnaire was divided into three sections. The first section of the questionnaire was collecting demographic data about the participants. The second and third section aimed to uncover the thinking and views of students and graduates of the college about the possible opportunities and likings or dislikes about agriculture and agriculture studies in general. The study used stratified random sampling as its sampling strategy since the population consisted of different strata in the form of the study levels as well as exit levels. The collected data was later analysed for commonality across the strata or across understanding level.

### **3.6 Data analysis**

Castellan (2010) describes data for the quantitative study as preconceived and quantifiable concepts and theories used in determining the kind of data to be collected. Generated numerical data represents social environment while statistical techniques followed by deductive reasoning are used for data analysis (Castellan, 2010). In the quantitative study, statistical inferences attach sample findings to a selected population while impersonal and objective reports usually computer-generated do summarise research findings (Castellan, 2010). Data for this study was analysed using the Social Package for the Social Science (SPSS). Along with SPSS descriptive and inferential statistics analysis was used. Since data was numerical, some description of data in terms of statistical variables such as percentages, means, medians, modes and standard deviations were going to be applied. But in this instance it was Chi-Square that was used since data was non-parametric as there were no variables such as mean, medians, modes and standard deviations used. The data followed no normal distribution. From descriptive statistics, inferential statistics was derived to enable the researcher to draw the conclusion about the population in general. The quantitative data on perspectives were socially analysed using the sophisticated computer package. It is with this inferential statistics that several tests were conducted on data available.

### **3.7 Pilot study**

Pilot Study can be defined as tool that is used to plan a randomized and controlled trial that will be used prior to major study and data collection (Lancaster, Dodd and Williamson, 2002). Lancaster *et al.*, (2002) further illustrates the reason for this feasibility study as determination of initial data for primary and basic outcome in order to perform calculation of a sample size for a larger trial. The pilot study is also referred to as a

feasibility study. 10 individuals were selected for pilot questionnaires and were not included in the final sample group. If the individuals in the pilot study were included in the final sample, then this could constitute the limitation of the study. The pilot study was used to test as to whether the final study would be accurate or whether major flaws could be identified in the final data analysis.

### **3.8 Ethical considerations**

On ethical basis the researcher ensured that:

- The participants had been given informed consent which was a letter that had been signed by the institution concerned in order to allow the researcher to carry out and conduct the study within the institution.
- Respondent were assured of their identity protection and that no harm would be done to him/her. The confidentiality and anonymity of the participant was guaranteed. The identity of all parties involved were to be protected in whatever form with each questionnaire having nothing to identify anyone be that e-mail addresses, names, postal addresses, identity numbers, student numbers or any form of identification.
- Permission was obtained.

### **3.9 Limitations of the study**

Some aspects came up during this research that the study could not cover and consequently warranting further investigation on this subject. The study did not highlight the area or regions of this province where the pursuant entrepreneurs would be comfortable farming in. The fact that most of the students and graduates could not identify the northern KZN as a suitable area to farm in, an alternative could have been suitable for the students. Sometimes it could happen that the geographical location needed to be explained well in order for them to master the understanding of the concept.

### **3.10 Validity and Reliability**

The information as presented and as researched is valid and the researcher had to make sure that nowhere else in all the chapters of this research document is an information that has been sourced in an illegal manner. The authenticity and the originality of the information presented has been validated by the researcher himself following proper research procedure and going according to the proper guidance of the college administering the degree. The researcher ensured the reliability of the work through the use of the use of the reliable sources of information such as validation of material from media.

## **IV. Findings**

A total of 133 questionnaires with a 100% response rate were distributed to college students and graduates, collected and analysed. The good response could be due to the advantages associated with group administration of questionnaires. In the group session especially the lecture hall sessions, questionnaires were handed over to the respondents by the researcher. The graduates were visited in their work areas and/or residences especially for the unemployed who also responded accordingly. The study revealed that 88.7% of the surveyed sample of the population was below the age of 35 years and 11.3% was above the age of 35 years. In the South African context and in terms of age any individual between ages of 14 years and 35 years (National Youth Policy (NYP) 2020, 2015) is classified as youth. NYP 2020, (2015) also states that about 36.1% of the youth of 15 to 35 year category remained unemployed and this figure is doubling that of the unemployed adult (35 to 64 years) economically active category where the level of unemployment stands at 15.6%. The youth group formed the major part of the focus group as it remained the most vulnerable group in terms of opportunities of enhancing its living standard through practising agriculture. Out of 133 respondents, 79 or 59.4% of them were males whereas 45 or 40.6 % were females.

