

**The Sustainability of Emerging Cane Growers through Youth  
Involvement. A case study of the North Coast of KwaZulu-Natal  
in South Africa**

By

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## ABSTRACT

Agriculture is usually purported as one of the main solutions to the socio-economic problems besetting the rural areas. It is one of the main economic drivers in the rural areas of South Africa. The advantage of agriculture over other sectors is that it is labour-intensive and this is critical in a country such as South Africa that has a high level of unemployment. However, the main concern is that the current farmers are an ageing population and there seems to be reluctance on the part of the youth to follow agriculture as a career. There has also been a noticeable increase of youth migration to the cities in search of opportunities outside of agriculture.

This study, which was conducted in the sugar industry, focused on the sustainability of cane production through youth involvement. The youth, aged between 14 and 35 years and whose parents are emerging cane growers (ECGs) were the main respondents in this study. In the follow-up focus group discussions the ECGs also participated. The ECG category refers to the cane growers who were previously disadvantaged (in the South African political and economic contexts) and includes small-scale growers and land-reform growers.

According to SASA (the South African Sugar Association) there are approximately 22,500 registered sugarcane growers who annually produce on average 19 million tons of sugarcane in 14 mill-supply areas. This figure includes about 21,000 small-scale growers and 323 black emerging farmers. In the context of this study the term ECG refers to both SSGs (small-scale growers) and black emerging farmers (who are mainly referred to as LRGs – land reform growers – in the study).

This study arose as a result of concerns regarding the relative lack of participation by young people in cane farming. This is not a study about youth in general but a specific study about young people whose parents or relatives are ECGs.

There is a need to understand the seriousness of the challenges facing the sugar industry and strive to address them. One of these challenges is the drastic decline in cane production and there have been several efforts by the different role players aimed at remedying the situation. Millions of rands have been injected into the sugar industry to alleviate this problem. The researcher is of the view that these efforts will not lead to sustainable cane production if young people are not prepared to succeed their parents and become involved in cane farming.

Contrary to popular beliefs relating to the youth's negative perceptions and attitudes towards agriculture, the study found that young people whose parents are ECGs are prepared to succeed their parents as farmers. It showed that the youth are already involved in farming operations. They, however, would like to have their own farms instead of waiting for an inheritance. It also found a high level of involvement amongst these young people. The expected income was the main motivator for the young people to choose agriculture over other careers.

The study's recommendations focused on the need to ensure that the youth are able to own or lease land, on promotion of agriculture to youth from an early age, on access to funding for youth agripreneurs, and on providing support related to education and training for those choosing agriculture.

**Key Words:**

Succession, involvement, participation, youth, perceptions, attitudes, cane grower, land reform grower, emerging cane grower, small scale grower, sustainability, cane production

## OPSOMMING

Die bydrae van die landbou word algemeen beskou as potensieel een van die belangrikste faktore in die oplossing van die sosio-ekonomiese probleme wat die landelike gebiede teister, aangesien dit een van die vernaamste dryfkragte in die ekonomie van sodanige gebiede in Suid-Afrika uitmaak. Die voordeel wat die landbou bo ander sektore geniet, is dat dit arbeidintensief is, iets wat van kernbelang is in 'n land soos Suid-Afrika met sy uitermate hoë werkloosheidsyfer. Die grootste bekommernis is egter dat die huidige landbouers al ouer raak, terwyl daar onder die jeug blykbaar 'n onwilligheid heers om die landbou as beroep te kies. Verder is daar die afgelope tyd ook 'n merkbare toename in die aantal jeugdiges wat van die plase af stad toe migreer op soek na werkseleenthede buite die landbou.

Hierdie navorsingsprojek is in die suikerbedryf uitgevoer en spits hom toe op die volhoubaarheid van suikerrietverbouing deur die jeug daarby te betrek. Die meeste respondente in hierdie projek was jeugdiges tussen die ouderdomme van 14 en 35 jaar wie se ouers ontluikende suikerboere (ECG's) is. Die ECG's het ook self aan die opvolg-fokusgroepbesprekings deelgeneem. Die benaming ECG verwys na suikerrietkwekers wat voorheen (gesien binne die Suid-Afrikaanse politieke en ekonomiese verband) benadeel is. Dit sluit in dié wat op klein skaal boer asook dié wat a.g.v. grondhervorming tans opkomende landbouers is.

Volgens SASA (die Suid-Afrikaanse Suikervereniging) tel daar huidiglik sowat 22,500 as geregistreerde suikerrietboere, wat jaarliks gesamentlik gemiddeld 19 miljoen ton suikerriet in 14 suikermeulgebiede lewer. Dié syfer sluit in sowat 21,000 kleinboere en 323 ontluikende swart boere. In hierdie verhandeling verwys die term ECG na sowel SSG's (klein-skaal-boere) as swart ontluikende boere (na wie hoofsaaklik as LRG's – grondhervormingskwekers – verwys word.)

Hierdie projek het sy ontstaan te danke aan kommer oor jong mense se betreklike gebrek aan deelname aan suikerrietverbouing. Die projek gaan nie oor die jeug oor die algemeen nie: dit spits hom spesifiek toe op jong mense wie se ouers of familie ECG's is.

Dit is noodsaaklik dat die erns van die uitdagings wat die suikerbedryf in die gesig staar, begryp word, ten einde dit die hoof te bied. Een sodanige uitdaging is die snelle afname in die lewering van suikerriet. 'n Aantal pogings is al deur verskeie rolspelers aangewend om die toestand aan te spreek. Miljoene rand is reeds in die suikerbedryf ingespuut om die probleem te probeer oplos.

Die navorser is van mening dat sodanige optrede nie tot volhoubare suikerriettlewering sal lei nie tensy jong mense bereid is om hul ouers op te volg en self aan suikerrietverbouing deel te neem.

Teenstrydig met die algemeen aanvaarde oortuiging dat die jeug 'n negatiewe houding en opvatting teenoor die landbou koester, is bevind dat jong mense wie se ouers ECG's is, self bereidwillig is om hul ouers as landbouers op te volg. Daar is bewys dat jeugdige alreeds betrokke is by boerbedrywighe. Hulle verkies egter om 'n eie plaas te besit in plaas daarvan dat hulle wag om 'n familieplaas te erf.

Daar is ook bewys dat sodanige jong mense reeds diep betrokke is by landboubedrywighe. Die verwagte lone was die belangrikste beweegrede wat hulle genoop het om die landbou bo ander loopbane te verkies.

Die aanbevelings van die navorsing is toegespits op die noodsaaklikheid dat die jeug in staat gestel moet word om self grond te besit of te huur, dat hulle van 'n vroeë ouderdom aangemoedig moet word om die landbou as beroep te kies, dat bevondsing bekom moet word ten behoeve van jong agripreneurs en dat bystand ten opsigte van onderrig en opleiding voorsien moet word aan diegene wat die landbou as beroep kies.

### **Sleutelwoorde:**

Opvolging, betrokkenheid, deelname, jeug, opvatting, houding, suikerrietverbouers, grondhervormingsboere, ontlukende suikerrietkwekers, kleinskaal-boere, volhoubaarheid, lewering

## **DECLARATION**

I hereby declare that the thesis hereby submitted by me as fulfilment of the requirements for a Doctor of Philosophy degree in Sustainable Agriculture at the University of the Free State is my own independent work and has not previously been submitted before for any degree or examination in this or any other University. I hereby forfeit any copyright of this thesis to the University of the Free State.

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**Wellington Ntshangase**

**15 April 2016**

**Date**

## **DEDICATION PAGE**

**To God be the glory!**

“I can do all things through Christ who strengthens me” – Philippians 4:13

This thesis is dedicated to the youth of Africa whose daily struggles inspired this work. The future prosperity of any country depends on how its young people are nurtured today.

A special dedication to the other Wellington M. Ntshangase (Jr.). He inspired me to change the title in order to avoid receiving his letters. I pray that he will follow in my footsteps.

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## ABBREVIATIONS AND ACRONYMS

Agri Seta	Agricultural Sector and Training Authority
CASP	Comprehensive Agricultural Support Programme
ECG	Emerging cane grower
DRDLR	Department of Rural Development and Land Reform
FAF	Financial Aid Fund
FGD	Focus group discussions
GDP	Gross Domestic Product
HSRC	Human Sciences Research Council
KZN	KwaZulu-Natal Province
LDC	Less Developed Country
LRAD	Land Redistribution for Agricultural Development
LRG	Land Reform Grower
MAFISA	Micro-Agricultural Financial Institutions of South Africa
NDP	National Development Plan
NFG	New Freehold Grower
NYDA	National Youth Development Agency
NYP	National Youth Policy
PLAS	Proactive Land Acquisition Strategy
RADP	Recapitalisation and Development Programme
SA	South Africa
SACGA	South African Cane Growers' Association
SAJAE	South African Journal of Agricultural Extension
SASA	South African Sugar Association
SASRI	South African Sugar Research Institute
SEFA	Small Enterprise Finance Agency
SID	Sugar Industry Directory
SITFE	Sugar Industry Trust Fund for Education
SSG	Small Scale Grower
UAF	Umthombo Agricultural Finance
UCL	Union Cooperative Limited
USDA	United States Department of Agriculture

UYF

Umsobomvu Youth Fund

WCED

World Commission on Environment and Development

YARD

Youth in Agriculture and Rural Development

# CHAPTER ONE

## 1. INTRODUCTION

### 1.1 The importance of agriculture

Rural areas where agriculture is practiced are characterized by high levels of poverty, unemployment and a lack of basic services. Agriculture is usually purported as one of the solutions to the socio-economic problems besetting the rural areas. It is one of the main economic drivers in the rural areas of South Africa. Chapter six of South Africa's *National Development Plan* (NDP) highlights the importance of agriculture as part of a vision aimed at creating inclusive rural development by 2030. This chapter of the NDP also makes proposals on how to tackle challenges of land reform and goes on to argue that agriculture has the potential to create close to one million new jobs by 2030, which will be a significant contribution to the overall employment target. There is little doubt that the main beneficiaries of this employment will be young people, especially in rural areas.

Agriculture is one of the economic sectors of the South African economy. Within the agricultural sector there are various industries. In terms of economic contribution agriculture, forestry, and fisheries is a R66 billion industry. Primary agriculture contributes about 3% to the gross domestic product (GDP), down from 15% in the 1950s and about 7% to formal employment. However, there are strong linkages into the economy, so that the agro-industrial sector comprises about 12% of GDP (Mathivha, 2012:12).

Besides economic contribution, it can be argued that agriculture contributes to social stability in areas where it is practiced, because of the sector's ability to alleviate both poverty and unemployment.

Agriculture is important in South Africa because of, *inter alia*, the following reasons:

- Economic contribution, which includes positive contribution to the alleviation of unemployment. This is even more important because agriculture is generally more labour intensive when compared to other sectors of the economy.
- It enhances poverty reduction.
- Ensuring food security.

The advantage of agriculture over other sectors is that it is labour-intensive and this is critical in a country such as South Africa that has a high level of unemployment. According to the Quarterly Labour Force Survey (Stats SA, 2014:v) the unemployment rate in S.A. stands at



25.5 per cent as at quarter two of 2014. The unemployment scourge impacts negatively on livelihoods in rural areas and agriculture can play a critical role in alleviating unemployment. Furthermore, youth unemployment is generally higher than the average unemployment.

The main participants in agriculture are White commercial farmers, the emerging group of Black commercial farmers and small-scale farmers. Levin and Weiner (2003:39) in Mathivha (2012:11) argue that White commercial farmers as a category are still responsible for the biggest slice of this contribution. Black commercial farmers as well as small-scale farmers have also contributed their share. Mathivha (2012:11) further states that an estimated 35,000 large-scale commercial farmers, predominantly of White origin, own farms with an average size of 2,500 hectares and about 82 million hectares of land were owned by 60 000 White farm divisions.

Mathivha (2012:11) explains that these White farmers produce 95 per cent of all marketed outputs and they collectively occupied 87 per cent of the agricultural land in 2003; there is no indication that this figure has significantly changed since then. A second category of farmers is composed of approximately 200,000 Black farmers “emerging” since 1994. It is estimated that 13 million people lived in “homelands” (rural and segregated areas for Blacks during apartheid) in poor living conditions. South Africa has a large proportion of its population residing in rural areas and some of them are involved in agriculture-related activity. An example is the high number of sugarcane growers who reside in rural areas. SASA (2015:17) estimates this number of sugarcane growers in rural areas to be around 22 500 sugarcane growers.

Agriculture in S.A. takes place in freehold and communal areas. Freehold areas are areas where landholders own or lease land and under normal circumstances title deeds exist for those properties. In the context of communal areas, land is normally controlled by traditional authorities who in turn allocate pieces of land to their subjects. Landholders are generally given permissions to occupy (P.T.O.) land by traditional leaders who have jurisdiction over these areas.

Almost all White commercial farmers and Black commercial farmers operate in freehold areas and in most cases these farmers have full security of tenure. Some of the freehold areas are owned by government who in turn leases this land to Black commercial farmers as part of

the land reform process. A typical example of this case is a Proactive Land Acquisition Strategy (PLAS) which facilitates the redistribution of land to Black commercial farmers. Most small-scale farmers are found in communally owned areas.

In the South African context there has been a shakeup in the agricultural sector because of the land reform process which is aimed at addressing the inequalities of the past in terms of access to land as well as restoring the land rights to those who were forcibly removed from their ancestral lands by the previous successive apartheid governments. Generally, this has had an impact on the agricultural sector and the extent to which this impact has been negative is a major bone of contention in the country. However, there is a general consensus that the impact on agricultural production has been negative in the sense that it created some uncertainty as to whether farmers will eventually be forced to sell their farms in order to facilitate the restoration of land rights. This uncertainty normally discourages investment in agriculture. Furthermore, some farms already transferred declined in production as a result of various reasons such as lack of farming skills and lack of funding.

## **1.2 Youth in agriculture**

The literature as well as anecdotal evidence abounds with stories of youths' lack of interest in agriculture. The perceived lack of adequate youth participation in agriculture is a concern and efforts are being made to address this challenge. It is in this context that this study has been undertaken. Generally, there is a consensus in literature that there are fewer young farmers. It is not clear as to how many young people are involved in agriculture in S.A. Currently there are efforts aimed at stimulating the interest of the youth in agriculture, hence the formation of organizations such as Youth in Agriculture and Rural Development (YARD). YARD operates in most provinces of the country. Government agencies such as the National Youth Development Agency (NYDA) encourage the participation of youth in agriculture.

The apparent lack of youth interest in agriculture is fuelled by the migration from rural areas to the cities. There is a very little doubt that the prevalence of new economic opportunities since the advent of the new political dispensation of 1994 contributed to the migration to the cities in search of these opportunities. This migration is a challenge in the sense that it has the potential to deprive the rural areas of both the workforce and potential entrepreneurs who could have made a meaningful economic contribution.

### **1.3 The sugar industry**

The focus of this research is on the sugar industry and therefore merits attention in this introduction. The study evaluates the involvement of young people whose parents or relatives are cane growers and ascertains whether they are prepared to succeed them as farmers. The assumption is that the sustainability of cane farming will be enhanced if the youth are interested in cane farming and are prepared to follow the footsteps of their parents by becoming farmers.

The Sugar Industry Directory (SID) of the South African Sugar Association (SASA) states that approximately 22,500 registered sugarcane growers annually produce on average 19 million tons of sugarcane from 14 mill supply areas, extending from Northern Pondoland in the Eastern Cape to the Mpumalanga Lowveld (SASA, 2015:17). Approximately 21,110 are small-scale growers, of whom 12,507 delivered cane last season, producing 9.4 per cent of the total crop. “There are approximately 1,383 large-scale growers (inclusive of 323 Black emerging farmers) who produce 83.3% of total sugarcane production. Milling companies with their own sugar estates produce 7,94% of the crop” (SASA, 2015:17).

Over the years the sugar industry has seen a drastic increase in the number of cane growers and this is confirmed by SASA (2010:3) which states that the sector comprises of approximately 38,200 registered sugar cane growers. This is compared with the 2015 SID quoted earlier, which refers to approximately 22,500 sugar cane growers.

Regarding the sugarcane industry’s economic contribution, SASA (2015:4) states that the sugar industry generates an annual estimated average direct income of R12 billion and makes an important contribution to the national economy given its agricultural and industrial investments, foreign exchange earnings, labour intensity, and linkages with major suppliers, support industries and customers. The industry is also a catalyst to socio-economic development, particularly in rural areas where the industry is located. An important feature of the industry is the employment in rural areas where there is often little other economic opportunity. Direct employment occurs in the sugar cane field and the sugar mills and cuts across a diverse array of skills from farm labourer to agricultural scientist. The sugar industry creates approximately 79,000 direct jobs, which represents over 11 per cent of the total agricultural workforce in South Africa. In addition, there are registered cane growers supplying cane for processing to sugar mills. Indirect employment is estimated at 350,000

jobs. Approximately one million people, or 2% of South Africa's population, depend on the sugar industry for a living.

The structure of the sugar industry is administered by the South African Sugar Association (SASA) which is an umbrella body consisting of cane growers and sugar millers. There are 13 Local Grower Councils that make up the South African Cane Growers' Association (SACGA) while on the millers' side there are six milling companies that form the South African Sugar Millers' Association Ltd.

This study focuses on the Black cane growers – African, Coloured and Indian growers – who had very little opportunities prior to the new political dispensation of 1994. There are two main categories of Black growers, which are land reform growers (LRGs) and small-scale growers (SSGs). The LRGs refer mainly to those Black commercial growers who acquired their land through various land redistribution initiatives which were driven by the state and some by the sugar millers who sold their farms to this group of growers. Some of these growers acquired their farms through private sales while some lease their land from the state. The SSGs are situated mainly in communal areas which fall under the jurisdiction of traditional land and most of this land is administered by the Ingonyama Trust Board. There are also small-scale growers, predominantly Indian, who are categorized as SSGs. For the purposes of this study the researcher has adopted the term “emerging cane growers” (ECGs) to refer to these two categories of growers. The researcher cautions that this is not the term that is generally used in the sugar industry although the term “emerging farmer” is widely used in the S.A. context to refer to non-White commercial farmers.

The number of SSGs has been declining. Some of the factors that have contributed to this decline in numbers are the following:

- Reduced viability of cane farming. This is mainly due to low sugar price and high input costs.
- Cane farming competing with other land uses.
- Corporatisation of farms from individual farmers into cooperatives. Although there may be large numbers of growers belonging to one cooperative, the sugar industry statistics treat the cooperative as if it is one grower. This practice may have contributed to the distortion of the figures.