### **4.1 Major subjects studied by respondents by level of study**

With the exception of the first-year students' category, all other categories of respondents had more animal science majors than both crop science and agro-processing majors. 54.3% of the respondents in the first year were either intending to major or were majoring in crop science. Remarkably in both the first and second-year categories there were no agro-processing major students. Even though there were agro-processing major students in the third-year and alumni categories, they constituted about 6.5% and 6.1% of each category respectively.

### **4.2 Employment status of respondents**

Since the college is a full-time study college, all first 3 study levels are full time and no student was involved in any form of utilizing his/her diploma other than studying towards it. Alumni group did exercise some form of activity with the exception of 3% that was studying and 27% that remained unemployed. The 3% that was studying could be furthering their post-graduate-studies. Barely 10% of the college graduates had made it into entrepreneurial world of agriculture.



#### **4.3 Section B - Perceptions of students and graduates on the academic entrepreneurship teaching material offered by the college**

The level of training and academic excellence does affect the level of entrepreneurship as well as the commitment of the students towards becoming agricultural entrepreneurs. As a reference point the quality of teaching material and resources of better magnitude do play an influential role towards the achievement of the objectives of becoming entrepreneurs by students. This college state of the resources do also affect and play an influential role towards the achievement of an entrepreneurial agricultural spirit among those who have already attained their qualifications from the college. The material and resources of any nature used by the college has influenced the response. Key to all the perceptions was their heavily reliance and dependence on education level or study level.

##### **4.3.1 Academic information**

Key academic variables such as Information Technology (IT) infrastructure, library books, premises themselves, academic environment and other facilities within the college campus were used to check the views and perceptions of the students and graduates as to whether the facilities and environment were offering enough for the education that would develop an entrepreneur. This is the information that revolved around the learning materials and the way as to how the college's education is modernized to meet the requirements of the modern agriculture. Will the material and facilities be able to meet the objectives of training a modern farmer?

##### **4.3.2 The college has science and IT (equipment's, computers, internet) infrastructure with modern technology to train the future farmer entrepreneur**

77.2%, 55.8%, 67.7% and 97% of first years, second years, third years and alumni respectively felt that the college provided modern infrastructure to enhance the entrepreneur training. Of interest is that 97% of the alumni were in support of the above statement. Exposure to the working environment where they realise the importance of modern technology as related to what they studied in the college could be the reason for total agreement with the point. The example of exposure to technology are gadgets such as digipen, extension-suite-online, GPS equipment and other modern technology tools used by the extension officers. Some of these modern technology tools are given to students for their practicals. In direct contrast is that 77.2% of the first years as opposed to second year 55.8% and third year 67.7% compatriots highly praised the college's infrastructure's modern technology approach. This could be as a result that the first years is a new group to the tertiary environment and has never been exposed to the modern way of teaching and learning. Overexposure of both second and third year students to technology could have contributed to their downplaying the college's entrepreneurial technology.

##### **4.3.3 The college has a library with adequate reading material that can help develop an entrepreneur**

Below half of the first and second years agreed that there were adequate library facilities in the college that could develop an entrepreneur. More than half of the finalist and alumni agreed with the statement. Significantly, some first years and second years were not happy about the college library facilities. Of concern was a bigger percentage of full-time college students that were unsure of whether the library facility was enough to develop them entrepreneurially.

##### **4.3.4 My association with the college has led me to understand what entrepreneurship means**

Even though there was a big percentage of the first and second year students (68.6% and 67.6% respectively) who agreed, it was also interesting to note that about 94% of both finalists and alumni had a strong view that the college had an impact in making them understand what entrepreneurship was all about. That meant that the more the students progressed with their studies at the college, the more they found the role played by the college in enhancing an understanding of entrepreneurship. This level of progression in understanding what entrepreneurial agriculture is all about was significant at a college third-year level, because when students came to the college as the first-years, they knew basically very little or nothing about agriculture and entrepreneurship.