**Table 1.1: Number of small-scale growers**

	Small-Scale Growers			Total Population
	2013/14			
Mill Region	Indian	Coloured	African	
Komati	-	-	706	706
Malelane	1	-	257	258
Pongola	-	-	169	169
Umfolozi	-	-	4 387	4 387
Felixton	1	-	5 099	5 100
Amatikulu	-	2	4 886	4 888
Darnall	171	11	24	206
Gledhow	151	3	475	629
Maidstone	164	-	540	704
Eston	4	-	1 245	1 249
UCL Company Ltd (formerly Union Cooperative Limited)	-	-	3	3
Noodsberg	1	-	564	565
Sezela	36	2	1 801	1 839
Umzimkulu	21	1	181	203
<b>Total</b>	<b>550</b>	<b>19</b>	<b>20 337</b>	<b>20 906</b>

*Amended from SACGA (2014)*

According to statistics from SACGA (2014) the number of SSGs has decreased from 33,481 in the 2009/10 season to 20,906 in the 2013/14 season. At least 97 per cent of all SSGs who delivered in 2013/14 were classified as Black Africans. On the other hand the number of commercial Black growers (LRGs) has remained stable over the same period. In the 2009/10 season there were at least 386 LRGs and this number dropped to 367 LRGs in the 2013/14 season. This significant decline has also been experienced by Indian growers, who dropped from 90 to 77 growers, with the main contributing factor having been the land claims.

**Table 1.2: Number of land reform growers**

	Land Reform Growers			Total
	2013/14			
Mill Region	Indian	Coloured	African	Population
Komati	-	-	28	28
Malelane	-	-	24	24
Pongola	-	-	6	6
Umfolozi	-	-	16	16
Felixton	3	-	25	28
Amatikulu	5	1	30	36
Darnall	26	-	34	60
Gledhow	17	-	20	37
Maidstone	17	1	11	29
Eston	-	-	16	16
UCL Company Ltd (formerly Union Cooperative Limited)	-	-	1	1
Noodsberg	3	-	9	12
Sezela	5	-	47	52
Umzimkulu	1	1	20	22
<b>Total</b>	<b>77</b>	<b>3</b>	<b>287</b>	<b>367</b>

*Amended from SACGA (2014)*

#### 1.4 Background to the study

This study arose as a result of concerns regarding the relative lack of participation by young people in cane farming. Although the focus is on the sugar industry, the concerns also apply to other industries in the agricultural sector. These concerns are even more serious when we take into cognisance the fact that cane farmers, particularly small-scale farmers, are an ageing population.

Anecdotal evidence has suggested that young people are not interested in farming. The researcher thus sought to confirm this. The researcher's philosophy is that if farming is going to have a brighter future then the involvement of youth is of paramount importance. The researcher argues that there is no sustainability of agriculture if young people are not playing a significant role. This is not a study about youth in general but a study specifically about young people whose parents or relatives are ECGs.

This is a joint study by a doctoral candidate who is the author of this thesis and two Master's students whom he supervised. The two Master's students focused on the following:

- “Investigating youth participation and the sustainability of small-scale cane growers” – mini dissertation by Sithabisile Cleopatra Ngidi.
- “Investigating youth and the sustainability of land reform cane growers” – mini dissertation by Sifiso Joseph Mkhwanazi.

The reason for the categorization of ECGs into two categories – SSGs and LRGs – stemmed from the fact that they are different in terms of the following:

- **Size (number of hectares):** LRGs are larger and SSGs much smaller. The average number of hectares of an SSG is two hectares in communal areas and approximately twenty hectares in freehold areas. In the case of LRGs the size of landholdings managed by each farmer can range from thirty hectares to more than 300 hectares.
- **Income levels:** The income of LRGs is much higher than that of SSGs. The size of the landholdings and ultimately the area under cane that is managed by each grower has a big impact on farmer income levels.
- **Area of operation:** LRGs operate mainly in freehold areas whereas SSGs are predominantly in communally owned areas.
- **Classification:** LRGs are commercial farmers whereas most SSGs, due to the constraints relating to size of their operations, remain just above the subsistence level. However, in the context of the sugar industry, the term “subsistence” is not used because all growers sell their sugarcane to the sugar millers and no sugarcane is consumed at home.

These large disparities, especially in terms of income and size of farms, greatly influenced the need to approach these two categories differently and then later aggregate the results.

### **1.5 The rationale for the study**

Long-term sustainability of sugarcane production has been under threat for a prolonged period. Over the years there has been a steady if not drastic decline in cane production. This decline, if not addressed, will have a negative effect on the livelihoods of ECGs who are dependent on cane farming. The rural economies also depend on cane farming.

The economy of these areas is highly dependent on the sugar industry. The decline in production negatively affects the incomes of sugarcane farmers. These farmers and their families mainly rely on the income from sugarcane farming for survival.

ECGs, especially those residing in communal areas, have unique problems and challenges e.g. lack of security of tenure and the small land holdings, which affect their ability to raise capital. There is a need to understand the seriousness of these challenges as well as how they impact on the sustainability of cane production in communal areas. However, the researcher is of the opinion that even if these problems can be addressed a bigger problem, which is the lack of succession planning among ECGs, will remain unsolved.

The researcher hypothesizes that the current generation of cane growers is an ageing population. Therefore, even if the problems besetting the current generation of growers can be resolved there will still be a need to encourage young people to be involved in agriculture in general and cane farming in particular. The researcher generally hypothesizes that as the current breed of cane growers gets older the younger generation seems reluctant to take the baton and continue with cane farming. Unless interest in cane farming is developed amongst the youth, cane production in rural areas will not be sustained.

There are two categories of emerging cane growers. The first category is that of small-scale growers (SSGs) who farm mainly on communal areas that fall under the jurisdiction of traditional leaders. The second category is that of Black commercial farmers who operate on freehold areas which are either owned or leased. In the context of this study the latter category will be referred to as land reform growers (LRGs). The hypothesis is that young people who are offspring of current SSGs are reluctant to take up cane farming as a career. This younger generation is reluctant because they are seeing their parents struggling to make ends meet with income from cane farming. As a result, they prefer careers outside agriculture. In a nutshell, the researcher hypothesizes that the youth have negative perceptions and attitudes towards cane farming. Sustainability will be compromised unless the youth are prepared to pursue cane farming. Since sustainability is about ensuring that future generations continue to play a role, the researcher's current observation is that there is no cross-generational equity in cane farming. However, regarding youth whose parents are LRGs, the researcher's hypothesis was that these young people are more likely to take up farming as a career. In both ECG categories the researcher was of the view that there was a general lack of succession planning, which contributes to the ill-preparedness of young people to take up farming as a career.



Mtembu (2010:2) argues that

succession planning remains a critical issue across all growers in the industry. The younger generation is not keen on farming (primary agriculture). This generation wants to work overseas, tour the world, work in other industries and this poses a big risk to our SSG sector mainly because the average age of a grower in that sector is about 53 years old, which is quite close to retirement.

It is against this backdrop that the researcher wants to ascertain whether the offspring of these farmers are interested in taking over from their parents and becoming farmers. If they are not interested, the researcher wants to understand the reasons for these perceptions and attitudes.

Recent studies have focused mainly on assisting the current cane growers to increase production. No study has looked beyond the current generation of cane growers to ensure sustainability of cane production amongst ECGs.

With regard to ECGs in communal areas this study is even more important because in terms of African culture in general and Zulu culture in particular, the right to the land will be passed on to the children of the landholder. In most cases this happens to be the eldest son, although not always. Therefore, the threat to cane production might be that the children of the current cane growers might not be interested in cane farming. This will have a detrimental effect on the sugar industry in particular and agriculture in general.

In one of the most publicised sugar cane projects at Matholamnyama scheme in Ndwedwe, cane fires ravaged the cane fields and this put the scheme under financial stress. Ntshangase (2008:63) indicated that some claim that these fires are accidental, while others claim that certain growers who are part of Matholamnyama Agricultural Scheme or their relatives have deliberately set cane alight because they were not getting any financial benefit from this cane. Among the relatives mentioned, the youth were identified as the main culprits behind these fires. This is a classic example of lack of acceptability of agriculture from the perspective of the youth.

ECGs are located in the poverty-stricken rural areas. It is against this backdrop that many public and private initiatives have been aimed at developing and supporting small-scale cane growers. Farming is therefore seen as a means of alleviating poverty and creating employment in the rural areas. In the case of the study under consideration, sugarcane is the

main crop that is cultivated in the tribal areas under study. The sugar industry makes an enormous contribution in terms of job creation in these rural economies. Therefore, the interest in this study emanates from the wish to see these rural economies being uplifted and ECGs increasing their income levels so that they will ensure sustainable livelihoods.

This study will influence policy on the support to ECGs, namely SSGs and LRGs. The understanding of respondents' perceptions and attitudes towards cane farming will guide the policy makers and other stakeholders in developing programs aimed at stimulating youth interest in cane farming, thus ensuring the sustainability thereof.

### **1.6 Aims and objectives of the study**

Sugarcane production has been declining over the past few years and efforts have been made to understand the reasons for this. Some of these efforts have been practical and have gone as far as injecting funds to help alleviate the plight of the emerging growers. Government departments, particularly the Department of Rural Development and Land Reform (DRDLR), have been instrumental in assisting LRGs to revitalize their farms. The Recapitalisation and Development Programme (RADP) is aimed at achieving this objective of ensuring that LRGs are sustainable. However, the researcher argues that these efforts will not be sustainable beyond the current generation of ECGs if their heirs / offspring are not interested in cane farming. The researcher's philosophy is that unless new and upcoming emerging growers are identified and supported, all efforts to increase production in areas where these growers operate will not yield the desired results. Since land rights in communal areas tend to remain in the family, the future generation of cane growers should more likely emanate from the offspring of current cane growers.

In a nutshell, the researcher's philosophy is that the farms of ECGs will be sustainable if there is proper succession planning as well as sustainability models that support the involvement of young people. A case in point is that a young person is unlikely to be interested in taking over a small, 2 hectare farm and they will rather migrate to the cities. The perception will be that there is nothing much to gain financially. However, if the model involves a larger land holding as well involvement in the value chain, then the attitude changes. However, in the case of LRGs who have larger land holdings the possibility is that

their heirs will be more likely to accept cane farming as a career and this will be positive for the sustainability.

#### **1.6.1 Primary objective:**

- Understand whether the heirs of ECGs are prepared to succeed their parents as cane growers and the implications of their choices on sustainability. Furthermore, factors that contribute to their choices will be identified.

#### **1.6.2 Secondary objectives:**

- Ascertain whether succession planning takes place or not. This is critical, as the current cane growers are getting older.
- Understand the offspring's current level of involvement in farming operations.
- Understand their perceptions and attitudes towards agriculture and also identify the factors that led to the development of current attitudes and perceptions.
- Determine the relationship between the youth characteristics, their socio-economic conditions as well as their perceptions and attitudes towards farming.
- Identify stimulators that will lead to more young people staying in agriculture.
- Identify barriers / inhibitors that discourage young people from choosing cane farming.
- Identify factors that pose a threat to the sustainability of cane production. These factors relate to the pillars of sustainability which include social and economic pillars.

#### **1.6.3 Research questions**

In order to realise the objectives, the study seeks answers to the following research questions:

- Has any succession discussion taken place in the family?
- Are you willing to succeed your parent as a cane farmer?
- Is there someone within the family who is willing to take over farming from parents?
- Are you currently involved in the farming operations on your parents' farm or any other farm?
- If involved, what is the duration of involvement?
- Are siblings or other youth in the area involved in farming activities?
- Do you have any experience in cane farming?
- Have you been trained in sugarcane agriculture?
- Do you see yourself as a fulltime farmer in the future?

- Would you recommend farming as a career to your friends and others?
- Do you have enough information about farming as a career?
- What is it that you like about cane farming?
- What is it that you do not like about cane farming?
- What is the size of your parents' farm?
- Will you take up cane farming if it can be proven that there is money to be made?
- What is your general attitude towards agriculture?
- What is your overall perception of cane farming?
- Has your life been improved by cane farming?
- Do you believe that returns from cane farming are good and that cane farming is profitable?
- If you were to choose between an agricultural career path and other careers which one will you choose?
- Where do you prefer to work and settle; in rural or urban area?

#### **1.6.4 The contribution of the study**

Despite concerns about the youth's lack of interest in rural and agrarian futures, very little research has been conducted to deeply understand the rural youth's views and aspirations toward farming and life in rural areas. Most of the literature on youth interest in farming has been anecdotal. The contribution of this study to the body of knowledge is original in the sense that this is not just a study about the youth in general but rather a study about the offspring of cane growers. The researcher starts from the premise that if the current generation of cane growers exit the industry for various reasons such as retirement or death, their offspring are supposed to inherit their farms, hence the importance of researching these young people.

There is no study in the sugar industry that the researcher is aware of in the sugar industry, particularly in the North Coast Region, that has looked into the offspring of cane growers to deeply understand their attitudes and perceptions towards farming as well as their readiness to succeed parents as farmers. Where there has been an attempt to understand youth, the focus has been on the youth in general and not the offspring of cane growers. The researcher is also not aware of any study that has looked into their current level of involvement as well as their likes and dislikes about cane farming.

The study seeks to make an original contribution to the body of knowledge because it also seeks to develop a generic model for the sustainability of ECGs through youth involvement. This model will guide initiatives aimed at uplifting these ECGs, with a view to ensuring sustainability beyond this current generation of ECGs and also contributing to the formulation of policies in this regard.

#### **1.6.5 Description of the study area**

The study focused on the North Coast of Kwa-Zulu Natal Province of South Africa. It was conducted amongst youth whose parents are cane growers who supply the five sugar mills which are Maidstone, Darnall, Gledhow, Amatikulu and Felixton. These mills fall under Ethekewini Metropolitan Municipality, Ilembe District Municipality and Uthungulu District Municipality. The local municipalities that are part of the study area are Ndwedwe, Maphumulo, Mandeni, Umlalazi, Umhlathuze, KwaDukuza and Ntambanana local municipalities.

Map 1.1: Location of the study area



Source: Tongaat Hulett Properties (2013)

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## CHAPTER TWO

### 2. LITERATURE REVIEW

#### 2.1 The importance of agriculture

Agriculture plays a critical role in the economic development of the world and Terblanché (2006:132) states that agriculture remains an important sector in the South African economy. The role of agriculture is even more important in underdeveloped regions, especially the rural areas of third world countries. It is against this background that Leavy and Hossain (2014:10) state that agriculture is the main source of livelihood for one billion poor people living in rural areas on less than US\$1.25 a day. Although the share of agriculture in the Gross Domestic Products (GDPs) of developed countries is lower when compared to other sectors of the economy, it remains critical to both the economy and as a source of food security. It is even more important in developing countries as reflected in the Zimbabwean case, where Muwi (2012:2) argues that agriculture plays a pivotal role in the economy, employs 75 per cent of the country's population and contributes 15 to 20 per cent to gross national product. Therefore, agriculture is crucial to the development of underdeveloped regions of the third world. According to Naamwintome and Bagson (2013:61) agriculture is an essential industry for many nations and in the western world, the share of agriculture in total GDP is less than 4 percent but nearly 50 per cent of the worldwide agricultural trade is conducted by these (developed) countries.

Ghatak and Ingersent (1984:26) argue that the expansion of the non-agricultural sector is strongly reliant on domestic agriculture, not only for a sustained increase in the supply of food, but also for raw materials used in manufacturing products such as textiles.

South Africa is one of the countries where the contribution of agriculture is enormous. Besides ensuring food security, agriculture creates employment and alleviates poverty in the rural areas. In most rural areas agriculture is the main economic sector that drives the local economies and without agriculture the development of the rural areas will be slow.



The 2006/2007 *Yearbook on Agriculture and Land Affairs* (Department of Agriculture, 2007:71) states that “the contribution of agriculture is approximately 2.8 per cent to GDP and about 7.2 per cent to formal employment. However, due to strong backward and forward linkages into the economy the total contribution is estimated at about 15 per cent of GDP”. It looks like the contribution of agriculture has been declining over the years. Therefore, in the context of this study, it can be inferred that more and more young people are getting employed in other sectors.

“Since agriculture sustains humans and their livestock support systems, and also provides the primary source of income and employment for low income populations, it must be relied on as the keystone of economic growth and the alleviation of poverty” – Pinstup-Andersen (1993) in Miller and Wali (1995:413).

Djurfeldt and Larsson (2004) in Naamwintome and Bagson (2013:61) state that

in Sub-Saharan Africa, the population is predominantly rural and agriculture remains the main occupation. Unfortunately, agricultural growth in sub-Saharan Africa still lags behind that of the population culminating in the continuous food importation. Thus, poverty and food insecurity remain widespread in Sub-Saharan Africa. Domestic food markets are not given the needed attention as a potential engine of agricultural growth. This is demonstrated in high national import dependence which is the major cause of food insecurity among farmers especially in Kenya and a low budget allocation as Ghana.

These sentiments, which are also shared by the researcher, highlight the need for greater investment in agriculture. This investment will yield positive results in the sense that agriculture is more labour intensive when compared to other sectors of the economy.

## **2.2 Categorisation of agriculture**

There are various categories of farmers, depending on the country and the particular industry. In the case of South Africa, Groenewald (2002:4) states that if agriculture needs to be categorized, it can be categorised into three categories which are per site, per nature or size and per practice. Where agriculture is categorised per site this could be urban, peri urban or rural. In the case of nature or size categorisation this could take the following five forms which are

- New entrants
- Small-scale

- Emerging
- Large-scale (commercial/ conventional)
- Subsistence

Where agriculture is categorised per practice this could be conventional (which actually refers to the most commonly used practice), alternate, organic and low-input. Emerging farmers, in the South African context, are farmers from previously disadvantaged socio-economic backgrounds. In the context of this study, new entrants, small-scale, and large-scale farmers of Black origin are regarded as emerging cane growers (ECGs). The term “subsistence farming” is not used in the sugar industry, mainly because sugarcane value is derived from selling it to the sugar mill rather than being utilised at home.

Mathivha (2012:11) states that South Africa has a dual agricultural economy: a well-developed commercial sector and a subsistence sector predominantly occupied by resource-poor Black farmers. However, while the opposition between White large-scale commercial farmers and Black small-scale subsistence farmers has existed for a long time and remains valid, South Africa’s agriculture is best described today as a *three-tiered sector*. In the sugar industry, which is the focus of this study, the common categorization is reflected in the following paragraph.

The South African Cane Growers’ Association (SACGA, 2015:5) defines a "small-scale grower" as a grower who is affiliated to a Member Organisation and during the immediately preceding 3-year period, delivered an average of 225 tons or less of recoverable value of cane per season. A "large-scale grower" means any grower who is affiliated to a Member Organisation and is not a small-scale grower (SSG). Black large-scale growers are regarded as land reform growers (LRGs) and for all purposes they are regarded as commercial farmers. For the purposes of this study the term “Black” refers to Africans, Indians and Coloured growers. Most of the LRGs acquired their farms through the three dominant approaches. The first approach is where they purchased their farms with the assistance of government’s Land Redistribution for Agricultural Development (LRAD) programme. Some of the growers lease their farms from government through government’s Proactive Land Acquisition Strategy (PLAS). The second approach is where they bought their farms from the sugar millers. The term normally used by the sugar industry to identify these growers is called New Freehold

Growers (NFGs). The third approach is where they have purchased their farms through normal commercial transactions without any support from government.

Whether these lands are sustainable or not becomes a very important aspect in any farming venture and this is discussed in the next section.

### **2.3 Sustainable agriculture**

According to Dumanski (1997:15) the generally accepted definition of sustainability was given by the Bruntland Commission (WCED, 1987). It defines sustainable agriculture as follows:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their needs.” There is no doubt that this is a profound statement, therefore it is important for one to understand the different perspectives of sustainability. For example, Department of Agriculture (1995:6) argues that issues central to sustainable agriculture are the following:

- The necessity of taking a long-term view, thereby ensuring the supply of products to future generations.
- The necessity of maintaining and enhancing soil fertility, veld condition, water supply, water quality, and genetic resources on which agriculture depends.
- The importance of managing the farming environment collectively rather than in isolation.

The above remarks, especially the first point, highlight the importance of this research in the sense that unless a long-term view is taken there can be no guarantee that agricultural products will be supplied in future. In the context of cane farming in tribal areas, the offspring of current cane growers are critical in ensuring the sustainability of cane farming.

Williams (2000) in Chizari, Baygi and Breazeale (2006:52) states that being economically sound, environmentally protective, and socially acceptable were the three widely advocated components of sustainable agriculture. These authors further quote Al-Subaiee, Yoder and Thomson (2005) as saying that the aim of sustainability in agriculture is a healthy and ample food supply for both present and future generations through the wise utilisation of natural resources.

To demonstrate the validity of these abovementioned authors' opinions, other authors such as Groenewald (2002:4) take the idea forward. He argues that according to *Agenda 21 of 1992*, irrespective of the site, nature or practice, "the major objective of sustainable agriculture and rural development is to increase food production in a sustainable way and enhance food production". The author goes on to say that sustainability is now regarded as a norm of evaluation rather than a specific identified farming practice. Groenewald (2002:1) argues that sustainable agriculture is a process rather than an occurrence, a direction rather than a destination, and a philosophy and system of farming.

Sustainability does not only concern philosophy and system, other dimensions such as environmental degradation, the elimination of small family farms from agriculture, the erosion of rural communities, and the inadequate conservation of fragile lands, have made agricultural sustainability a significant concern (Chizari, Baygi & Breazeale, 2006:52). According to Department of Agriculture (1995:6) sustainable agriculture has as its goals both the production of agricultural goods and the conservation of the resources on which these goods are produced. Department of Agriculture (1995:19) further proposed that the following are techniques needed for sustainable agriculture:

- Pay attention to physical measures that contribute to the conservation of natural resources, e.g. crop rotation and cross contouring.
- Where possible and appropriate, use natural, on-farm non-chemical methods of pest control, which do not destroy beneficial forms of life.
- Ensure the correct application of fertilizers, pesticides and other chemicals.
- Maintain and enhance soil fertility by utilising on-farm nutrient sources such as manures and legumes to the fullest practical extent.
- Use on-farm sources of capital, both farm profits and off-farm earnings, to finance the ownership and operation of the farm and reducing reliance on borrowed capital.

There is no doubt that agriculture has a great role to play in sustaining both humans and livestock, and some authors add that since it also provides the primary source of income and employment for low income populations, it must be relied on as the cornerstone of economic growth and the alleviation of poverty (Miller and Wali, 1995:418).

In essence agriculture is characterized by systems. According to Groenewald (2002:5) there are criteria that any agricultural system should fulfil before it can be declared as sustainable. These criteria are now commonly known as the 5 pillars of sustainability, namely:

1. Economic viability
2. Social acceptability
3. Protection of all natural resources and proper management thereof
4. Reduction of the level of risk
5. Maintenance or enhancement of production/ services

Groenewald (2002:2) states that a short, concise definition of sustainable agriculture could simply be cross-generational equity; citing the *Farmer's Weekly* of 24 March 1995: "sustainability is about forever". "Sustainability is to leave future generations as many, if not more, opportunities as we have had ourselves" (Dumanski, 1997:15). Therefore any meaningful discussion about sustainability should take into cognisance the circumstances of young people who are either current or potential farmers. Since this study focuses on farming in the sugar industry it will be critical to give a synopsis of this industry. This synopsis is given in the next section.

## **2.4 A synopsis of the sugar industry**

### **2.4.1 The socio-economic contribution of the sugar industry**

According to Maloa (2001:1) the sugar industry is a major contributor to the rural economic activity in the sugarcane growing areas of South Africa, namely, KwaZulu-Natal (KZN), Mpumalanga and the Eastern Cape, generating an income from the sale of sugar and molasses of about R4,985,000,000 (R5 billion). This figure relating to income has increased to more than R12 billion in 2014/15. Maloa (2001:1) further states that the sugar industry is an important provider of jobs. Its role in this regard has been particularly valuable as it is a rurally based industry and so the jobs both in milling and growing are in the rural areas.

According to the South African *Sugar Industry Directory* (SID) the direct employment within the sugar industry is approximately 77,000 jobs and indirect employment is estimated at 350,000 jobs (2010:3). In addition to this approximately 38,200 registered cane growers earn their living from the sugar industry. This directory further states that approximately one million people, more than 2 per cent of South Africa's population, depend on the sugar industry for a living. In 2014/15 the sugar industry's direct employment stands at 79,000

jobs. This shows that the industry continues to grow despite various challenges facing the industry.

Imani-Capricorn in McCarthy (2007:12) states the following about the sugar industry:

- The sugar industry directly contributes between 0.5 – 0.7 per cent of national GDP.
- Sugarcane ranks as the sixth largest agricultural product – after poultry, maize, dairy, beef and deciduous fruit – in South Africa.
- The estimated national multiplier for the sugar industry is 3.2, implying that for every R1 increase in output from sugar farming, milling and refining combined, national GDP will grow by R3.20.

McCarthy (2007:17) states that those cultivating sugarcane in South Africa today include some 50,000 registered growers (most of them smaller growers on communal tenure land), and this is because the sugar industry voluntarily pioneered small-scale Black farming initiatives over the past three decades, with results that have arguably exceeded the efforts of all other actors combined in South Africa (tens of thousands of small farms have been created).

These thousands of farmers supply the 14 sugar mills that exist in South Africa. Even though there are more SSGs than large-scale farmers, the combined production of these SSGs is much smaller than that of large-scale farmers. Production by SSGs has been declining drastically over the past few years.

The South African Cane Growers Association (2007:3) states that between 1996/97 – 2006/7 the number of SSG has declined by 22.7 per cent. This newsletter further states that cane production by SSGs has declined by 1,659,848 tons (45 per cent) translating into a loss of real annual revenue of approximately R290 million into cash strapped areas over this period.

According to Ntshangase (2008) the major role-players in the sugar industry are the following:

- Sugar millers such as Tongaat Hulett Sugar, Illovo, TSB and uShukela Wethu.
- South African Cane Growers' Association (SACGA), which represents sugarcane growers.

- South African Sugar Association (SASA), which represents the interests of both millers and growers.
- The Departments of Agriculture, especially the provincial departments of KwaZulu-Natal and Mpumalanga.
- The Department of Land Affairs is also involved in matters pertaining to land reform in the sugar industry.

#### **2.4.2 Challenges faced by emerging cane growers**

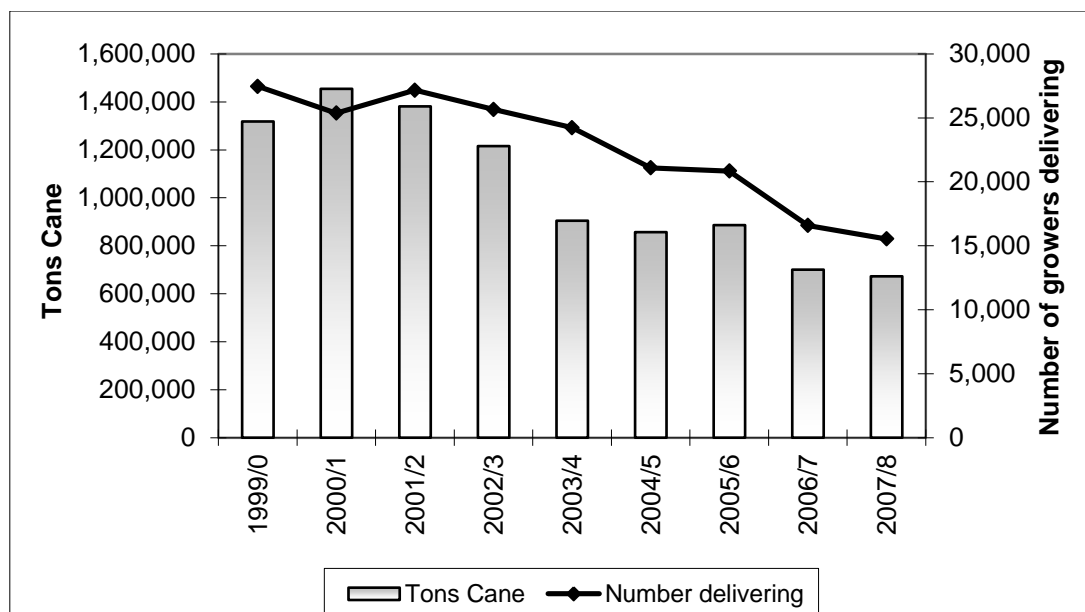
McCarthy (2007:10) states that the S.A. sugar industry took the initiative to establish many thousands of small growers. McCarthy further states that this initiative commenced in 1973 when the industry established a Financial Aid Fund (FAF) entirely at its own cost in order to bring small-scale growers (SSGs) into production.

It is important to understand the challenges faced by emerging growers. These challenges might influence the perceptions and attitudes of the youth towards small-scale growers. The youth under study are the offspring of the emerging growers and therefore we cannot divorce these challenges from their perceptions and attitudes.

#### **2.4.3 Declining cane production**

According to SASA (2009) small-scale growers have been severely challenged by declining returns to cane production and poor growing conditions experienced since the 2002/3 season. Declining returns have negatively affected their viability and as a result many SSGs have gone out of production with dire consequences for the rural economies.

Small-scale grower cane deliveries are important to the sustainability of the entire sugar industry as they contribute to mill throughput and viability. A significant decline in small-scale grower production could result in mill closures in severely affected cane supply areas and reduce economic activity in the tribal areas of KZN where cane is grown (SASA, 2009:2).



**Figure 2.1: Number of small-scale growers and their cane production**

*Source: SASA Report to KZN Department of Agriculture and Environmental Affairs (2009)*

#### 2.4.4 Land reform in the sugar industry

Ghatak and Ingersent (1984:217) make a broad distinction between traditional and modern systems of land ownership and tenure. These authors state that under traditional systems the ownership of land may be either communal or private.

Under communal or tribal ownership, farmers have individual rights of cultivation, but not necessarily exclusive use of the land. For example grazing rights are often held in common. Under private ownership, the rights of ownership and cultivation may either be exercised by the same person (the owner –farmer) or separately by landlords and tenants (Ghatak & Ingersent, 1984:217).

Most small-scale growers have access to very small plots of land. They also lack security of tenure. In the tribal areas of KwaZulu-Natal the plot holders get what is called a “Permission to Occupy” (PTO) before they can access the land and farm. These plots are usually very small. Ntshangase (2008:2) quotes SACGA as stating that sugarcane farms vary in size and subsistence farms average 1.7 hectares.

Le Gal and Requis in Northard, Ortmann and Meyer (2005) argue that a serious drawback of the small-scale grower sector is the farmers’ inability to efficiently plant, grow, cut and deliver cane to mills, considering the small size of their farms, with an average of between 1,5 and 2 hectares of sugarcane.



Furthermore, Ghatak and Ingersent (1984:24) state that the distribution of land in Less Developed Countries (LDCs) tends to be distorted in favour of a minority of landlords and large-scale farmers. These authors further state that whilst labour is generally abundant, with work-sharing the norm on family farms, land is extremely scarce due to population pressure and the unequal distribution of cultivation rights.

The sugar industry has made great strides in ensuring the transformation of the industry in terms of land ownership by different racial groups as well as tonnage produced by these various groups. Some of the industry flagship programmes that fast tracked the distribution of land to emerging cane growers (ECGs) included the selling of 18,789 hectares to 172 ECGs by the sugar millers.

SASA (2014:3) states that freehold land under sugarcane under Black ownership has increased from 5 per cent in 1994 to 22 per cent currently, or over 74,405 hectares under cane farmed by land reform beneficiaries. This publication further mentions that Black growers produced over 3.5 million tons of sugarcane in the 2011/12 season.

In order to sustain production by ECGs the sugar industry has entered into a range of partnership agreements aimed at providing support to the ECGs. These partnerships take the form of grant funding, co-funding arrangements, fertilizer and seed cane schemes as well as loan facilities. Some of these partnerships are the following:

- Recapitalisation and Development Programme (RADP), which is a partnership with the Department of Rural Development and Land Reform (DRDLR). Since 2010 the DRDLR has injected more than R326 million rand into the industry to assist struggling ECGs to rehabilitate their farms and increase cane production. This has resulted in the increase in the area under cane farmed by ECGs and also contributed to job creation.
- KZN Agribusiness Development Agency which has injected millions to support ECGs as part of the Comprehensive Agricultural Support Programme (CASP).
- KZN Department of Agriculture and Rural Development has supported the sugar industry by injecting funds for fertilizer schemes, cane development and mechanization in farms.

- KZN Department of Economic Development, Tourism and Environmental Affairs has entered into co-funding agreements to fund cane development and establish farming enterprises.
- MAFISA (Micro-Agricultural Financial Institutions of South Africa), which is an entity of the national Department of Agriculture, Forestry and Fisheries, has established a loan facility for the sugar industry.
- The Small Enterprise Finance Agency (SEFA), which is an entity of the Industrial Development Corporation has partnered with the industry and established a loan facility for the ECGs.

Despite the great strides made by the industry the albatross around the neck of the industry has been the restitution process. SASA (2014:4) states that “with 39 per cent of the commercial freehold sugarcane land gazette under restitution claim in KwaZulu-Natal, the impact has been significant in terms of sugarcane production”. The publication further argues that this inability to timeously settle the outstanding gazette claims has had several unintended consequences. These consequences are highlighted as follows:

- Landowners are reluctant to make major investments on their properties, which has resulted in declining yields.
- Claimant communities are becoming increasingly impatient with the landowners relating to the settlement of the claims. At times the perception arises that landowners are delaying the settlement of claims.
- Given the extent of gazette, the restitution process has effectively “strangled” the market, leaving very limited land for private transactions.

It is in the context of the above land reform situation that the sugar industry has established a dedicated and focused land reform office aimed at ensuring that the industry plays a meaningful role in the land reform and restitution space.

#### **2.4.5 Low prices**

Ghatak and Ingersent (1984:22) state that the volatility of commodity prices is a major constraint to the development of farmers, especially small-scale farmers. In the case of the sugar industry the cane farmers are price takers, which means that they do not have influence on the price determination. This reality has, to a certain degree, been realized by the sugar

industry because of the volatility of the sugar price in the world market. This is because some of the sugar produced in S.A. is exported and therefore the exported sugar attracts a lower price.

The problem of low prices is further compounded by the global trade in agricultural products, which has had a negative effect on some industries within the agricultural sector. The twin evils of low prices for the produce and high input costs have impacted negatively on the viability of cane farming.

The Economic Commission for Africa (2000:3) states that despite the free trade area being championed by the World Trade Organisation, industrialized countries have protected themselves against the most dynamic exports of African countries, including textiles and clothing, agricultural products, and processed raw materials, to the detriment of Africa. The commission further argues that huge surpluses of products like sugar, dairy and beef accumulated under high tariff walls in industrialized countries are often disposed of by resorting to subsidized exports, to the disadvantage of African producers, as this displaces developing countries' products in third country (export) markets and in the domestic markets of developing countries themselves.

#### **2.4.6 Lack of skills**

According to Ntshangase (2008:24) most small-scale farmers have very little formal education. In the context of this study, the terms “grower” and “farmer” mean the same thing, although the sugar industry usually uses the term “grower”. Besides general education, very few have attended training courses in agriculture. They rely mainly on extension services provided by the private sector and various government donor agencies. Large business organizations also provide extension services to the farmers that supply them with products. In providing support and supplementing the skills of farmers, extension services are important. Anecdotal evidence relating to the Proactive Land Acquisition Strategy (PLAS) of the DRDLR suggests that some of the beneficiaries of this programme lack both the technical knowledge and the financial management knowledge that is required in order to succeed as a sugarcane grower.

#### **2.4.7 Over-reliance on external support**

Within the emerging cane grower (ECG) category most small-scale farmers (most of these are located in communal areas) are not self-sufficient. They rely heavily on financial and technical support from various government and non-governmental organizations, and the private sector. In the sugar industry various payments are paid to SSGs as a form of supplementary payments (subsidies) aimed at improving their incomes. Large-scale cane growers do not receive these supplementary payments. Another example of over-reliance on external support is the fertilizer assistance scheme that was initiated by SASA and funded by the KZN Department of Agriculture and Environmental Affairs. An example of another programme aimed at the SSGs was jointly funded by the KZN Department of Economic Development, Tourism and Environmental Affairs in conjunction with one of the sugar millers, Tongaat Hulett, with the objective of planting 3,500 hectares of sugarcane.

Within the context of the land reform in South Africa, various support programmes have been implemented by government with the main aim of assisting the land reform grower (LRG) category of emerging farmers. These programmes are highlighted in section 2.4.4 under the section dealing with land reform in the sugar industry. There is no doubt that the dire situation of LRGs would have been worse if it were not for the support programmes highlighted.

Having articulated these challenges, the question remains as to whether young people should pursue a farming career with no guarantees? What if there are policy changes and budgetary constraints and as a result thereof this support is no longer forthcoming? These are some of the challenges regarding the youth involvement in agriculture in general and cane farming in particular.

#### **2.4.8 High poverty levels**

According to Ghatak and Ingersent (1984:23) poverty is the outstanding characteristic of traditional agriculture. The causes of poverty are resource constraints and technological stagnation, both of which limit production. The sugar industry operates in the rural areas that are characterized by high levels of poverty. Generally, there is a relationship between high poverty levels and youth migration to the cities. This is a source of concern because this will contribute to labour shortage. Already this is experienced by the sugar industry in the context of the critical shortage of sugarcane cutters.

#### **2.4.9 Limited access to capital**

Even in cases where small-scale farmers can access the land they face a greater challenge of securing finance. Ghatak and Ingersent (1984:23) state that access to capital is very restricted due to low internal savings (linked to low farm incomes) and capital market imperfections. Efforts by the sugar industry aimed at addressing this challenge included the various partnerships mentioned in section 2.4.4 under the section dealing with land reform in the sugar industry. In the past the industry used to operate an industry financing entity called the Financial Aid Fund (FAF). When this entity ceased to exist the industry established Umthombo Agricultural Finance (UAF) whose main mandate is to run a savings scheme for ECGs. The UAF is currently housing funds from agencies such as MAFISA with the objective of financing ECGs.

#### **2.4.10 Volatility of input prices**

The economic conditions of the SSGs are further aggravated by the twin evils facing them, namely high input costs and low commodity prices. Sometimes prices for inputs such as fertilizer, herbicides and fuel become very volatile and as a result make it difficult for farmers. It is even worse when prices for these inputs are on an upward trend.

### **2.5 Socio-economic profile of rural youth**

This section is largely based on the *Status of Youth Report* (2003) which was conducted by the Human Sciences Research Council (HSRC). Umsobomvu Youth Fund (UYF) commissioned this report, which was published in 2005. HSRC (2005:12) mentions that 42 per cent of young people reside in the rural areas.