##### **4.3.5 College facilities are excellent to conduct practicals that develop an entrepreneur**

The college finalists and alumni felt that their association with the college has led them to understand what entrepreneurship is all about. Almost a similar response has been echoed and observed in case of the facilities. These facilities other than the library are the college's infrastructure and all other tangible and intangible resources to facilitate learning. 64.5% of the third years and 69.7% of the alumni as opposed to 42.8% of the first years and 35.3% of the second years do agree about the excellent practical facilities that would develop an entrepreneur. In this instance more than half of the first and second years don't seem to agree with the college facilities having to provide proper education for pursuant entrepreneurs. The college's academic

approach whereby the first year consists of the generic, theory-based learning might be a contributory factor as most of the students might not be familiar with the teaching style and college's objectives in terms of progression. The second years seem not to be impressed with the college's facilities.

#### **4.3.6 Agricultural entrepreneurship course should be made compulsory and be a full course on its own**

Though being part of the other course at the college entrepreneurship received a suggestion that it be made compulsory. Entrepreneurship is not even part of the curriculum as the course is on its own, part of the other course Advanced Farm Business Management. Most of the students' perception were that entrepreneurship was very important for the development of the farmer and the economy as a whole.

#### **4.3.7 Curriculum/Content information**

The question that the graduates and students had to answer was whether the curriculum itself apart from the facilities was good enough to develop an entrepreneurial agriculturalist. Part of this section of the questionnaire was the issue of whether the academic staff and other courses apart from the entrepreneurial courses were enough to develop the right perception for an individual who wanted to pursue a career in entrepreneurial agriculture. Views had to be heard as to whether agriculture subjects the college was offering were enough to develop a student, former student and the farmer out there in the field.

#### **4.3.8 College academic staff is willing to give students more information on entrepreneurship**

Evaluation of the academic staff by the students and graduates on the willingness to part with entrepreneurial information has received a gradual 10% transition upwards from each study level. This is shown by 62.9% of the first years, followed by 70.6% of the second years, 80.7% of the third years and 90% of alumni who progressively agreed that the college staff was not withholding information on entrepreneurship. This response shows the confidence that students and graduates have on academic staff.

#### **4.3.9 All academic courses and programmes should include entrepreneurship in some way or the other**

The biggest percentage of the first years, second years, third years and alumni did have the strong positive feeling about the importance of entrepreneurship in their study programmes. Basically all courses should incorporate the element of entrepreneurship as the college's focus has shifted away from training standard modules to training of entrepreneurial farmers. There seemed to be less than 10% of the students who seemed to disagree with incorporating entrepreneurship into different courses. This means a strong willingness and desire on the part of the students to see entrepreneurship being incorporated onto their curriculum with every course having entrepreneurship as a part.

#### **4.3.10 The college curriculum provides basic knowledge (in agriculture) required by students to start farming on their own**

In this context basic knowledge forms part of the information that students and graduates accumulate from all courses especially production and other ancillary courses. But as seen above there are limitations in as far as entrepreneurship is concerned as only production courses are taken seriously. The general trend of all study levels of full-time students alluding to that statement by almost 80% proves the point that the college offers basic agricultural knowledge, but limited to production courses only. By having a total agreement with the statement alumni acknowledged the benefits of basic education it received from the college as making a positive contribution towards what they do now and what they intend to do in the future. This is especially for those who are employed.

#### **4.3.11 The curriculum seems to be in line with entrepreneurial agriculture outside academic circles**

Impressed as they were with agricultural education that the college is offering, this time the first year and second year students seemed to reduce their agreement level on whether what they are taught in the college is in line with what is happening outside in the world of agriculture business. But another picture is painted at third year and alumni levels when almost 81% and 88% of the respondents respectively agreed that the curriculum is in line with the entrepreneurial agriculture outside academic circles. For both of these advanced levels, their perceptions about the college's approach on academic and curriculum issues show a closer alignment and agreement with the college's approach. A very reduced number of the first years did not see a linkage between agriculture that is taught at the college and the one practiced in the field by the farmers including those involved in farming activities such as extension officers. As the levels of study progress, the level of disagreement decreases till about 3% of the alumni level.

#### **4.3.12 College education empowers the potential farmer and practicing farmer**

The knowledge gained by the farmers and agriculturalists who are former students is vital part of their agricultural practice. Even though the first and the second years are confident about the college's farmer empowerment, the third years and alumni felt empowered as potential as well as practicing farmers respectively. This disagreement for first and second years followed a general trend that had been observed throughout this curriculum theme. 100% support or agreement amongst the alumni depicts full confidence in the college education system.

#### **4.3.13 Entrepreneurship learning scope**

The perception was on the width of the college's learning scope in terms of developing a farmer and a potential farmer. As entrepreneurship is more emotional, psychological and motivational, it was also more important to find out from the parties concerned as to whether the development of an entrepreneurial farmer was more along those lines more than being academic. The scope of the college training also allows for the commercial farmer development and the students and graduates perceptions would have to show whether they attested to that. There was a general feeling about the scope to include the role that ought to be played by the provincial government in ensuring enhancement of entrepreneurial agriculture through the college.

#### **4.3.14 The college provides its students with both psychological and emotional character development**

On average about half of both first and second year students felt that the college was giving them education that would enhance psychological and emotional character development. This is followed by 35% of this category (first and second years) who disagreed. The finalists and alumni who disagreed were half of the first and second years. The normal and basic trend is that with an increased stay as well as exposure to the variety of trainings in different courses, then gradually students will begin to realize that they get to be developed emotionally and psychologically. This therefore points out that entrepreneurship is not only backed by physical and tangible resources such as money, education and opportunity but also by psychological development of a student. A smaller percentage of alumni compared to the first 3 study levels was unsure as to whether they had better emotional and psychological growth after having passed their examinations from the college

#### **4.3.15 Current college agricultural entrepreneurial approach can help the individuals become successful commercial farmer**

Whatever entrepreneurial agricultural approach that the college is offering according to greater percentage of the first years, second years, third years and alumni has the potential of helping individuals become successful commercial farmers. These sentiments were shared by almost the same number of these students and graduates when there was a feeling that the college curriculum is in line with entrepreneurial agriculture outside the academic circles. The college's approach gives confidence to both the first and second year students as they alluded to the statement and with a much higher percentage of both the third years and alumni in complete agreement with the college's approach. Very few of them did not agree with the statement. The greater level of exposure of both the finalists and alumni translate to the increased confidence in their quest to face and enter the entrepreneurial world of agriculture.

#### **4.3.16 To me the college places more emphasis on production courses than entrepreneurial courses**

Production courses such as animal production and crop production seem to receive more attention from college management and curriculum planners than those courses that prompt and enable a graduate to become an entrepreneur since a lot of the first years, second years and third years and alumni attest to that. A smaller percentage (15.2%) of the alumni was against the notion of the college placing a greater emphasis on production courses more. All these study levels emphasise that the college does not have a curriculum with entrepreneurship in it.

#### **4.3.17 The government provincial department of agriculture should be involved in the development of the entrepreneurial curriculum**

More than 90% of students and graduates at all levels agreed that the provincial government through its KZN DARD needs to take a centre role in effecting and developing entrepreneurial curriculum in the college. Alumni level expressed its 100% full support for the provincial government to be at the centre of entrepreneurial curriculum development.

#### **4.3.18 All other stakeholders (incl. farmers, sponsors, strategic partners and others) should have a helping hand in training future entrepreneurs from the college**

There is a general feeling amongst students and graduates that it should not only be the college that needs to train future entrepreneurs, but the involvement of other stakeholders (parties of influence) as well. When

venturing out to the entrepreneurial world, the students and the former students need the experience and influence of the stakeholders and role-players involved. Stakeholders could be the sponsors of students in terms of bursaries, grants and student loans. They can also be employers, inputs companies, exporters and marketers of agricultural products, consumers as well as any other individual or body that plays a significant role in agriculture and training in general. Education departments, other colleges and universities do play a critical role in the development of the college and its students. The experience of the alumni and third year students attest to that.