#### **2.5.1 Youth definition**

According to the *National Youth Commission Act of 1996*, youth are defined as all people between the ages 14 to 35 years. Everatt (2000:22-23) in HSRC (2005:17) questions the wisdom of retaining this wide age band in the definition of the youth, following the social changes in the 1990s:

The life experiences, contexts and needs of a 14 year old are radically different from a 35 year old's. When we add the complications of race, gender, class, urban/ rural locations and others that underpin South African society, the complexity becomes impossible to contain within an already blurry concept such as 'youth' (Everatt, 2000:22-23).

While there are various definitions of the term, 'youth' for the purposes of this study means people between the ages 14 to 35 years. In South Africa eighteen (18) is the age at which a person may vote or obtain a driver's licence. A person who is aged 18 and above is more empowered to make personal decisions than is a 14 year old. Age 18 is also the age at which most young people complete their secondary schooling and are therefore better able to have a view of their career directions. The *National Youth Policy* explains this definition of 'youth' in more detail:

The *National Youth Policy (NYP) 2009-2014* is used inclusively to refer to young people as those falling within the age group of 14 to 35 years. This is based on the mandate of the *National Youth Commission Act of 1996* and the *National Youth Policy 2000*. This inclusive approach takes into account both historical as well as present-day conditions. Although much has changed for young people since the advent of democracy in 1994, the motivation for 35 years as the upper age limit of the youth has not yet changed since historical imbalances in the country are yet to be fully addressed (NYP, 2009:12).

Mathiva provides further information regarding youth as category of the South African population:

The overall population is estimated at 50 million, an increase of about 2.5 million between the year 2005 and 2009. At 37 per cent of the entire population, the youth constitute the biggest age category of the South African population. Of the 37 per cent, Africans make about 80 per cent of the total youth population. Almost one-fifth of the facilities in South Africa are headed by youth, often without stable means of livelihood. Over 48 per cent of youth live in households that have reported hunger. About 60 per cent of youth aged between 15 to 24 years in seven of the South African' nine provinces live in households with low income (Mathivha, 2012:13).

Mathivha (2012:15) further explains that the data indicates that the number of youth between the ages of 14 to 35 years is estimated to be at 20.5 million, representing 40.9 per cent of the total population of 50 million. The estimates indicate that the youth population group, year on year, has been growing higher than the national average population growth meaning that there are more people joining this age group than national population growth average.

### **2.5.2 Youth migration**

According to Wiley, Rose and Halpin (2009:2) the lack of interest and decreased population in rural regions has led to the decline in small-scale farms. Youth migration into urban areas is an important feature of rural youth. The HSRC (2005:12) states that while 54 per cent of young men reported having been born in a rural area, only 39 per cent were currently resident in a rural area. Of the 59 per cent of young women who were born in a rural area, only 45 per

cent currently reside in a rural area. Although the reasons for this migration are not specified in the report it will not be unreasonable to assume that urban areas offer better opportunities than rural areas do.

Wiley, Rose and Halpin (2009:2) argue that small-scale farms are nearing extinction. Since the early 20th century, industrialization and urbanization have caused families and individuals alike to shift from farming as a mainstream profession to manufacturing and service oriented jobs. Wiley, Rose and Halpin (2009:2) further state that

such rural to urban migration has reduced both the population in rural regions and the quantity of farms producing agricultural goods. As a result, people from around the globe – both in developed and third world nations – have diverged from locally based, diversified agricultural food systems and embraced large-scale corporate food production.

In the case of Nigeria, Akpan (2010:3) referred to surveys by Olayiwola (2005) and Echebiri (2005) that identified factors affecting youth rural-urban migration. Akpan (2010:3) highlighted that the economic pull factors they identified include the perception of greater job opportunities due to the presence of industries or companies in cities. Economic push factors included poor physical infrastructure and social amenities in the rural areas, the search for education and skills acquisition, and the absence of desirable job opportunities. Other factors include a general dislike of village life or expulsion from rural communities resulting from the commitment of an offense or crime. The results reveal that economic factors were the dominant reason for rural youths' increased involvement in non-farm activities and migrating to urban areas.

A study that looked at the migration of youth to Ho Chi Minh City in Vietnam showed that economic difficulties in rural areas emerged as significant in encouraging people to move to cities. Thi (2008:261) states that employment difficulties in rural areas due to land scarcity, a lack of jobs and low pay have caused young people to move out of their villages. Furthermore, Thi argues that the labour surplus in rural areas due to high population growth had led to increased flows of out-migrants from rural areas.

#### ***2.5.2.1 The impact of migration to the cities***

When looking at the impact of neglecting agriculture, Adebayo et al. are quoted in Aphunu and Atoma (2010:47) as stating that

the scenario was worsened by the emergence of petroleum as a foreign exchange earner thereby igniting a chain of reactions that led to the total neglect of development of agriculture at the grassroots level. The consequential effect of the neglect of agricultural sector is the high rate of rural-urban drift of able bodied young men and women and unemployment, youths' restiveness and hooliganisms, especially as being witnessed in the Niger Delta region.

Bezu and Holden (2014:260) give insight into some of the reasons why rural people would engage in non-farm activities instead of agriculture. These authors state that the push and pull factors represent the incentives that motivate employment or investment in the non-farm sector. Whether and to what extent rural residents engage in the non-farm sector also depends on the capacity of the residents. The capacity represents not only the individual's resources but also the relevant household and community resources that she/he has access to.

Bezu and Holden (2014:260) further argue that

rural residents who do not own agricultural land in the face of missing land markets experience the ultimate push factor. However, farmers who have land to cultivate but face frequent weather shocks may be forced to diversify into the non-farm sector as ex ante risk management and/or ex post risk-coping mechanism. The pull factors emerge if earnings from non-agricultural employments are assessed to be higher than earnings from farm employment. The higher the returns to labour and capital in non-agricultural employment, the more attractive such employment will be compared to farming.

### **2.5.3 Socio-economic status**

The HSRC (2005:15) states that unemployment among young people is high; youth are characterized by high levels of poverty. The HSRC (2005:132) makes the following summary points on youth poverty and inequality:

- Urban-rural location plays a key role in the distribution of poverty, with a majority of poor people living in rural areas. The concentration of poverty in rural areas particularly in rural areas of the former homelands is also crucial to the distribution of poverty among the provinces.
- Nearly three quarters of the sample (72.3 per cent) reported growing up under circumstances of poverty and deprivation in which they either did not have enough money for basics like food and clothing or were short of many other things.
- Almost half (46.3 per cent) of respondents felt that their financial situation had improved since childhood. However, African and Coloured respondents, those in the 18 to 24 age group, and those who lived in rural areas, were less likely to report



improvements in their financial situations and more likely to see a deterioration in their circumstances.

- While considerable attention has been focused on child poverty, youth poverty has not received as much attention, both in South Africa and internationally.

Naamwintome and Bagson (2013:60) state that youths aged 10 to 24 years, are 27 per cent of the world's population and 33 per cent of the population in Africa. Ghana, according to the United Nations Organisation and Commonwealth Secretariat, defines "youth" as "persons within the age bracket of 15 and 35"

#### **2.5.4 Youth in agriculture**

The number of young people involved in agriculture is not known. Currently there are efforts aimed at stimulating the interest of the youth in agriculture, hence the formation of organizations such as Youth in Agriculture and Rural Development (YARD). YARD operates in most provinces of the country.

The ageing farmer population is largely a reflection of the lack of or low level of youth participation in agriculture. "The age of participants is a worrying factor because 66% are more than 50 years old with 48% above 61 years of age. The involvement of the youth is minimal, and the survey results indicated that only 5% of the young people are engaged in sugarcane farming" (Masondo, Nxumalo and Eweg, 2009:3).

Leavy and Hossain (2014:9) argue that better education and communication appear to have had the effect of dramatising the hardships of a farming life; a generation has grown to adulthood which, in some of the less developed locations in particular, has for the first time had the means to compare a future as a farmer (often viewing farming as a way of life rather than as a job, and 'farmer' as an identity as opposed to a job title) with other possibilities.

Youths are very important resources for every nation especially for sustaining agricultural productivity, an important sector for the development. The youth is a stakeholder in the development process especially in view of the great assets of youth, resilience, resourcefulness and perseverance. Unfortunately, this category of people is virtually left out in policies and programmes considerations (FAO et al., 2009) even though this is a critical stage for this group of people since this is a period of transition into adulthood (Naamwintome & Bagson, 2013:63).

Leavy and Hossain have the following to say:

While de-agrarianisation is not new, policymakers are correct to be concerned about a withdrawal from the sector: smallholder productivity growth, and agricultural transformation more broadly, depend in part on the extent to which capable, skilled young people can be retained or attracted to farming, and on policies that support that retention. So who wants to farm, and under what conditions? (Leavy & Hossain, 2014:3).

Leavy and Hossain (2014:7) state that this overlap between a ‘crisis’ in agriculture and a ‘youth crisis’ gives rise to policy concerns about, among others, the skills, size and sustainability of the future workforce for smallholder food farming: will the farmers of the future have the capacities, knowledge and networks for smallholder agriculture to maximise its potential for poverty reduction and food security.

White (2012:11) argues that to understand better the reasons behind why young people turn away from agriculture, we need to take account of a number of problems, including:

- the deskilling of rural youth, and the downgrading of farming and rural life;
- the chronic government neglect of small-scale agriculture and rural infrastructure; and
- the problems that young rural people increasingly have, even if they want to become farmers, in getting access to land while still young.

#### ***2.5.4.1 The experience of other countries***

The challenge of retaining youth in agriculture has been and is currently being experienced by other economies that are similar to South Africa, such as India. Swaminathan (2001) in Sharma (2007:27) states that in the coming years, one of the biggest challenges for Indian agriculture will be retaining its youth in agriculture. The author further argues that unless farming becomes both intellectually stimulating and economically rewarding, it will be difficult to attract or retain rural youth in farming. Another trend that was observed by this study was the ageing of farmer population caused mainly by the fact that young men are starting to play a diminishing role in farming.

Regarding evidence of the withdrawal of the youth from farming, Leavy and Hossain (2014:12) state that,

historically, aspirations studies from the 1960s and 1970s, mainly in West Africa, suggest that young people in these societies expressed high aspirations and expectations taking them away from farming, which was considered to be low status (Osuji, 1976; Owuamanam, 1982; Hurd and Johnson, 1967; Gugler, 1968; Championvincent, 1970; Imoagene, 1976). More recently, low levels of wellbeing –

material, relational and psychosocial – were reported by young girls working on South African fruit farms in Kritzingler (2002).

Young people who were interviewed in the Tanzanian study by Juma (2007) cited by Leavy and Hossain (2014:12) considered farming to be dirty and undesirable, although “agriculture is regarded as an employer of the last resort to young people”.

Studies from India also suggest a trend towards young people exiting agriculture. This is prevalent across all sizes of landholdings, but with different motivations. Those with lower access to land are likely being pushed out of the sector while those with larger landholdings are capitalising on their relatively higher education and skills levels to exploit opportunities in other sectors (Leavy & Hossain, 2014:12).

Mangal (2009) in Naamwintome and Bagson (2013:63) stated that there is insufficient youth participation in the agricultural sector even though this class of people is the most productive of any society as it contains people in the prime of their lives physically and mentally. Muwi (2012:4) cites International Fund for Agricultural Development (IFAD, 2010) as stating that “young men and women in Zimbabwe are continuously moving from the rural areas to settle in the cities. This has been attributed to the attraction of high incomes in the urban areas and the lucrative life and high standards of living. However, once in the cities they do not find employment because currently the world’s underdeveloped countries are still experiencing the highest levels of underemployment and unemployment”. Muwi (2012:4) further argues that the agrarian sector remains the world’s largest provider of work and for this reason the youth’s apparent lack of interest in agrarian and rural futures in times of contracting labour markets is paradoxical.

The twin challenges relating to the lack of youth interest and the ageing farmer population are not confined to developing and underdeveloped countries only. When quoting Schweitzer (2005) Wiley, Rose and Halpin (2009:3) state that the average age of a U.S. farmer today is nearing 60 years, up from 50 years in 1978. Just 5% of farmers in 2002 were between the ages of 25 and 34”.

When looking at the Nigerian farmer and the farming environment, Aphunu and Atoma (2010:47) remarked that

the Nigerian farmer is ageing with an average of 50 years. The problem with this is that the younger generation is not interested in farming. The age and low level of education of average Nigerian farmers correlates with their aversion of risks associated with the adoption of new innovations and hence the very low productive

capacity. In the opinion of many, getting youths to take up farming seems a possible panacea to the problem.

Naamwintome and Bagson (2013:63-64) further argue that ensuring Ghana's youth, who constitute about 20 to 30 per cent of Ghana's active population participation in agriculture is paramount, as this mitigates:

- a) the ageing farmer population in the country which averages 55 years;
- b) the continuous rise of Ghana's food import especially for rice, cooking oil, frozen chicken and meats;
- c) the poor image of persons involved in agriculture, especially in the rural communities; and
- d) youth unemployment, particularly in the rural areas.

## **2.6 Challenge of lack of access to land**

If young people are going to be retained in agriculture access to land for farm purposes will have to be ensured. In a study by Bezu and Holden (2014: 263) about youth abandoning agriculture in Ethiopia they found that the majority of young people in rural Ethiopia do not have their own farmland despite their constitutional right to access land in the community in which they live. These authors quoted the 2012 national level land use survey which showed that the youth (18–29 years of age, in this case) account for 21 per cent of the rural landholders in Ethiopia. These same authors highlighted the problem of small farms and many inheritors. Bezu and Holden (2014:263) state that “as farm sizes in our study areas are small relative to the household sizes, allocating parents' land among children is a challenge. An estimate based on current land holdings of parents in our sample shows that if parents were to allocate their land to all sons and daughters, each would receive, on average, 0.22 hectares. This is such a small amount of land that it cannot even be formally registered as a new separate farm unit”. This Ethiopian picture painted by Holden and Bezu resembles that of communal areas who are part of this study.

According to Muwi (2012:31) most of the parents/guardians showed concern that it was going to be difficult for their youth to have access to land for farming. They cited the reasons that land is now limited or exhausted. This draws back to the time of the colonial period when the current communal lands were given to the native Zimbabweans being marginalized and regarded as unproductive.

White (2012:14) cites Colson (1960:79-89) as stating that

sixty years ago research among the Tonga in Zimbabwe found that many children had their own fields. Unmarried boys or girls might be given a portion of a field belonging to either father or mother before obtaining their own fallowed land, and after harvest might have their own bins in which to store grain from these plots.

White (2012:14) then goes on to refer to Reynolds (1991:xxvii), saying:

A generation later Pamela Reynolds described how young children often work, and are sometimes allowed to make their own farms, on the land of a parent or other relative, and “actively direct their labour contributions in accord with various strategies that maximize their chances of meeting current needs, and establishing links among kin and neighbours that will enhance future security” (Reynolds, 1991:xxvii).

The challenges of access to land are better articulated by White (2012:15) when he asked, “is it surprising if young men and women today, having experienced some years of education, are reluctant to engage in long years of agrarian ‘timepass’? Who wants to wait until they are 40 or 50 years old to be a farmer?”

## **2.7 The case for agriculture**

IFAD (2013) in Leavy and Hossain (2014:10) argues that agriculture is the main source of livelihood for one billion poor people living in rural areas on less than US\$1.25 a day. Over 80 per cent of food consumed in much of the developing world comes from the smallholder sector. It is seen to play a key role in poverty reduction and food security, with great potential for impacting on nutrition via higher volumes and wider varieties of food produced.

Naamwintome and Bagson (2013:60) argue that agriculture is core to every nation’s development, especially in this 21st century, hence the investment in it by both developed and the developing countries. These authors further quote the 2008 World Bank report that agriculture remains fundamental to poverty reduction and economic growth in the 21st century (World Bank, 2008). The quoted World Bank report further posits that 75 per cent of the world’s poor are from rural areas and most are involved in farming, an activity which requires sustenance especially by the youth who are the leaders of tomorrow.

Diao et al. (2007) and Lipton (2005) also argue in Leavy and Hossain (2014:10) that growth-poverty linkages in agriculture are also stronger compared to other sectors, with greater potential to reduce poverty than non-agricultural activities, in allowing more poor people to participate in growth and creating more opportunities for employment for poor people.

According to Naamwintome and Bagson (2013:61) agriculture is an essential industry for many nations and in the western world, the share of agriculture in total GDP is less than 4 per cent but nearly 50 per cent of the worldwide agricultural trade is conducted by these (developed) countries. Therefore, in order to deal with the rural challenges such as underdevelopment and unemployment there is a need to ensure that youth participate in agriculture. Royal Society (2009) and IFAD (2013) are quoted in Leavy and Hossain (2014:10) as predicting that over the next four decades, the need to feed a large and growing urban population will create more demands on the agriculture sector, including in global markets. This means agricultural productivity and intensification need to increase, and be sustained.

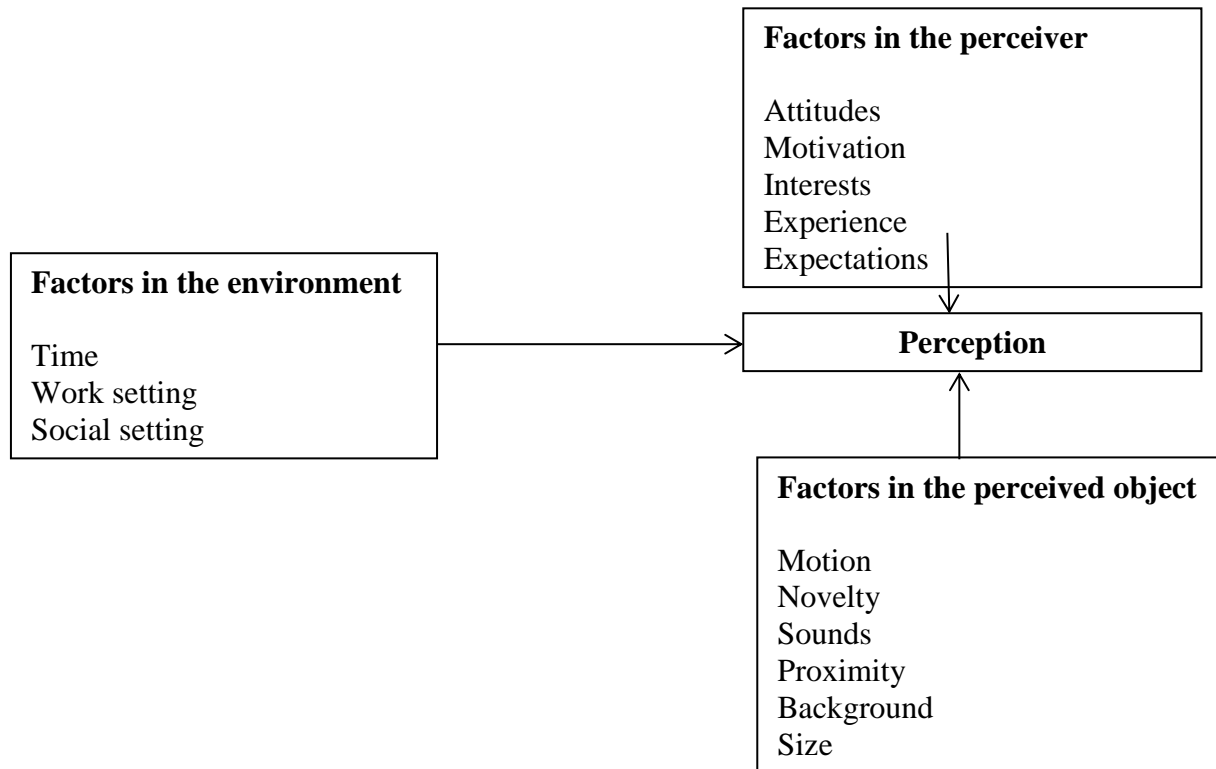
## **2.8 Perceptions and attitudes**

Since this study also looks at the perceptions and attitudes of youth towards cane farming it will be fair to define these concepts in order to put issues into perspective. “Perception makes us aware of the world around us. Perception is a selective process by which we interpret and give meaning to external factors. It is seldom realistic and essentially a subjective process” (Bergh and Theron, 2003:104). According to Bergh and Theron (2003:113) “evidence suggests that perception is influenced by learning (nurture) as well as heredity (nature) and that considerable evidence substantiates the view that key aspects of perception are learned”. In the context of this study the implications of these assertions are that youth perceptions are learned through a socialization process.

According to Murphy, Murphy and Newcomb in Lundy et al. (2006:45) an attitude can be defined as a way of being “set” toward or against certain things. Perloff in Lundy et al. (2006:45) states that attitudes are learned through socialization and are usually enduring influences on cognitions and behaviours. Eagly and Chaiken (1995) cited in Lundy et al. (2006:43) propose that a key consequence of attitude strength is resistance to change. These authors further state that the difficult process of attempting to change attitudes is persuasion.

Figure 2.2 shows the various factors that influence perception. In the context of this study the work setting of those already in the agricultural space or their social setting such as the social status accorded agriculture may influence the perceptions of the youth. The attitudes of the

youth may be positive or negative and this will have a bearing on how these young people perceive agriculture. Their experience of agriculture such as seeing their parents making or not making money may also influence their perceptions of agriculture.



**Figure 2.2: Factors that influence perception**

*Source: Bergh & Theron (2003:114) adapted from Robbins (2001)*

Regarding the negative perceptions and attitudes of youth about agriculture, Terblanché (2006:132) states that agriculture remains an important sector in the South African economy. The Strategic Plan for South African Agriculture recognises the importance of the youth and emphasises the education and training of the youth, to ensure a new generation of farmers and agriculturists. The youth however show very little interest in agriculture, not only in South Africa, but worldwide and one of the challenges will be to change the negative image of agriculture among the youth.

Notwithstanding the importance of the youth in future agricultural development, there seems to be a lack of interest in agriculture by the youth as a future career. Parents and teachers often regard education as a path to a better life in the city, while agricultural work is seen as a type of punishment suitable for those who have not been doing well at school (Machinga, 2004:21 in Terblanché, 2006:133).

Aphunu and Atoma (2010:46) state that

youths are a formidable force in the agricultural production process, constituting a sizeable proportion of future progressive farmers and better citizens, especially in the rural areas. While their contribution towards attaining food security cannot be underestimated, their apparent lukewarm attitude towards agriculture is a source of concern and challenge to the development of agricultural extension.

Youth perceptions and attitudes are normally developed through a socialization process. This process takes place at home, school and through peer groups. To emphasise the role played by parents at home as well as peer groups, authors such as Jones (2009:168) in Muwi (2012:11) regard the home as the primary socializing agent of the youth where their views on smallholder farming are influenced by the way they are socialized by their parents/elders whose experiences in farming can affect the advice that they give their children on farming. Muwi (2012:11) describes peer groups as individuals who are of the same age or maturity level and they are usually in contact with one another and these peer groups become a space where the youth would understand themselves better without the socio-economic status that has been attributed to them by their parents.

On the issue of the role of school in the socialization process, Jones in Muwi (2012:12) states that as a form of secondary socialization the school educates the youth and they gain knowledge which they cannot get either from their parents or their peers (Jones, 2009:168). The youth go through the education process as they interact with their teachers. Youths learn at school about the climatic and other changes that are happening and these can affect their views on agriculture. Terblanché (2006:141) states that peer group attitude according to Ornstein (1992:680) could have a positive or negative influence and “negative peer pressure is a problem”. Vernon (1986) cited in Terblanché (2006:137) states that it is always good and motivational to be accepted among the peer group. A study amongst high school students by Terblanché (2006:141) revealed that 39.4 per cent of the respondents indicated a negative attitude towards learners taking agricultural science as a subject and only 15.6 per cent indicated a positive attitude and this finding was an indication of learners being rejected by their peer group.

White (2012:12) stated that the alienation of young people from agricultural knowledge and rural life skills is made worse by the misguided political correctness of many anti-‘child labour’ campaigners, who insist on the right of children to complete their entire childhoods without any experience of the world of work. The author goes on to argue that it is probably



no exaggeration to say that in most countries, formal schooling as currently practised teaches young people not to want to be farmers.

Kritzinger (2002) in Mathivha (2012:24) found that in South Africa most teenage girls living on fruit farms had negative views of farm life, relating to: nature of farm work and low wages; low status ascribed to farm children compared to children living in towns and villages; alcohol abuse, gossip and jealousy among farm workers; and lack of privacy, boredom and social isolation. Most want to escape farm life and improve their economic position, as well as their status.

Chikezie et al. (2012:24) state that though youths have desirable qualities that can promote agriculture, most of them have strong apathy towards it. These authors further argue that since agricultural development is the basic tool for economic development, there is the need for more emphasis to be placed on the role youth can play in agriculture. In Nigeria, agricultural production is still carried out using physical strength, which declines with age. Chikezie et al. (2012:24) argue that this has therefore been observed as one of the major constraints to agricultural production in Nigeria. Arokoyo (1992) and Ekong (2003) in Chikezie et al. (2012:224) noted that the youth who have the energy to take up agricultural production do not believe or have the knowledge that agricultural production can really be a profitable venture. Thus, there arises the urgent need to really teach them to know the importance and prospects in farming and take to it, thereby increasing the farming population.

Contrary to anecdotal evidence supporting youth's negative perceptions and lack of involvement in agriculture, a study by Chikezie et al. (2012:228-229) looking at the factors constraining rural youths' involvement in cassava production in Onuimo Local Government Area of Imo State, Nigeria, found that the youth were actively involved and participated in most farming activities. Chikezie et al. (2012:228-229) further stated that

the findings tend to agree with the findings of Adesope (1999), Jibowo and Sotomi (1996) and Roy (2003), who reported active involvement of the youth in agricultural activities. Chikezie et al. (2012:228-229) recommend that "the youth who are an embodiment of zeal, strength and innovativeness should be encouraged as they perform their role in nation building as well as in sustaining the food security of our dear country in particular and the world at large and more importantly encouraging agricultural development". The implication of the above findings is that what the

youth need is the right incentive to improve their level of productivity, since the zeal and energy to participate are there.

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## CHAPTER THREE

### 3. RESEARCH METHODOLOGY

#### 3.1 Introduction

This study, which researched the offspring of emerging cane growers (ECGs), was conducted in the North Coast and Zululand Region of the Province of KwaZulu-Natal. This chapter deals with the delimitation of the study area, research approach and design, research strategy and ethical considerations. The section on the research strategy also deals with aspects such as study population and sampling, data gathering instruments and techniques and methods of data analysis that were adopted in this research. Considering these activities entailed in this research project, Dane (1990:5) in Steyn (2005:3) best describes research as a systematic process of enquiry for knowledge and information.

#### 3.2 Delimitation of the study area

The study focused on the youth (age 14 to 35 years) whose parents or close relatives are emerging cane growers that are located in the areas of KwaZulu-Natal North Coast. There are 7 mills on the North Coast of KwaZulu-Natal. These constitute 50 per cent of the mills in the country. However, in terms of grower numbers per mill, the combined grower numbers in these mills far exceed 50 per cent.

These emerging cane growers supply the following sugar mills on the North Coast and Zululand. These sugar mills are Maidstone, Darnall, Gledhow, Amatikulu, Felixton, Umfolozi and Pongola.

The focus of the study was on cane growers who supply five sugar mills that are situated on the North Coast of KwaZulu-Natal. These mills are Maidstone, Darnall, Gledhow, Amatikulu and Felixton. The survey population and the sample size are reflected in Table 3.1.

**Table 3.1: Total emerging cane growers' statistics**

<b>Grower Category</b>	<b>Survey Population</b>	<b>Sample</b>	<b>Percentage</b>
Small-Scale Cane growers	11 527	193	1.67%
Land Reform Cane growers	190	61	32.10%
<b>Total</b>	<b>11 717</b>	<b>254</b>	

The breakdown of statistics from Table 3.1 is reflected in Table 3.2 and Table 3.3. These tables show the breakdown per sugar mill area, the total survey population, as well as the sample per mill areas. The reason for taking a sample per mill area was to ensure that the sample is as representative as possible.

**Table 3.2: Small-scale cane growers' statistics**

<b>Number of Small-Scale Growers</b>							
	<b>2013/14</b>			<b>Total</b>	<b>Survey</b>		<b>Sample</b>
<b>Mill Region</b>	<b>Indian</b>	<b>Coloured</b>	<b>African</b>	<b>Population</b>	<b>Population</b>	<b>Percentage</b>	<b>Size</b>
Komati	-	-	706	706			
Malelane	1	-	257	258			
Pongola	-	-	169	169			
Umfolozi	-	-	4 387	4 387			
Felixton	1	-	5 099	5 100	5 100	44.24%	81
Amatikulu	-	2	4 886	4 888	4 888	42.40%	85
Darnall	171	11	24	206	206	1.79%	4
Gledhow	151	3	475	629	629	5.46%	11
Maidstone	164	-	540	704	704	6.11%	12
Eston	4	-	1 245	1 249			
UCL	-	-	3	3			
Noodsberg	1	-	564	565			
Sezela	36	2	1 801	1 839			
Umzimkulu	21	1	181	203			
<b>Total</b>	<b>550</b>	<b>19</b>	<b>20 337</b>	<b>20 906</b>	<b>11 527</b>	<b>100%</b>	<b>193</b>

*Source: Amended from South African Cane Growers' Association (SACGA, 2014)*

Table 3.2 reflects the number of small scale growers (SSGs) as well as the sample size. A total of 193 respondents were interviewed from the 5 sugar mills which are the focus of this study. The breakdown is reflected on the above table. Almost 99 per cent of respondents are located in communally owned areas that fall under the jurisdiction of traditional leaders.



**Table 3.3: Land reform cane growers' statistics**

Number of Land Reform Growers							
Mill Region	2013/14			Total	Survey	Percentage	Sample
	Indian	Coloured	African	Population	Population		Size
Komati	-	-	28	28			
Malelane	-	-	24	24			
Pongola	-	-	6	6			
Umfolozi	-	-	16	16			
Felixton	3	-	25	28	28	14.74%	9
Amatikulu	5	1	30	36	36	18.95%	12
Darnall	26	-	34	60	60	31.58%	20
Gledhow	17	-	20	37	37	19.47%	8
Maidstone	17	1	11	29	29	15.26%	12
Eston	-	-	16	16			
UCL	-	-	1	1			
Noodsberg	3	-	9	12			
Sezela	5	-	47	52			
Umzimkulu	1	1	20	22			
<b>Total</b>	<b>77</b>	<b>3</b>	<b>287</b>	<b>367</b>	<b>190</b>	<b>100%</b>	<b>61</b>

Source: Amended from SACGA (2014)

Table 3.3 reflects the number of Black large-scale growers as well as the sample size. In the context of this study the above mentioned Black large-scale growers are described as land reform growers (LRGs). They are part of an umbrella term regarded as emerging growers which also includes SSGs.

A total of 61 respondents were interviewed from the 5 sugar mills which are the focus of this study.

### 3.3 Researcher's philosophy

This study was inspired by the researcher's belief in knowledge and wisdom, and this section deals with the research philosophy of the researcher. Saunders, Lewis and Thornhill (2016:124) describe research philosophy as a system of beliefs and assumptions about the development of knowledge. "The process of exploring and understanding your own research philosophy requires you to hone the skills of reflexivity, that is, to question your own thinking and actions, and learn to examine your own beliefs with the same scrutiny as you would apply to the beliefs of others" (Gouldner, 1970 in Saunders et al., 2016:125).

Saunders et al. (2016:135-144) highlight five major philosophies, namely positivism, critical realism, interpretivism, postmodernism and pragmatism.

**Table 3.4: Comparison of five research philosophies**

	<b>Ontology</b>	<b>Epistemology</b>	<b>Axiology</b>	<b>Research methods</b>
Positivism	Real, external, independent	Scientific, measurable	Researcher is neutral/ independent	Structured, quantitative methods
Critical realism	Stratified/layered (empirical, the actual and the real)	Facts are social constructions	Value laden research	Range of methods & data types to fit subject matter
Interpretivism	Multiple meanings, interpretations & realities	Focus on stories, narratives, perceptions & interpretations	Subjective, value bound research	Small samples, in-depth investigations
Postmodernism	Socially constructed through power relations	What counts as knowledge is decided by dominant ideologies	Value constituted research	Typically qualitative methods
Pragmatism	Reality is the practical consequence of ideas	Problem solving & informed future practice as a contribution	Research initiated by researcher's beliefs & doubts	Mixed methods. Emphasis on practical solutions

Source: Adapted from Saunders et al. (2016:136-137)

How a particular research is undertaken or approached is mainly influenced by the researcher's ontological assumptions and epistemological assumptions. Jashapara (2011:44) states that "ontology relates to our assumptions of reality and epistemology relates to our grounds of knowledge and what we can know". Saunders et al. (2016:127) define ontology as assumptions about the nature of reality and these assumptions shape the way in which the

researcher sees and studies the research objects. Saunders et al. (2016:127) mention that epistemology concerns assumptions about knowledge, what constitutes acceptable, valid and legitimate knowledge. Axiology is also important in philosophy and this is described by Saunders et al. (2016:128) as referring to the role of values and ethics within the research process and this incorporates questions about how the researcher deals with both their own values and those of their research participants.

Regarding philosophical positions, the researcher subscribes to pragmatism and this is the paradigm adopted in this study. Saunders et al. (2016:143) state that pragmatism strives to reconcile objectivism and subjectivism, facts and values, accurate and rigorous knowledge and different contextualised experiences. “Pragmatists recognise that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities” (Saunders et al., 2016:144).

### **3.4 Research approach and design**

Various authors agree that there are two main research approaches, which are quantitative and qualitative. Babbie and Mouton (2001:270) state that qualitative research entails a generic approach to research according to which research takes as its departure point the insider perspective on action. On the other hand, quantitative research entails precisely measuring variables and testing hypotheses that are linked to general causal explanations (Neuman, 2000:122). Judging from the above explanations it can be concluded that quantitative research deals mainly with numbers while the qualitative focuses on understanding and depth. The research approach that was followed was a combination of quantitative and qualitative approaches.

Both primary and secondary research data were gathered. According to Tustin et al. (2005:120) secondary data are defined as existing data that can be used in solving the problem in question. The same authors argue that secondary data are most useful when interpreting and evaluating primary data. Tustin et al. (2005:89) contend that primary data are collected specifically to address the research objective and if the value of secondary research is assessed as being inadequate for the research objectives. Therefore, it can be concluded that primary data is new information whereas secondary data is data that already exists. It is for that reason that this research used both primary and secondary data although the main emphasis was on primary data.

According to Babbie and Mouton (2001) a research design is regarded as the “blueprint” or general plan of the study which informs both the research approach and research methodology. Babbie and Mouton (2001) further mention that there are three main research designs, which are:

- Explorative – undertaken when little is known about a phenomenon or when the researcher wants to gather more information. Usually associated with qualitative methodology.
- Descriptive – undertaken with the objective of providing specific details about a situation, social setting and relationship. This design is associated with both quantitative and qualitative methodologies.
- Explanation (comparative) – seeks to identify the reasons or causes of the phenomenon.

The research design that was applied in this study is the descriptive design because, according to Neuman (2000:22), it:

- provides a detailed accurate picture of the situation;
- locates new data that contradicts existing evidence; and
- reflects on the background and context of the situation.

The descriptive research design is associated with both quantitative and qualitative methodologies.

### **3.5 The study type**

The research type that was followed is the survey. The survey entailed taking a sample of respondents from a given study population. A survey is a form of quantitative research. According to Neuman (2000:250) surveys measure many variables, test multiple hypotheses, and infer temporal order questions about past behaviour, experiences or characteristics. Santakos in Thi (2008:55) elaborates and articulates that the advantage of quantitative research is that it investigates social problems objectively. The author further asserts that objectivity is the main concern in quantitative research because objectivity requires researchers to remove personal prejudices and bias and see things for what they are. Kumar in Thi (2008:55) argues that objectivity is a significant indicator in establishing validity of information and doing so, investigators become neutral observers and analysts.

In most cases, the survey research will yield answers on the same questions or observations from the same observation schedule from a large number of respondents. The purpose is to obtain answers on the same questions/ observations. It is a form of quantitative research. However, in this research qualitative aspects will also be considered. The purpose of this survey is to replicate the findings and generalize about the whole survey population.

Regarding the usefulness of surveys, Neuman (2000:247) in Steyn (2005:7), states that the following can be investigated through survey research:

- behaviour in a variety of settings and contexts, e.g. buying choices;
- attitudes, beliefs and opinions regarding, e.g. persons, products and services;
- biographical and demographic characteristics e.g. place of employment, farm size;
- expectations in terms of, for example, careers, material goods etc.;
- self-classification, e.g. in terms of liberal, moderate or conservative; and
- knowledge about an issue or topic.

Focus group discussions (FGDs) were also undertaken in this research. The following four FGDs took place:

- Two FGDs with ECG participants numbering 22 ECGs.
- Two FGDs of youth whose parents are ECGs participated. The total number of participants was 39 young people.

The main purposes of the focus groups were to broaden the understanding of survey results, understand the various factors that were at play regarding youth in agriculture, understand their likes and dislikes and reasons thereof, investigate their current involvement in farming operations, and finally assess their willingness to succeed parents and the factors that inhibit or encourage them to either pursue or reject agriculture as a career. The FGDs also facilitated a better understanding of succession issues from parents' (ECGs) point of view.

### **3.6 The research strategy**

#### **3.6.1 Study population and sampling**

The study population comprised young people between the ages of 14 to 35 who are the heirs or offspring of emerging cane growers (ECGs), which supply the five sugar mills under

study. In cases where the offspring is not available a young person who has been living in the same household as the emerging grower was interviewed.

There are basically two sampling approaches, which are probability and non-probability. Tustin et al. (2005:344) state that non-probability samples are instances in which the chances (probability) of selecting members from the population in the sample are unknown whereas the opposite is true in the case of probability sampling. Tustin et al. (2005:344) define a sample as a subset of a population (or a universe). The total number of growers in all the five sugar mills made up the total population and a sample of each group was taken. The growers were not respondents per se but their offspring were.

In terms of the sampling approaches, since this is both quantitative and qualitative research, the probability sampling approach was followed. On the other hand, non-probability sampling approaches are more suitable to qualitative research. In probability sampling the members of the population have a known chance of being selected while the opposite applies in the case of the non-probability sampling.

Regarding the sampling methods the following methods are more popular:

- Simple Random sampling
- Stratified sampling

The above methods refer to how the sample was drawn. According to Tustin et al. (2005:350) with simple random sampling, the probability of being selected in the sample is known and equal for all members of the population.