#### **4.4 Section C – Students and graduates perceptions on entrepreneurial development, opportunities and challenges**

There were different views associated with the development of entrepreneurs while entrepreneurial development does not exist on its own without opportunities and challenges associated with it. The biggest question is what role the college is playing in the northern KZN. Has the college got influence? What were the perceptions to the effect? What were the views on the role of KZN province government in developing an entrepreneur? Would there be any opportunities and challenges in agriculture? What attracted most of the students and graduates to agriculture?

##### **4.4.1 Entrepreneurial development scope**

Key issues such as the attractiveness of farming as well as challenges and opportunities associated with entrepreneurial agriculture got different views from the students and graduates. How challenging has entrepreneurship been to students and graduates? Did the graduates view the province especially the northern parts of KZN as offering enough opportunities for their development? Were there other factors according to their views that were responsible for their development?

##### **4.4.2 Becoming an employee is more attractive than becoming a farmer**

An average of 61% of the first, second and third year students felt that they would not be happy if they could be employed by somebody else. Based on the above reasons students and graduates felt that the only satisfaction would be when they are self-employed. A bigger margin of 72.7% of alumni felt also that they would be unwilling to become employees. Some members of the alumni who are already employed by somebody else might also be unhappy about their employment status, conditions and prospects thereto. A smaller percentage of all study levels about 29% on average of all study levels felt that working for somebody else would be acceptable to them but there is a general willingness on the part of the current and former students to become entrepreneurs. The generation of the would-be employees is faster diminishing into history. At the same very little of the first year students did not know as to whether they wanted to become, farmers or employees. That could not be blamed onto themselves as they would still be deciding. Here time is a factor

##### **4.4.3 Becoming a commercial farmer is a more challenging job**

Even though about 61% of all the students and 72.7% of the graduates preferred to become the farmers rather than employees, the feeling among all levels that there was a lot of challenges in commercial farming could not be ignored. More than 90% of second years, third years and alumni agreed on commercial farming being a challenging job and carrying risks. Starting on a small scale yet commercial is usually very scary experience for the upcoming farmer graduates as literature has revealed that those young and inexperienced farmers are facing major constraints.

##### **4.4.4 Politically and socially females are having better entrepreneurial chances than males**

The issue of women empowerment in agriculture is receiving many conflicting views from different academic, government and social strata. The view of many in different strata still feel that women have not been empowered enough as their male counterparts. Only an average of 31% of all respondents saw that women were being better empowered and offered more opportunities in entrepreneurial agriculture than their male counterparts. This compares very well with 38% who did not see women being afforded opportunities of becoming farmers. 57% of the first year students could not see women being empowered and having better opportunities to make it in entrepreneurial agriculture. This means that the issue of social, economic and political dynamics has not received any attention from relevant institutions including educational institutions (the college as an example) and authorities. An average of 31% of students and graduates were unsure of whether women were politically empowered. Within this 31% of the students and alumni, the most indecisive was the alumni group. In this instance for the alumni to be away from the college did not give them any advantage of checking and balancing political and social demographics of South African or KZN agriculture. To the alumni the issue of women empowerment still left a lot of unanswered questions.

#### **4.4.5 The college is strategically located to enable students to interact more with Northern KwaZulu-Natal**

On average 44.4% agreed that the college was better strategically located for the students to interact more with the northern KZN agriculture. This response is exactly the same as 44% of the students and graduates who were unsure of the strategic location of the college. This left an average of about 12.1% of those who did not agree with the college's northern KZN proximity advantage.

#### **4.4.6 Entrepreneurial opportunities and challenges**

The graduates and students views pointed different perspectives on challenges and opportunities. Their different feelings stem from whether they have love for the farming itself or they want to be just the employees. The major question was whether students have what it takes to love agriculture. Do graduates and students have zeal and motivation apart from the knowledge of the subject of agriculture? Were there other factors that attracted them to agriculture or it was just the love of agriculture? Was money and other benefits the driving factor behind studying agriculture? What were the perceptions on challenges as well as benefits? The variables such as knowledge and skill (both formal and informal) also became a major determinant on students' perceptions. Social and national issues such as the land issues became the major focus areas that students did have remarkable views on.