Regarding small-scale growers (SSGs), if the principle of simple random sampling is assumed in this study, it means that all the 11,527 SSGs who are part of the study population in the 2013/14 season have a known and equal chance of being selected as respondents. However, there were five strata (Felixton, Maidstone, Gledhow, Darnall and Amatikulu) and random sampling was applied in each stratum instead of the total population. A total of 193 respondents were interviewed from the SSG category of ECGs.

Regarding LRGs there were also five strata and 61 respondents were interviewed out of a population of 190 respondents. This means that a total of 254 respondents from both the SSG and LRG categories were interviewed. These respondents are the offspring of the cane

growers. In addition to the 254 respondents, there were 61 who participated in four focus group discussions (FGDs) – 39 youth whose parents are involved in farming and 22 ECGs.

### **3.6.2 Data gathering techniques and instruments**

In the context of this study both primary and secondary data were gathered. According to Tustin et al. (2005:120) secondary data are defined as existing data that can be used in solving the problem in question. Relevant research data that already exists will be utilised. Secondary data normally complement primary data and are most useful when interpreting and evaluating primary data. Tustin et al. (2005:89) state that primary data is collected specifically to address the research objective and if the value of secondary research is assessed as being inadequate for the research objectives. Where secondary data exists this thesis tapped into that data. However, the main focus was on primary data whose aim was to make an original contribution to the body of knowledge.

According to Steyn (2005:9-10) there are various data gathering methods, namely observation, face-to-face interviews, self-administered methods, focus groups and personal interviews. The data gathering method / technique that was predominantly applied was that of face-to-face interviews. In order to supplement face-to-face interviews, focus groups were also utilised. The main advantage of face-to-face interviews was that the interviewer was able to clarify questions and also probe the respondent for more information. The interviewer was also able to explain the terminology in a simple manner, which the respondent was not going to understand in the case of self-administered methods. In terms of the data gathering instruments, a structured questionnaire was utilised since this is mainly a quantitative research, although qualitative data was gathered using focus groups.

Regarding focus groups some ECGs were interviewed as participants in FGDs. Quantitative data was critical in this study since the researcher wanted to know the number of youth who have a positive attitude towards farming. The researcher also wanted to know the number of respondents who answered or felt in a certain way regarding cane farming. Therefore it was important that the questions asked were similar for all the respondents. This also made it easy for the interviewers. The structured interview, as an instrument, is also advantageous because, unlike the unstructured interview schedules, it does not rely on the subject expertise of the interviewer.

The questionnaire was pilot-tested before the main data collection took place. A total of 20 ECG respondents (10 from the LRG category and another 10 from the SSG category) participated in the pilot testing, after which minor adjustments were made to the questionnaires.

In addition to face-to-face personal interviews, four FGDs were undertaken. The two FGDs were for the ECGs and involved a total of 22 participants while the other two concentrated on the youth and there were 39 participants in this category.

### **3.6.3 Methods of data analysis**

The gathered data was captured and manipulated using statistical software called SPSS (2015, version 23). Since the structured questionnaire was used, codes were used in most instances to make it easier to sort and categorize the data using computer programs. The aim was to derive findings and make conclusions and recommendations. In terms of the quantitative aspects of this research computer programs ensured faster and more accurate analysis.

Data description was typically the first and main step in the analysis. According to Tustin et al. (2005:522) descriptive analysis provides a very useful examination of the data. They further state that the starting point in descriptive analysis is the construction of a frequency distribution (2005:523). Frequency distribution is simply the construction (by computer) of a table that shows in absolute and relative terms (that is, percentages) how often the different values of the variable are encountered in the sample. Tustin et al. (2005:523) mention that a frequency distribution indicates how “popular” the different values of the variable are among the units of analysis.

**3.6.3.1 *Chi-square*** Due to the nature and objective of this research the chi-square was the main statistical technique used to draw conclusions regarding empirical data. “In order to determine whether the differences between the observed frequencies and the expected differences are significantly different, we use the chi-square test” (Willemse, 1990:138).

#### **3.6.3.2 *Characteristics, uses and applications of a chi-square***

Based on Willemse (1990) and Anderson (2014) the following can be regarded as the main features, uses and applications of the chi-square:



- “One of the most important applications of the chi-square distribution is to test whether a population conforms to a specific probability distribution. This type of test is called *a goodness of fit test*” (Anderson, 2014:264). “One of the unusual features of a goodness of fit test is that you always implement the alternative hypothesis as a right-tailed test. Based on the construction of the test statistic, the null hypothesis that a population follows a specified distribution is rejected only if the test statistic is too large; therefore a goodness of fit test is always right tailed” (Anderson, 2014:265).
- Referring to the chi-square goodness of fit Willemse (1990:140) states that these tests are used to determine whether a set of sample data follows a particular probability distribution. Willemse goes on to argue that these tests will determine whether the sample information is significantly different from that expected for the hypothesized distribution.
- The chi-square test can also be used to test for independence between rows and columns of a contingency table.
- The chi-square distribution has no negative critical values.
- As a result if the test statistic is greater than the critical value (where degree of freedom and significance level, which is usually 0.05, intersect) you reject the null hypothesis; otherwise you do not reject the null hypothesis.

According to *Social Science Statistics* (2015) the chi square is normally used to test for association between two categorical variables. An example of the variables may be gender (males and females) and smoking habits (smoker and non-smoker). The following requirements must be met before this test can be conducted:

- Random sample
- Observations must be independent of each other (so, for example, no matched pairs)
- Cell count must be 5 or above for each cell in a 2 x 2 contingency table

**3.6.3.3 Chi-square test of independence.** According to *Social Science Statistics* (2015), for a contingency table that has  $R$  rows and  $C$  columns, the chi-square test can be thought of as a test of independence. In a test of independence the null and alternative hypotheses are:

- $H_0$ : The two categorical variables are independent.
- $H_a$ : The two categorical variables are related.

The null hypothesis ( $H_0$ ) is a statement that is assumed to be true unless strong contrary evidence exists against it (Anderson, 2014:256). According to *Social Science Statistics* (2015) the null hypothesis asserts the independence of the variables under consideration (so, for example, gender and voting behaviour are independent of each other).

If the statistical evidence against the null hypothesis is strong enough to reject it, you need an alternative statement to accept in its place. “The alternative hypothesis ( $H_a$ ) is a statement of what you accept to be true if the null hypothesis is rejected” (Anderson, 2014:257).

A chi-square test of independence was the main statistical analysis that was conducted and therefore the procedure followed in making this analysis warrants an explanation. Willemse (1990:138-139) outlines the procedure for the chi-square test of independence that was followed:

1. State the  $H_0$  and  $H_a$
2. Since two variables are involved, the observed frequencies ( $F_o$ ) are entered in a two-way classification table, or contingency table.
3. In order to determine whether the differences between the observed frequencies and the expected frequencies are significant, the chi-square test is used.
4. In order to determine whether the chi-square value is high or low (how different from the  $F_e$  can the  $F_o$  be and still support the  $H_0$ ?), it is compared with a critical chi-square value from the chi-square table.
5. Conclusion: The acceptance region for  $H_0$  goes from the left tail of the curve to the chi-square critical value. To the right lies the significance level. When doing an analysis you will normally compare the chi-square value with region of acceptance and accept or reject  $H_0$ .
6. Make your decision.

### **3.7 Ethical considerations**

In the context of research ethical considerations are very important. Confidentiality was ensured and in order to achieve this, names and contact details of respondents will not be divulged to outside parties except university examiners who might want to confirm that interviews were indeed conducted. This was communicated to respondents who were given assurance of this confidentiality.

Respondents were assured that their names and their responses will not be disclosed. The advantage of computerized data analysis is that codes are utilised and as a result confidentiality is assured. Participation in the research project was voluntary. Although focus group discussions were recorded, permission had been sought from the respondents. Furthermore, permission to publish the four photographs published in this thesis was received from the participants.



**Photo 3.1: Focus group discussions of emerging cane growers at Amatikulu Sugar Mill near Gingindlovu**



**Photo 3.2: Focus group discussions of emerging cane growers at Kearsney, near Stanger**



**Photo 3.3: Focus group discussions of children of emerging cane growers at Amatikulu Sugar Mill near Gingindlovu**



**Photo 3.4: Focus group discussions of children of emerging cane growers at Kearsney, near Stanger**

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## **CHAPTER 4**

### **4. FINDINGS ON THE SUSTAINABILITY OF SMALL-SCALE GROWERS THROUGH YOUTH INVOLVEMENT**

#### **4.1 Introduction**

This chapter on findings deals with the sustainability of small-scale cane growing through youth involvement. It is divided into the following four articles (sub-chapters):

4.2 The impact of succession planning on the sustainability of cane production by small-scale cane growers in North Coast of KwaZulu-Natal, South Africa.

4.3 The sustainability of small-scale growers (SSGs) through youth involvement.

4.4 The perceptions and attitudes of small-scale cane growers' offspring towards farming and implications for sustainability. A case study of KwaZulu-Natal North Coast, South Africa.

4.5 Economics of small-scale cane farming: Youth perceptions versus reality

This chapter (4) and the following two chapters have been written in an article format. The rationale for using this format is to facilitate ease of reading and overcome the challenge of well researched topics not getting through to the users and readers due to the number of pages that scare the potential users of the research findings. The researcher wanted to prevent this becoming one of the voluminous theses gathering dust in library shelves.

Some of these articles have been reviewed by the different publication houses that received the journals, such as the South African Journal of Agricultural Extension (SAJAE) based in South Africa as well as the Human Ecology Journal based in India.

These papers captured the findings in a special way by each focusing on specific aspects of the study as it is depicted in each article such as perceptions and attitudes, economics of cane growing, youth involvement and succession planning. The main aims of these articles are to facilitate easy access and to contribute to the body of knowledge by deriving various lessons from original research.

## 4.2 THE IMPACT OF SUCCESSION PLANNING ON THE SUSTAINABILITY OF CANE PRODUCTION BY SMALL-SCALE CANE GROWERS IN THE NORTH COAST OF KWAZULU-NATAL, SOUTH AFRICA<sup>1</sup>

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### Abstract

*This paper forms part of a research study for a PhD, which has been conducted in the North Coast of KwaZulu-Natal and focuses on the sustainability of emerging cane growers. The research problem of the study was that cane growers cannot be sustained beyond the current generation of existing farmers because young people are not interested. Agriculture takes place in rural areas which are characterised by high levels of poverty. Cane farming, like other agricultural production activities, is the major economic driver in these areas. However, the current farmers involved in cane growers are ageing and the economy will be negatively impacted unless the youth succeed their parents as farmers. Sustainability of cane production depends on the preparedness of the offspring of the cane farmers to succeed them as farmers.*

*The results of the study revealed two responses. The first response suggested that young people whose parents are cane growers are willing to succeed their parents and become cane growers. The second response suggested that where discussions on succession planning have taken place there was an increase in the number of young people indicating an interest in succeeding their parents. The paper concludes with a recommendation that there is a need for developing succession planning in the North Coast farming area.*

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**Key words:** Cane grower, cane farmer, sustainability, succession planning, youth.

#### **4.2.1. Introduction**

A study was conducted in the North Coast of KwaZulu-Natal on cane growers. It focused on the sustainability of emerging cane growers. The rural areas where cane farming activities take place are characterised by high poverty and unemployment levels which are contributing factors to youth migration to the cities. Youth migration into urban areas is an important feature of rural youth and unless young people remain active in agriculture, which is the main economic driver in these areas, they will migrate to big cities and the situation in rural areas will remain worse off. The *National Development Plan* (NDP) of South Africa recognizes this challenge and is trying to address rural development, for example agriculture is seen as one of the economic drivers which has the potential to create employment and fight poverty (National Planning Commission, 2011).

The problem investigated in the study relate to poor nonexistence of succession planning in the cane growers which will affect sustainability of farming in the long run. Sustainable agriculture is about the future which means future generations will have to continue to play a role if sustainability is to be ensured. However observations show that youth are not involved in cane growing. The question which can be asked is whether the youth from cane growers are prepared to succeed their parents as farmers and to understand the implications of their choices on sustainability of cane farming.

This is even more critical because the current generation of cane growers is ageing. It can be argued that without direct youth involvement there will be no sustainability in cane growing in the North Coast area of KwaZulu-Natal. This situation will negatively affect the livelihood of cane growers in the study area. The objective of this paper is twofold, namely to report and discuss the views of youth who are from the cane growers family about succession planning and secondly to discuss the opinions of youth who are from the cane growers family about their views with regard to future participation in their parents farming cane enterprises.

#### **4.2.2. Theoretical background**

The concept of sustainability has been explained by various authors (Dumanski, 1997:15; World Commission on Environment and Development, 1987; Groenewald, 2002:1-4), with different views about sustainability being proposed. The World Commission on Environment

and Development (WCED) sees sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). Groenewald (2002:4) on the other hand, observed that irrespective of the site, nature or practice, “the major objective of sustainable agriculture and rural development is to increase food production in a sustainable way and enhance food production”.

It is further asserted by the same author that sustainability is now regarded as a norm of evaluation rather than a specific identified farming practice because sustainable agriculture is a process rather than an occurrence, a direction rather than a destination, and a philosophy and system of farming. In the context of sustainable agriculture it is important to take a long term view with the aim of ensuring long term supply of products to future generations.

Sustainability is about taking a long term view with the objective of ensuring long term availability of goods and services.

The issue of sustainability coupled with the retirement age in cane growing across the globe has become a thorny issue among the authors (Mtembu, 2010:2). The younger generation is not keen on farming (primary agriculture). This generation wants to work overseas, tour the world, work in other industries and this poses a big risk to our small-scale grower (SSG) sector mainly because the average age of a grower in that sector is about 53, which is quite close to retirement.

The challenge of the ageing farmer population is not only a third world phenomenon and according to Wiley, Rose and Halpin (2009:3) the average age of a U.S. farmer today is nearing 60, up from 50 in 1978. “Just 5% of farmers in 2002 were between the ages of 25 and 34” (Schweitzer in Wiley, Rose & Halpin, 2009:3). It can be indicated that any meaningful discussion about sustainability should take into cognisance the circumstances of young people who are either current or potential farmers.

#### **4.2.3. Research procedure**

The study focused on the youth (aged 14 to 35 years) whose parents or close relatives are small-scale growers (SSGs) that are located in the areas of KwaZulu-Natal North Coast and Zululand Region. There are seven mills on the North Coast of KwaZulu-Natal. The respondents were the young people whose parents are cane growers who supply five of the seven sugar mills that are situated on the North Coast of KwaZulu-Natal. These mills are Maidstone, Darnall, Gledhow, Amatikulu and Felixton.

According to the *National Youth Commission Act of 1996*, youth are defined as all people between the ages 14 to 35 years (Mathivha, 2012:15). Although there are various definitions of the term “youth”, for the sake of simplicity the researchers decided to use this definition.

A probability sampling approach was adopted in this study which meant that each member of the survey population had a known and equal chance of being selected. There were five strata representing five sugar mills and simple random sampling was applied in each stratum of the total population. A total of 193 respondents were reached from a survey population of the offspring of 11,527 growers who delivered cane to the five mills under study in the 2013/14 season. Almost 99 per cent of respondents are located in communally owned areas that fall under the jurisdiction of traditional leaders. Except for three Indians all other respondents were Black South Africans.

There are various data gathering methods, namely observation, face-to-face interviews, self-administered methods, focus groups and personal interviews. The data gathering method / technique that was predominantly applied was that of face-to-face interviews. In terms of the data gathering instruments, a structured questionnaire was utilised, since this was mainly quantitative research. The questionnaire was piloted before the main data collection took place and some changes were subsequently made to the questionnaire. The gathered data was captured and manipulated using statistical software. As part of the analysis frequency distributions as well as statistical analyses such as chi-squares were undertaken. In terms of ethical considerations, the respondents were assured that confidentiality would be maintained and that they were not forced to participate in the study.

#### **4.2.4. Findings and discussion**

##### **4.2.4.1 Demographic details**

The demographic details of respondents were as follows:

- A total of 57 per cent respondents were male, while females comprised 43 per cent.
- 63.2 per cent of respondents were between the ages 19 to 30, while the 31 to 35 age category comprised 24.4 per cent.
- Almost 40 per cent of respondents had done agricultural subjects at school.
- At least 57 per cent of respondents had completed matric and the other 14 per cent had attained a tertiary qualification. Only two per cent of respondents had never been to school.

- At least 62 per cent of respondents have undergone some training in sugarcane agriculture. This may be formal, informal or a combination of the two.
- Regarding occupation only 34.4 per cent were unemployed. The rest are engaged in full or part-time studying (25.5 per cent), full-time or part-time employment (28.7 per cent), running a business (7.3 per cent) and working full time while studying part time (4.2 per cent).

From these findings it is clear that unemployment is one of the challenges facing our youth in rural areas. This situation will later become a poverty trap because many will be afraid to have families due to lack of financial resources to support their families. Unless this situation is addressed many young people will soon reach the adulthood without any form of formal employment, a situation which may exacerbate poverty in the rural areas of North Coast of KwaZulu-Natal.

#### 4.2.4.2 Succession Planning and Future Participation

Masondo, Nxumalo and Eweg (2009) indicated that only 5 per cent of youth are involved in sugarcane agriculture. The youth were asked to indicate whether they were involved in succession planning. Their responses are indicated in Table 4.2.1.

**Table 4.2.1: Respondents response to the issue of succession planning**

Type of Response	Frequency	Percent
No	114	59.1
Yes	75	38.9
Missing	4	2.1
<b>Total</b>	<b>193</b>	<b>100.0</b>

The involvement of youth in Table 4.2.1 reflects that the issue of succession planning has not been widely discussed as shown by the number of respondents (59.1 per cent). It is presumed that under normal situation, parents ought to have discussed this matter with their children. One wonders what could be the reason for not discussing with their children when red signs are clear that these parents are ageing and need new blood to continue with farming. This is a painful situation displayed by the cane growers.

#### 4.2.4.3 Willingness of someone in the family to take over farming

The perceptions of youth towards farming have created negativity against agriculture as a career. According to Leavy and Hossain (2014:9), this perception is reinforced among youth by the fact that farming is often viewed as a way of life rather than a career. The lack of a role model of a youth farmer entrepreneur can be seen as one of the contributing factors towards this negative perception. Respondents were asked to check whether there is someone in the family who was willing to take over farming. The response is indicated in Table 4.2.2

**Table 4.2.2: Willingness of someone in the family to take over farming**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
No	22	11.4
Don't know	66	34.2
Yes	102	52.8
Missing value	3	1.6
<b>Total</b>	<b>193</b>	<b>100.0</b>

According to Table 4.2.2, the majority of the youth (52.8 per cent) indicated their willingness to take up farming in the family as opposed to 45.6 per cent who said they were not willing to do so, or didn't know if they would. The reason why the youth's perception is slightly above 50 per cent could be seen as a product of family discussion within some cane grower families.

#### 4.2.4.4 Relationship between succession planning and willingness of siblings to take over farming

In order to analyse the relationship between the two main objectives of the paper, namely succession planning and willingness of siblings to take over farming, an analytical tool of cross tabulation is used. The findings are presented in Table 4.2.3.