#### **1.4. 7 I associate myself with farming because I love farming and I have a zeal to farm**

Over 90% of the second years, third years and alumni concurred that associating themselves with farming had never been a mistake, but was as a result of the love for farming. Farming to them is their passion. Basically all the study levels share the same passion as 82.8% of the first years did the same. This slight drop in positive association of the first years with passion for farming could be as a result of the students admitted to the college either not knowing their career prospects or in agriculture or have no passion for agriculture at all. Some come to the college to kill time because they had nothing to do or could not be admitted to other institutions which were their first choice. This phenomenon of "time killing" is associated with the attitude that the youth sometimes have about agriculture.

#### **4.4.8 I associate myself with farming because of the attractiveness of benefits (including money) associated with farming other than farming itself**

Even though love for farming was the main driver towards selecting a career in agriculture, a sizeable percentage of 57% to 64% felt that other than love for farming itself there were also benefits such as money and other material and emotional benefits that were also attracting them to farming. There should be an intrinsic value in farming where at the end of the day there should be some benefits involved. As people in their youthful ages, graduates and students need to satisfy and fulfil part if not all their needs and ambitions. Love itself alone cannot be the end, but the end could be any of the benefits and satisfaction involved. A greater percentage (63.6%) of alumni was of the opinion that it was not only love of farming itself, but also other benefits associated with farming. This is a group of employed, self-employed and unemployed whose aim is to achieve and be at a certain level of life through agriculture. On the other hand 36% on average did not agree that it was money and other benefits that was attracting them to agriculture.

#### **4.4.9 There are more challenges than benefits when one pursues a career in agriculture**

Even though everyone is pursuing a career in agriculture or is already involved in agriculture, they are fairly aware of the challenges which sometimes surpass benefits. On average 68.4% felt that there were some challenges and that love would override them all. Love for farming was the major reason why farming was chosen as a career. Despite the overwhelming majority who put love for farming as the prime reason, more than a third of all the respondents was aware of the challenges associated with the agricultural career. The issue of challenges imply that there are risks involved in agriculture. According to the students and graduates it therefore came up that farming is the risk worth taking. Despite challenges involved, there is still love as well as benefits in farming. A smaller percentage of about 11% of the students was not sure of whether the challenges exceeded benefits or vice versa.

#### **4.4.10 Lack of knowledge and skills are bigger obstacles to succeeding as a farmer than other variables such as money**

On average 91% of students and graduates felt that knowledge and farming skill could contribute greatly to farming. The general feeling is that apart from human capital (knowledge and skill), money and resources cannot manage themselves to success. Less than 9% of all at all study levels were not convinced that knowledge and skill were behind ones success as a farmer.

#### **4.4.11 The land is still under white farmer control and the government seems to be doing enough to break that trend in order to develop young agricultural entrepreneurs**

Two-thirds of the college's students and alumni felt that the government was taking action in addressing white minority control of the land issues. A third of the first years did not agree with the statement. That could be as a result of the lack of knowledge and experience on land matters. A contrasting scenario comes forward when almost the same percentage of the alumni disagreed with the statement. That could be as a result of experience alumni has over land matters. On this point there was a sharp contrast of the inexperience of the first years in land matters and the experience of alumni in land matters. Even though these 2 strata have the same number of individuals in disagreement on land matters, but there is a high likelihood that they are talking from different platforms.

### **V. Conclusions And Recommendations**

For the primary study the findings while meeting the following research objectives have been presented as follows:

*Reasons and contributory factors towards students and graduates successes and failures while pursuing the goals of becoming agricultural entrepreneurs:* The findings of the study revealed confidence shown by the students and graduates in the willingness of the academic staff to offer them education good enough for their future. This is one of the contributory factors towards the future successes and possible failures of graduates and would-be graduates. It has also become apparent that the failure of the curriculum to provide much needed education of empowerment would result in the graduates and students inability to farm or start farming on their own. The graduates did feel that the curriculum was providing much needed information for them to have a career in agriculture even though it was limited to production courses. The failure of the college to provide entrepreneurial courses as stand-alone could count negatively towards the students' chances of making an impact in the world of entrepreneurial agriculture. With the education that the college provides, a substantial percentage of the finalists and alumni felt they were satisfied that the curriculum was in line with what is happening outside the college. Emotional and psychological development had been described as key variables and a general feeling among all the students and graduates had been that the college was giving education that did not focus on psychological character development. A large number of students and graduates believed that the approach though limited to production subjects can help graduates become successful farmers. In line with the KZN DARD call for the necessity entrepreneurs the perceptions were overwhelmingly in agreement with the call. Almost everyone amongst the graduates and students was in agreement with the issue of the involvement of provincial government in developing entrepreneurial agriculture as well as the curriculum that would help shape future entrepreneurs. *Reasons for students and graduates perceptions (positive or negative) about entrepreneurial opportunities:* The students and graduates views shared strong reasons as to why they were either positive or negative about entrepreneurial agriculture. There was a number of views to substantiate their reason as most of the reasons were in the entrepreneurial learning scope, also encompassing some views in the entrepreneurial development scope, opportunities and challenges. The reason for the curriculum of the college placing greater emphasis on production relative to entrepreneurial courses was enough to spark a perception of entrepreneurship being an "ignored" subject in the curriculum. Even though the students and graduates understood the challenges facing commercial farming they still had valid reasons for choosing to associate themselves with entrepreneurial agriculture than being employees. Women empowerment also became a major reason as most of the college associates felt that women in agriculture had not been taken seriously. The issue of women empowerment remained a strong reason for bringing a negative, marginal response from both students and graduates. Men still dominated all agricultural activities, especially in the northern KwaZulu-Natal. All the entrepreneurial challenges and opportunities were the major reasons for their perceptions. The love for farming and the zeal to farm were the major drivers for college students and graduates. The benefits associated with farming such as money, self-esteem, independence, subsidized vehicles, pension schemes, bonus cheques, land ownership and many more could either drive the graduate and student towards agriculture as an entrepreneur or as an employee. Knowledge and skill factors also became key variables for either venturing into entrepreneurial agriculture or taking a more cautious approach towards it.

#### **5.1 Recommendations**

The recommendations to the management and authorities for the improvement of the education deliverance are as follows:

- It is recommended that since IT is the basis for the survival of any venture these days, the college should revise its approach by introducing more modern technology. It does not have to be the computer laboratory alone, but other areas such as the lecture halls where digital learning should be encouraged. Lectures should be conducted in a modern way to make a student feel the difference of being in a tertiary institution. Modern technology should include 24-hour access to Wi Fi even in their residences. Introducing modern

technology will also help students conduct their practical sessions in a professional manner, and enable graduates to face the fast changing and digitalized agriculture in terms of increasing their chances of becoming more competitive whether they stand alone as entrepreneurs or become employed by somebody else.