**Table 4.2.3: Cross tabulation - Relationship between succession planning and willingness of siblings to take over farming**

Variables		Is there someone willing to take over farming within your family?		Total
		No/Don't know	Yes	
<b>Was the issue of succession planning discussed in the family?</b>	<b>No – Count</b>	73	41	114
	Expected Count	52.8	61.2	114.0
	% within Has the issue of succession planning been discussed in the family?	64.0%	36.0%	100.0%
	% of Total	38.8%	21.8%	60.6%
	<b>Yes – Count</b>	14	60	74
	Expected Count	34.2	39.8	74.0
	% within Has the issue of succession planning been discussed in the family?	18.9%	81.1%	100.0%
	% of Total	7.4%	31.9%	39.4%
<b>Total</b>	Count	87	101	188
	Expected Count	87.0	101.0	188.0
	% within Has the issue of succession planning been discussed in the family?	46.3%	53.7%	100.0%
	% of Total	46.3%	53.7%	100.0%

Based on the results of Table 4.2.3 and Table 4.2.4 it was found that there was an association between discussion of the issue of succession planning and willingness of someone in the family to take over the farm. From the shaded rows in the cross tabulation in Table 4.2.3, it can be seen that in families where succession discussions have not taken place, only 36 per cent of participants said that there is someone willing to take over the farm. In contrast, in families where succession discussions have taken place, 81 per cent of participants said that there is someone willing to take over the farm. The reason for this positive attitude was created by the fact that there was a discussion of succession which led to an increased willingness among the family members.

Another tool used beside cross tabulation in order to deepen the analysis, was the chi-square. The aim of using this tool was to check the significance difference of the values under discussion. The results are presented in Table 4.2.4.

**Table 4.2.4: Chi-square depicting the significance of the analysis**

	<b>Don't know / Nobody willing to take over farming</b>	<b>Someone willing to take over farming</b>	<i>Marginal Row Totals</i>
<b>Discussion on succession - No</b>	73 (52.76) [7.77]	41 (61.24) [6.69]	114
<b>Discussion on succession - Yes</b>	14 (34.24) [11.97]	60 (39.76) [10.31]	74
<i>Marginal Column Totals</i>	87	101	188 (Grand Total)

*The chi-square statistic is 36.7382. The P value is 0. This result is significant at  $p < 0.05$ .*

Table 4.2.4 provides the following information: the observed cell totals, (the expected cell totals) and [the chi-square statistic for each cell]. The chi-square statistic, P value and statement of significance appear beneath the table. Italic or colour blue means we are dealing with dependent variables. Judged from the findings of the analysis, the result is significant.

#### **4.2.4.5 Respondents' indications of whether they are personally prepared to take over farming**

Agricultural transformation, according to Leavy and Hossain (2014), depends in part on the extent to which capable, skilled young people can be retained or attracted to farming, and on policies that support that retention. Respondents were asked to indicate if they were personally prepared to take over farming from their parents. The findings are presented in Table 4.2.5.

**Table 4.2.5: Respondents' indications of whether they are personally prepared to take over farming from parents**

<b>Responses</b>	<b>Frequency</b>	<b>Percent</b>
No	18	9.3
Don't know	29	15.0
Yes	144	74.6
Missing	2	1.0
<b>Total</b>	<b>191</b>	<b>99</b>

In Table 4.2.5, unlike in Table 4.2.2, respondents had to answer whether they are personally prepared to take over the running of the farms from parents. The responses show that 75 per cent of respondents are willing to run the farms left over by parents. This response is encouraging; it may mean that the youth are willing to go to farming to succeed their parents.

#### 4.2.4.6 Cross tabulation between succession planning and willingness of the respondent to take over farming.

This tool of cross tabulation was further engaged to evaluate the relationship between succession planning and willingness of the respondent to take over farming. The results are presented in Table 4.2.6.

**Table 4.2.6: Cross tabulation - Relationship between succession planning and willingness of the respondent to take over farming**

Responses		Are you prepared to take over the farm from your parents?		Total	
		No/Don't know	Yes		
<b>Has the issue of succession planning been discussed in the family?</b>	No	Count	36	78	114
		Expected Count	28.3	85.7	114.0
		% within Has the issue of succession planning been discussed in the family?	31.6%	68.4%	100.0%
		% within Are you prepared to take over the farm from your parents	76.6%	54.9%	
		% of Total	19.0%	41.3%	60.3%
		Count	11	64	75
	Yes	Expected Count	18.7	56.3	75.0
		% within Has the issue of succession planning been discussed in the family?	14.7%	85.3%	100.0%
		% within Are you prepared to take over the farm from your parents	23.4%	45.1%	
		% of Total	5.8%	33.9%	39.7%
		Count	47	142	189
	Total	Expected Count	47.0	142.0	189.0
% within Has the issue of succession planning been discussed in the family?		24.9%	75.1%	100.0%	
% within Are you prepared to take over the farm from your parents		100.0%	100.0%		
% of Total		24.9%	75.1%	100.0%	



According to Table 4.2.6 it was found that there was an association between discussion of the issue of succession planning and willingness to take over the farm. From the shaded rows in the cross tabulation table, it can be seen that in families where succession discussions have not taken place, 68 per cent of participants said that they are willing to take over the farm. In contrast, to families where succession discussions have taken place, 85 per cent of participants said that they are willing to take over the farm. Based on Table 4.2.6, it can be indicated that discussions of succession planning led to an increased willingness of participants themselves to take over their parents' farms.

#### **4.2.5. Summary and recommendations**

The majority of the youth of small-scale cane growers seem to be prepared to succeed their parents as cane farmers. This finding dispels the ideas that are usually heard that young people are not interested in farming. The findings have pointed that young people are willing to succeed their parents. Holding a discussion in the family will further reinforce the idea of succession to become a reality. There is consensus in literature that there are fewer young farmers. It is not clear as to how many young people are involved in agriculture in South Africa. Currently there are efforts aimed at stimulating the interest of the youth in agriculture, hence the formation of organizations such as Youth in Agriculture and Rural Development (YARD).

In order to ensure sustainability of cane farming it is recommended that the issue of succession planning be discussed within farming families as part of youth preparation for farming careers. However, there are issues that become thorny to young farmers which go beyond the succession debate. These issues include limited land, reluctance by parents to retire and the problem of many inheritors in each family. The researcher is of the view that current youth involvement in farming should increase, regardless of whether they succeed parents or not, in order for them to get exposure. Furthermore, it is recommended that succession planning should be taken seriously if the future generations are to be sure of feeding the nation in future. It is recommended that the agricultural extension personnel employed by various role players in the sugar industry should play a meaningful role in conscientising cane growers about the importance of succession planning.

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### 4.3 THE SUSTAINABILITY OF SMALL-SCALE CANE GROWERS THROUGH YOUTH INVOLVEMENT<sup>6</sup>

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#### Abstract

*Cane farming makes an important contribution to the socio-economic development of rural areas, which are characterised by high levels of poverty and youth unemployment. The current population of cane growers is ageing and there is a need to prepare to hand over the baton to the younger generation of cane growers. The minimal involvement of youth in cane farming will have negative implications for the sustainability of cane production in the rural areas. Sustainability of cane production will heavily depend on the current and future participation of young people in cane growing.*

*The research hypothesis was that there is a lack of youth involvement in agriculture, which is associated with negative perceptions and attitudes towards cane farming. As a result, farms cannot be sustained beyond the current generation of farmers because young people are not interested in agriculture in general and cane growing in particular.*

*The results disproved the hypothesis. Results showed that young people whose parents are cane growers are already involved in farming activities and assisting their parents. This involvement increases their willingness to take over farming from their parents. The results bode well for the future of cane farming.*

**Key words:** Small-scale, cane grower, youth, involvement, attitude, sustainability.

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#### **4.3.1. Introduction and definition of the problem**

The primary objective of this study was to understand whether the heirs of small-scale cane growers are currently involved in farming activities and whether current participation will increase their willingness to succeed their parents as cane farmers. The researcher argues that the sustainability of cane farming will be enhanced if there is current and future involvement of young people. This situation calls for sustainability of cane farming as part of the broader concept of sustainable agriculture. Sustainable agriculture is about ensuring that agricultural production will be sustained over a long period without degrading the environment. “Sustainability is to leave future generations as many, if not more, opportunities as we have had ourselves” (Dumanski, 1997:15). Therefore any meaningful discussion about sustainability should take into cognisance the circumstances of young people who are either current or potential farmers. According to Groenewald (2002:4) sustainability is about taking a long-term view with the objective of ensuring long-term availability of goods and services. Sustainability is also regarded as a norm of evaluation rather than a specific identified farming practice. In other words, it is seen as a process rather than an occurrence, a direction rather than a destination, and a philosophy and system of farming (Groenewald, 2002:1).

The rural areas where most farming activities take place are characterised by high poverty and unemployment levels, which are contributing factors to youth migration to the cities. Youth migration into urban areas is an important feature of rural youth and unless young people remain active in agriculture, which is the main economic driver in these areas, they will migrate to big cities and the situation in rural areas will remain dire, if not worsen.

The main problem facing cane farming is that there is minimal involvement of young people from cane growing areas. Sustainability will be compromised unless the youth are prepared to pursue cane farming. It will also be difficult for them to choose cane farming as a career if they are not exposed. Therefore, there is a need for young people to get involved in farming activities. The level of involvement will depend on whether they are full-time employees elsewhere or are full-time students. The hypothesis is that young people who are offspring of current small-scale growers are reluctant to be involved in farming. If this young generation is preparing for work outside agriculture they will then be reluctant to get involved in farming activities.

Regarding the youth in agriculture it is not clear as to how many young people are involved in agriculture. Currently there are efforts aimed at stimulating the interest of the youth in

agriculture, hence the formation of organizations such as Youth in Agriculture and Rural Development (YARD) which operates in most provinces of South Africa.

Mtembu (2010:2) argues that

succession planning remains a critical issue across all growers in the industry. The younger generation is not keen on farming (primary agriculture). This generation wants to work overseas, tour the world, work in other industries and this poses a big risk to our small-scale grower (SSG) sector mainly because the average age of a grower in that sector is about 53 years old, which is quite close to retirement.

Other third world countries have also experienced both the twin evils, namely the ageing farmer population and a lack of youth interest in agriculture. Akpan (2010:1) states that available evidence suggests an ageing farming population in Nigeria and argues that increased involvement of youth in agricultural activities will help reduce the problems of the ageing farm population and increasing youth unemployment. However, observations revealed that youth are not taking agriculture seriously. This is a worrying factor not only in Nigeria, but also in the rest of the world.

According to Leavy and Hossain (2014:8) the aspirations of young rural people are dominated by formal sector employment and modern urban lifestyles, and a generalised reluctance to consider farming as an employment option.

#### **4.3.2. Procedure**

The type of research method that was followed is quantitative, which also used surveying technique. The survey entailed taking a sample of respondents from a given study population. A survey is a form of quantitative research. According to Thi (2008:55), the main advantage of quantitative research is that it investigates social problems objectively. This author further asserts that objectivity is the main concern in quantitative research, because objectivity requires researchers to remove personal prejudices and bias and see things for what they are. Thi (2008:55) argues that objectivity is a significant indicator in establishing validity of information and in doing so, investigators become neutral observers and analysts.

The study focused on the youth (age 14 to 35 years) whose parents or close relatives are small-scale growers (SSGs) that are located in the areas of KwaZulu-Natal North Coast and Zululand Region. There are seven sugar mills on the North Coast of KwaZulu-Natal; the respondents were the young people whose parents are cane growers who supply five of the seven mills. These mills are Maidstone, Darnall, Gledhow, Amatikulu and Felixton.

According to the *National Youth Commission Act 19 of 1996*, youth are defined as all people between the ages of 14 to 35 years. Although there are various definitions of the term “youth”, for the sake of simplicity the researchers decided to use this definition. Mathivha (2012:15) states that the data indicates that the number of youth between the ages of 14 to 35 years is estimated to be at 20.5 million, representing 40.9 per cent of the total population of 50 million in South Africa.

A probability sampling approach was adopted in this study, which meant that each member of the survey population had a known and equal chance of being selected. There were five strata representing five sugar mills and simple random sampling was applied in each stratum of the total population. A total of 193 respondents were reached from a survey population of the offspring of 11,527 growers who delivered cane to the five mills under study in the 2013/14 season. Almost 99 per cent of respondents are located in communally owned areas that fall under the jurisdiction of traditional leaders. Except for three Indians, all other respondents were Black South Africans. In addition to personal interviews, focus group discussions (FGDs) were undertaken.

According to Steyn (2005:9-10) there are various data gathering methods, namely observation, face-to-face interviews, self-administered methods, focus groups and personal interviews. The data gathering method / technique that was predominantly applied was that of face-to-face interviews. In terms of the data gathering instruments, a structured questionnaire was utilised, since this is mainly quantitative research. The questionnaire was pilot tested before the main data collection took place and some changes were subsequently made to the questionnaire. The gathered data was captured and manipulated using statistical software. As part of the analysis, frequency distributions as well as statistical analyses such as chi-squares were undertaken. In terms of ethical considerations, the respondents were assured that confidentiality would be maintained and that they were not forced to participate in the study.

### **4.3.3. Findings and discussion**

This section deals with the findings and the discussions thereof.

#### **4.3.3.1 Demographic details of respondents**

The study revealed that the percentage of male respondents was 57 per cent, as opposed to 43 per cent who were female. This is not surprising because the way males are socialized is

different. Male children are normally given a higher status in the family and where a parent has both a girl and a boy the tendency is to give inheritance to the boy rather than the girl, because of the dynamics in Black cultures. A girl is seen as someone who is going to be married and may go away with the family riches.

Regarding the age brackets, at least 63.2 per cent of the respondents were between the ages 19 to 30, which is the age where most career decisions are made. The 31 to 35 age category comprised 24.4 per cent of the respondents. The results, in terms of education levels as well as agricultural subjects, are more likely to have positive implications for the sustainability of cane farming. This is because of the high number (57 per cent) of those who completed Matric and those who have attained a tertiary qualification (14 per cent). It was also encouraging to note that almost 40 per cent of respondents had done agricultural subjects at school, which should be commended in an age where agriculture is not necessarily the first career choice even for those who grew up in rural areas. Only two per cent of respondents had never been to school.

Results also revealed that at least 62 per cent of respondents have undergone some formal or informal training in sugarcane agriculture. The fact that they have undergone specific training in sugarcane agriculture suggests both interest and involvement by these young people, which will have positive implications for the future of cane farming.

#### **4.3.3.2 Youth Involvement in Farming Activities**

Research has shown that the involvement of youth in agriculture is a difficult exercise. There are various reasons for this and Terblanché (2006:133) states that agricultural work is seen as a type of punishment suitable for those who have not been doing well at school.

Youth were asked about their current involvement in farming activities and the results show that the respondents whose parents are cane growers are involved in farming activities. The findings further show that only 22.8 per cent of offspring of cane growers are not involved at all in farming operations. This high level of involvement which is almost 76.2 per cent involvement, whether fully or a few days a week, is good for the sustainability of cane farming.

Respondents were also asked about the involvement of their siblings in farming activities. Results show that the siblings of respondents are also involved in farming activities. The majority (59.1 per cent) are playing a role and this will undoubtedly impact positively on the future of cane farming.

Respondents were also asked whether, besides their siblings, other young people in the area where the respondent lives are involved in some farming activities. Results prove that many young people in the area are participating and helping the older generation to run their cane farms; the number of those involved was found to be 81.9 per cent

#### **4.3.3.3 Duration of Youth Involvement in Farming Activities**

It was inspiring to discover from the findings that a large number of young people whose parents or relatives are cane growers are currently involved in farming activities. The study then sought to understand the duration of involvement of respondents in farming activities. The interesting observation is that out of those who are already involved, it was found that more than 46.3 per cent have been involved in cane farming activities for more than five years. The other 25.9 per cent had been involved in farming activities for up to 12 months while the other 27.2 per cent had been involved for more than 12 months and up to 5 years. This reflects interest in farming which bodes well for the long term sustainability of cane farming.

#### **4.3.3.4 Willingness of somebody to take over Farming Activities**

Willingness to succeed parents as farmers was a key research variable of this study. Therefore, respondents were asked whether there is somebody in the family, other than the respondent, who is willing to succeed their parents and become a cane farmer. At least 52.8 per cent of families have somebody, other than the respondent, who is willing to take over farming. Only 11.4 per cent indicated that there is nobody willing to take over. The high percentage of those who do not know, which is 34.2 per cent, could be attributed to reluctance to openly discuss succession and inheritance-related matters in Black cultures.

#### **4.3.3.5 Respondents' indications of whether they are prepared to take over from parents**

The indication of respondents' willingness to take over from parents is one of the most important research questions in this study. Therefore, respondents had to answer whether they



are personally prepared to take over the running of the farms from parents. The responses show that 74.6 per cent of respondents are willing to run the farms left over by parents. The other 15 per cent of respondents were not sure while only 9.3 per cent expressed unwillingness to take over from parents. However, on further probing during focus group discussions (FGDs), the youth who participated expressed preference to run their own farms instead of waiting for an inheritance. The main reason behind this preference was to avoid complications in cases where there are siblings who are also interested in succeeding parents.

A post-hoc chi-square test for association was conducted between "Are you currently involved in the farming activities on your parents' farm or other farms in the area?" and "Are you willing to take over the farm from your parents?" and this is reflected in Table 4.3.1. From the shaded rows in the cross tabulation in Table 4.3.1 it can be seen that in the group of participants who indicated that they are not involved in farming activities, only 29.5 per cent said that they are willing to take over the farm. In contrast, in the group of participants who are involved in farming activities, 89 per cent of participants said that they are willing to take over the farm. It thus seems that increased involvement is associated with an increased willingness to take over the farm.

**Table 4.3.1: Cross tabulation - Relationship between involvement in farming activities and willingness of the respondent to take over farming**

Are you currently involved in the farming activities on your parents' farm or other farms in the area? * Are you prepared to take over the farm from your parents? Cross tabulation					
			Are you prepared to take over the farm from your parents		Total
			No/Don't know	Yes	
Are you currently involved in the farming activities on your parents' farm or other farms in the area?	Not involved	Count	31	13	44
		Expected Count	10.9	33.1	44.0
		% within Are you currently involved in the farming activities on your parents' farm or other farms in the area?	70.5%	29.5%	100.0%
		% within Are you prepared to take over the farm from your parents	66.0%	9.1%	
		% of Total	16.3%	6.8%	23.2%
	Involved to some extent	Count	16	130	146
		Expected Count	36.1	109.9	146.0
		% within Are you currently involved in the farming activities on your parents' farm or other farms in the area?	11.0%	89.0%	100.0%
		% within Are you prepared to take over the farm from your parents	34.0%	90.9%	
		% of Total	8.4%	68.4%	76.8%
Total	Count	47	143	190	
	Expected Count	47.0	143.0	190.0	
	% within Are you currently involved in the farming activities on your parents' farm or other farms in the area?	24.7%	75.3%	100.0%	
	% within Are you prepared to take over the farm from your parents	100.0%	100.0%		
	% of Total	24.7%	75.3%	100.0%	

As a follow up to Table 4.3.1 a Chi-square test was conducted to examine the relationship between involvement in farming activities and willingness of the respondents to take over farming from parents. The results are presented in Table 4.3.2.