- As a responsible higher education institution, the college needs to develop its library facilities and provide more books on entrepreneurship. Such a move will enable students to study more and be able to get an expanded knowledge of agriculture in general and entrepreneurship in particular. The college's activities of teaching and learning should meet modern requirements. The library needs to not only be equipped with books, journals and other up to date publications, but should provide a conducive and comfortable environment where it would be much easier for a student or alumni to have broader interaction with the material offered. There should be an upgrade of facilities and material so that students of each study level have access to the facilities and material that will be suitable for them.
- A teaching style or curriculum from first year through to the third year that is outcomes-based is recommended adopting an approach that will enable students to understand the objectives of the college as well as what is expected of the students when they finish their studies.
- The college should have a strong alumni association programme to keep in touch with its alumni where 2-way feedback will be encouraged. Alumni data should be kept updated with the developments at the college. In that programme alumni should also contribute and update the college on new developments and practices in the field such as technology. Alumni will have to ensure that the college as a training institution and facility is aware of societal demands and expectations. This 2-way approach will be a win-win relationship and benefit the college, current students, former students, academic and technical staff, as well as the members of the community.
- There should be an introduction of an entrepreneurship course(s) or programme within the curriculum whose sole purpose would be to develop human capital and to highlight the importance of entrepreneurial agriculture for South African youth especially those studying agriculture.
- Considering the overwhelming view by students and graduates on the issues of having all academic programmes giving an entrepreneurial background, the college has to consider incorporating an element of business concepts in most of its course programmes, especially the production courses. The incorporation does not have to be drastic, but needs to be gradual over time in order to enable proper fusion.
- Even though agricultural courses are offered so that they provide the much needed agricultural production knowledge, a general feeling of the lack of entrepreneurial training persists. Entrepreneurial training will provide much needed knowledge on how entrepreneurship links to production.
- It is recommended that first and second year students should be exposed to a particular farming experience - be it a mini excursion or intensive practical sessions outside the college. These intensive experiences will help them to understand clearly what is happening and what is expected of them outside academic circles. This programme will enable them to be prepared and to get ready for the WIL programme that has proved to be of help to the third year students. This first and second year students' programme needs to be properly planned so as not to disturb the normal academic programme.
- Somehow the college needs to train students to develop and such development should be academic as well as spiritual, emotional and psychological. Even though this type of training looks like training that is difficult to manage and execute, the question of sensitizing students about the character that an individual needs to assume immediately he/she thinks of engaging him/herself in business is vital at this juncture for development. Psychological and emotional character training is a specialist programme, but can be effected by the well-trained lecturer who had undergone prior training. It is recommended that lecturers themselves undergo such training in order to equip their students with such skills since these skills are the cornerstone for entrepreneurial development.
- Because other stakeholders understand the plight, shortcomings and strongpoints of most students and graduates, including them in the development of the curriculum will help advance their skills and strengthen those who are already practically involved. Stakeholders such as business, input suppliers, marketers, produce buyers, student sponsors, funders and development agencies know very well what they aspire to get from the young and upcoming entrepreneurs. Including them in to develop a curriculum will set pace as to what quality product they require. The government also must have policies in place for the entrepreneurs and it have a role to play in developing those entrepreneurs.
- It is recommended that the college should look into student motivation platforms. These platforms should include programmes such as career exhibitions especially where the good of becoming entrepreneur is displayed. Already practicing entrepreneurs should be invited to come and give speeches and motivational talks to students and alumni. Exhibitions portraying both the benefits and challenges of entrepreneurship, as well as the means of overcoming those challenges would serve as a departure point for future entrepreneurs. Of concern was a large percentage of the first years who were undecided and it is recommended that they

need exposure to career pathing early in their college life. Career pathing should be part of the orientation process.

- It is recommended that the curriculum should address both social and policy issues that are politically thorny yet very critical for entrepreneurial agriculture. The two critical issues are women empowerment and land reform issues. Currently it is of vital importance to note that the college is in the process of introducing a course in Land Reform and will be phased in as part of its curriculum. The course in Land Reform will be stand-alone and will also be part of other courses as well. The recommendation is that Land Reform course in land reform should encompass other social and policy issues such as women empowerment and labour law. As part of entrepreneurial agriculture the future entrepreneur should be well-versed in all these issues.
- When almost half of the population of graduates and students were unsure of the role played by the college in the province and also unsure of its strategic location, there arose a need for students to be aware of its geographical strategic position when it comes to opportunities. It is should be noted that geographical location plays a critical role in agriculture. With the geographical knowledge and understanding, the potential entrepreneur knows what to farm with and where. Under those circumstances the market will be understood and the economic ways of accessing the market be devised. It is therefore recommended that students be taught and trained the relevant ways of understanding what to grow and where based on geography and climatic conditions. They should be taught about aligning the produce to the market in a most cost-effective way.
- Proper alignment of all academic study levels is recommended. This will include proper introduction of the first years as well as induction of these primary study levels. It is recommended that induction should include a 2-way dialogue between the new entrants and those conducting an induction programme. Newly registered students viewpoints and expectations about college education should be taken into consideration for their development and for future generation development.

## 5.2 Summary

The study has identified major factors influencing the perceptions of agricultural students and graduates. From different perspectives graduates and students shared views based on the different study levels as observed. The literature played a critical role in the analysis of the results. Findings from the literature were all in line with the primary findings from the interaction with the respondents. The literature has made vast contributions towards finding a lasting solution to the problem of graduate employability. The solution to the problem mentioned above does not look beyond the entrepreneurial agriculture. Entrepreneurial agriculture according to the literature does have some challenges and the solution to it does warrant further study. In general students and graduates loved entrepreneurship as a point of departure towards agricultural success even though some work still had to be done. The study revealed that the college can play a pivotal role in ensuring that education will generate future entrepreneurs.

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