**Table 4.3.2: Chi-square Test: Relationship between involvement in farming activities and willingness of the respondent to take over farming**

<b>Involvement</b>	<b>Not sure / Not prepared to take over</b>	<b>Prepared to take over</b>	<b>Marginal Row Totals</b>
<b>Not Involved in Farming Activities</b>	31 (10.88) [37.18]	13 (33.12) [12.22]	44
<b>Involved to a certain extent</b>	16 (36.12) [11.2]	130 (109.88) [3.68]	146
<b>Marginal Column Totals</b>	<b>47</b>	<b>143</b>	<b>190 (Grand Total)</b>

*The chi-square statistic is 64.2829. The P value is 0. This result is significant at  $p < 0.05$ .*

The contingency table (Table 4.3.2) provides the following information: the observed cell totals, (the expected cell totals) and [the chi-square statistic for each cell]. The chi-square statistic, P value and statement of significance appear beneath the table. Italic or colour blue means we are dealing with dependent variables; red, independent. As can be seen in Table 4.3.2 there was a statistically significant association between involvement and willingness to take over the farm,  $\chi^2(1) = 64.283$ ,  $p = 0.000$ .

#### **4.3.4. Summary and recommendations**

The assumption was that there is minimal involvement or total lack of youth involvement in farming activities. It was important to note from the results that in addition to respondents' personal involvement, their siblings and other youth in the study area were also involved in farming. Furthermore, respondents claimed to know other young people, outside of their families, who are involved in farming activities. These results bode well for the sustainability of cane farming. The high level of youth involvement in this study is consistent with the results of a study by Aphunu and Atoma (2010) on rural youths' involvement in agricultural production in Delta Central Agricultural Zone of Nigeria. The age category of the youth who participated in the Nigerian study was not revealed. However, the results thereof are an important indicator of youth involvement.

It is recommended that efforts be made to increase youth participation in farming activities in order to ensure sustainability of cane farming. This participation at a young age will positively influence them to succeed their parents. It is not enough for young people to be involved with the objective of assisting or working for their parents. They will need to start

and run their own farming enterprises with the aim of generating income that can match or exceed the potential income in alternative employment or business ventures. Access to land will be critical to those who would like to be involved in farming and the recommendation is that youth access to land should be improved. Furthermore, access to capital and other inputs will be critical if youth are going to be excited about agriculture.

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#### 4.4 THE PERCEPTIONS AND ATTITUDES OF SMALL-SCALE CANE GROWERS' OFFSPRING TOWARDS FARMING AND IMPLICATIONS FOR SUSTAINABILITY. A CASE STUDY OF THE KWAZULU-NATAL NORTH COAST, SOUTH AFRICA<sup>11</sup>

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##### **Abstract**

*This is the second in a series of papers produced as part of a research study for a PhD, which has been conducted in the North Coast of KwaZulu-Natal. The study focuses on the perceptions and attitudes of small-scale cane growers' offspring towards farming. It has been observed that cane farming makes an important contribution to the socio-economic development of the rural areas where it takes place. Whilst it is self-evident that cane farming is useful in rural areas as it supplements incomes and improves livelihood systems, part of the problem was the observation that cane growers' offspring have negative perceptions and attitudes about agriculture in general and cane growing in particular. It is believed that unless the situation is addressed, the sustainability of cane farming in the KwaZulu-Natal North Coast will be negatively affected mainly by two factors. The first factor is the fact that the current farmers are ageing and need to be succeeded when they retire from farming. The second factor is that young people are not interested in farming. It is argued that the existence of these two facts will have negative implications for both the sustainability of cane production in rural areas and the number of cane growers. The results of the study showed that the*

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*perceptions of most young people whose parents are cane growers are positive. Furthermore, the same positive attitudes were displayed by respondents who saw themselves as future full-time farmers.*

**Key words:** Small-scale grower, cane grower, youth, attitude, perceptions, sustainability.

#### **4.4.1. Introduction**

According to the SASA (2015:17) there are approximately 22,500 registered growers who produce an average of 19 million tons of sugar per annum. At least 21,110 of these growers are categorised as small-scale and deliver about 10 per cent of the crop, and these are situated in poverty stricken rural areas. SASA (2015:17) further stated that the sugar industry generates an average R12 billion annually and creates 79,000 direct jobs and 350,000 indirect jobs. It is against this background that the sugar industry makes a significant contribution to the socio-economic development of the rural areas where small-scale farming takes place.

This research was conducted in the North Coast of KwaZulu-Natal and focused on the perceptions and attitudes of small-scale cane growers' offspring towards farming. The problem investigated in the study was that cane growers' offspring have negative perceptions and attitudes about agriculture in general and cane growing in particular. It is envisaged that unless the situation is attended to the sustainability of cane farming in the North Coast of KwaZulu-Natal will be negatively affected. This situation is worsened by the fact that the farmers are ageing and once they retire it will affect sustainability and production.

The main objective of the paper is therefore to give an account of the perceptions and attitudes of the offspring of small-scale cane growers in the North Coast of KwaZulu-Natal. The importance of this study emanates from the fact that in communally owned areas where most small-scale growers (SSGs) are located the land is secured through traditional tenure and it is expected that the offspring of current land users who are SSGs will inherit this land in accordance with custom. If the offspring of current SSGs have negative perceptions and negative attitudes towards agriculture they will be reluctant to continue with farming, thus compromising agricultural production.

#### **4.4.2. Theoretical background**

The concept of sustainability is defined differently by different authors, although they all agree on the need for long-term thinking and almost all authors have the same end result in mind. Sustainability is about taking a long-term view with the objective of ensuring long-term availability of goods and services. Dumanski (1997:15) refers to sustainability in agriculture as the secured future. In other words, Dumanski (1997:15) argues that it is to leave future generations as many, if not more, opportunities as we have had ourselves. It is the view of the researcher that any meaningful discussion about sustainability should take into consideration the circumstances of young people who are either current or potential farmers. Sustainable agriculture is about the future, which means that future generations will have to continue to play a role if sustainability is to be ensured.

Williams (2000) in Chizari, Baygi and Breazeale (2006:52) stated that being economically sound, environmentally protective and socially acceptable, were the three widely advocated components of sustainable agriculture. In the context of this research the main focus has been on the acceptability of farming to young people. In addressing the concept of sustainability, Groenewald (2002:4) argues that irrespective of the site, nature or practice, “the major objective of sustainable agriculture and rural development is to increase food production in a sustainable way”.

Groenewald (2002:4) goes on to argue that sustainability is now regarded as a norm of evaluation rather than a specific identified farming practice. However, it should be noted that this concept can also be viewed as a process rather than an occurrence, a direction rather than a destination, and a philosophy and system of farming (Groenewald, 2002:1). The understanding is that it is the youth who can make this concept of sustainability work. Observations reveal, however, that youth have been migrating into urban areas because they see poverty in the rural areas. It is the researcher’s view that unless young people remain active in agriculture, rural areas will be devoid of the necessary skills for agriculture to act as main economic driver. This situation is also affected by the perceptions that youth carry.

A study carried out in Indonesia revealed the negative opinions of the youth. Leavy and Hossain (2014:23) found that in the community of Cianjur, young people did not choose farming because it had low social status, was seen as dirty work, and ‘made their skin darker’ (in a context where fair skin is associated with high socioeconomic class and doing skilled



rather than manual work). When reflecting on the attitudes of young people, Aphunu and Atoma (2010:46) state that

youths are a formidable force in the agricultural production process, constituting a sizeable proportion of future progressive farmers and better citizens in rural areas. While their contribution towards attaining food security cannot be underestimated, their apparent lukewarm attitude towards agriculture is a source of concern and challenge to the development of agricultural extension.

Since this article focuses on perceptions and attitudes, it will be necessary to define these concepts in order to put issues into perspective. “Perception makes us aware of the world around us. Perception is a selective process by which we interpret and give meaning to external factors. It is seldom realistic and essentially a subjective process” (Bergh and Theron, 2003:104). On the other hand, an attitude is defined as a way of being “set” toward or against certain things (Lundy et al., 2006:45). Another author shedding more light on this subject asserted that attitudes are learned through socialization and are usually enduring influences on cognitions and behaviours (Perloff in Lundy et al., 2006:45). The youth may not necessarily be socialized to hate farming, but one is inclined to believe that what they observe might be influencing them to have a negative attitude. For example, the youth in the KZN North Coast might be reluctant to farm because they are seeing their parents struggling to make ends meet with limited income from cane farming. As a result, they prefer careers outside agriculture.

#### **4.4.3. Procedure**

The study focused on the youth (age 14 to 35 years) whose parents or close relatives are small-scale growers (SSGs) that are located in the areas of KwaZulu-Natal North Coast and Zululand Region. There are seven mills on the North Coast of KwaZulu-Natal. The respondents were the young people whose parents are cane growers who supply five of the seven sugar mills that are situated on the North Coast of KwaZulu-Natal. These mills are Maidstone, Darnall, Gledhow, Amatikulu and Felixton.

According to the *National Youth Commission Act 19 of 1996*, youth are defined as all people between the ages of 14 to 35 years. Although there are various definitions of the term “youth”, for the sake of simplicity the researchers decided to use this definition. Mathivha (2012:15) states that the data indicates that the number of youth between the ages of 14 to 35 years is estimated to be at 20.5 million, representing 40.9 per cent of the total population of 50 million.

A probability sampling approach was adopted in this study which meant that each member of the survey population had a known and equal chance of being selected. There were five strata representing five sugar mills and simple random sampling was applied in each stratum of the total population. A total of 193 respondents were reached from a survey population of the offspring of 11,527 growers who delivered cane to the five mills during the 2013/14 season. Almost 99 per cent of respondents are located in communally owned areas that fall under the jurisdiction of traditional leaders. All respondents were Black South Africans.

The study used a quantitative research design, with a structured questionnaire as well as face-to-face interviews being utilised to gather data. The questionnaire was piloted before the main data collection took place and some changes were subsequently made to the questionnaire. The gathered data was captured and manipulated using statistical software called SPSS (2015, version 23). As part of the analysis, frequency distributions as well as statistical analyses were undertaken. In terms of ethical considerations, the respondents were assured that confidentiality would be maintained and that they were not forced to participate in the study.

#### **4.4.4. Findings and discussion**

A total of 57 per cent respondents were male while females comprised 43 per cent. This shows that small-scale cane farming in the area under study is dominated by males. In terms of age categories a total of 63.2 per cent of respondents were between the ages 19 to 30 while the 31 to 35 age category comprised 24.4 per cent.

It was encouraging to discover that almost 40 per cent of respondents had done agricultural subjects at school and this bodes well for the future of agriculture. This statement is based on the argument that it will be difficult to voluntarily choose a subject that you are not interested in. The level of education of respondents inspired confidence because at least 57 per cent of respondents had completed matric and the other 14 per cent had attained a tertiary qualification. Only two per cent of respondents had never been to school. The finding that 62 per cent of respondents have undergone some training in sugarcane agriculture suggests that the young people are already involved and interested in cane farming. This training in sugarcane agriculture may be formal, informal or a combination of the two.

It was also found that 34.4 per cent were unemployed. This refers to official employment. However, some of the unemployed do assist their parents in running their cane farms. The rest are engaged in full or part-time studying (25.5 per cent), full time or part-time employment (28.7 per cent), running a business (7.3 per cent) and working full time while studying part time (4.2 per cent). The high level of unemployment gives an opportunity for increased participation of the youth in farming activities provided opportunities are provided.

#### 4.4.4.1 Perceptions of income generation from cane farming

Respondents were asked whether they believed that small-scale cane farming generates enough income to sustain a good living. The findings are indicated in Table 1.

**Table 4.4.1: Perceived income generation from cane farming**

<b>Perceived Income Generation from Cane Farming</b>	<b>Frequency</b>	<b>Percent</b>
Strongly disagree	12	6.2
Disagree	26	13.5
Not sure	32	16.6
Agree	89	46.1
Strongly agree	32	16.6
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100.0</b>

Table 4.4.1 shows that those who either agreed or disagreed with this statement stands at 62.7 per cent and this reflects positively on cane farming. Only 19.7 per cent disagreed or strongly disagreed with the statement while another 16.6 per cent stated that they were not sure. The fact that the result of those who agreed or strongly agreed is slightly above fifty per cent shows that there is positive perception about cane farming generating enough income to sustain a good living. This finding might influence the respondents to choose agriculture as a career.

#### 4.4.4.2 Perceived profitability of cane farming

Few authors have almost agreed on the energy that youth have. According to Arokoyo (1992) and Ekong (2003) in Chikezie et al. (2012:224) youth believe that they have the knowledge that agricultural production can really be a profitable venture. The perceptions of respondents with regard to profitability of cane farming are reflected in Table 4.4.2.

**Table 4.4.2: Perceived profitability of cane farming**

<b>Perceived Profitability of Cane Farming</b>	<b>Frequency</b>	<b>Percent</b>
Strongly disagree	5	2.6
Disagree	7	3.6
Not sure	24	12.4
Agree	118	61.1
Strongly agree	37	19.2
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100.0</b>

In Table 4.4.2 it is interesting to note that the majority of respondents (80.3 per cent) overwhelmingly agree or strongly agree that cane farming is profitable as opposed to only 6.2 per cent who disagreed or strongly disagreed. The other 12.4 per cent were not sure. The results show that perceptions of heirs of small-scale growers (SSGs) regarding cane profitability are positive. If the results could remain like this there is hope for the young people that they can succeed their parents as cane growers.

#### **4.4.4.3 More financial returns are from farming as compared to non-farming activities**

In rural areas there are various sources of incomes, chief of them are different grants that help the families for livelihoods. Respondents were asked to indicate their opinions whether more income is derived from farming or non-farming activities. The findings are indicated in Table 4.4.3.

**Table 4.4.3: Comparisons of financial returns between farming and non-farming activities**

<b>Returns between farming and non-farming activities</b>	<b>Frequency</b>	<b>Percent</b>
Strongly disagree	13	6.7
Disagree	75	38.9
Not sure	46	23.8
Agree	46	23.8
Strongly agree	11	5.7
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100.0</b>

According to Table 4.4.3 about 45.6 per cent of the respondents disagree with the statement that more financial returns are derived from farming. At least 29.5 per cent of the respondents agreed with the statement whereas 23.8 per cent were not sure. This is the perception that youth of North Coast have about farming. The low rating that farming does not bring more financial returns is not a positive one among the youth; this might be caused by the fact that they see their parents struggling every day to deal with poverty in the households.

#### 4.4.4.4 Taking up cane farming if there is money to be made

It is the writers' observations that the choice of career in many occasions is influenced by whether such a career will generate more income or not. Respondents were asked as to whether they will be prepared to take up cane farming as a career if it can be proven that there is money in cane farming. The results are indicated in Table 4.4.4.

**Table 4.4.4: Possibility of taking up cane farming if there is money to be made**

<b>Taking up cane farming if there is money</b>	<b>Frequency</b>	<b>Percent</b>
No	9	4.7
Not sure	19	9.8
Yes	160	82.9
<b>Total</b>	<b>188</b>	<b>97.4</b>
Missing System	5	2.6
<b>Total</b>	<b>193</b>	<b>100.0</b>

Table 4.4.4 shows that an overwhelming majority of respondents (83 per cent) is prepared to follow cane farming as a career if there is money. This finding does not compare favourably with the widespread belief that young people are not interested in agriculture.

#### 4.4.4.5 Preferences for cane farming

Respondents were given three statements to indicate their choices with regard to reasons of their preferences. The reasons are whether they liked it because it generates income, or whether it creates jobs or whether it not so complicated also asked to state their likes and dislikes of cane farming. The results are indicated in Table 4.4.5.

**Table 4.4.5: Respondents' preferences for cane farming**

Preferences for Cane Farming	I like cane farming as it generates income.		I like cane farming as it creates jobs in our community.		I like cane farming because it is not a complicated enterprise.	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Disagree	7	3.7%	2	1.1%	19	10.0%
Not sure	21	11.1%	3	1.6%	30	15.8%
Agree	162	85.3%	184	97.4%	141	74.2%
<b>Total</b>	<b>190</b>	<b>100.0%</b>	<b>189</b>	<b>100.0%</b>	<b>190</b>	<b>100.0%</b>

Table 4.4.5 shows that 85.3 per cent of respondents like the income generation part of farming. Furthermore, 97.4 per cent like the fact that cane farming creates jobs in the community. At least 74.2 per cent of respondents like cane farming because it is not complex.

#### 4.4.4.6 Preferences against cane farming

Respondents were given three statements to indicate their choices with regard to their reasons for disliking cane farming. These statements were whether it is because of its low socio-economic status (farm-life), or because of the type of work conducted that is difficult or because there is low income generated. The results are indicated in Table 4.4.6.

**Table 4.4.6: Respondents' preferences against cane farming**

Preferences against cane growers	I dislike cane farming because of its low socio-economic status (farm-life).		I dislike cane farming because of the type of work conducted is difficult.		I dislike cane farming because there is low income generated.	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Disagree	142	75.1%	124	65.6%	127	67.6%
Not sure	17	9.0%	17	9.0%	37	19.7%
Agree	30	15.9%	48	25.4%	24	12.8%
<b>Total</b>	<b>189</b>	<b>100.0%</b>	<b>189</b>	<b>100.0%</b>	<b>188</b>	<b>100.0%</b>

Table 4.4.6 reflects the dislikes of respondents regarding cane farming. Results are interesting in the sense that the majority of respondents disagreed with the statements that they do not like cane farming as per the suggested reasons such as: low socio-economic status, the difficult type of work conducted and low income generated.

#### 4.4.4.7 Further preferences against cane farming

There are many reasons that could play a role in discouraging the youth from participating in cane farming. Another set of three questions were asked to enable respondents to indicate their view points. The question was asked to test whether farming is disliked because of the three reasons namely low status, too rural, or dominated by the old generation. The results are indicated in Table 4.4.7.

**Table 4.4.7: Further preferences against cane farming**

<b>Further Preference against cane farming</b>	<b>I dislike cane farming because it is of low status.</b>		<b>I dislike cane farming because it is too rural.</b>		<b>I dislike cane farming because it is dominated by the old generation.</b>	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Disagree	146	76.8%	149	78.8%	132	69.5%
Not sure	16	8.4%	18	9.5%	15	7.9%
Agree	28	14.7%	22	11.6%	43	22.6%
<b>Total</b>	<b>190</b>	<b>100.0%</b>	<b>189</b>	<b>100.0%</b>	<b>190</b>	<b>100.0%</b>

According to the findings in Table 7 the majority of respondents did not agree with the statements of seeing agriculture as being of low status, too rural or dominated by the old generation and the percentages of those disagreeing were 76.8 per cent, 78.8 per cent and 69.5 per cent respectively. The results also contradict the reasons normally put forward as factors that discourage youth in agriculture.

#### 4.4.4.8 Life improvement by cane farming

Farming is done for a particular purpose. It is the writer's observations that its main objective is food security, income generation, fighting poverty and in the process provides a better life. Respondents were asked to state whether their lives have been improved by cane farming. The results are indicated in Table 8.

**Table 4.4.8: Life improvement by cane farming**

<b>Life improvement by cane farming</b>	<b>Frequency</b>	<b>Percent</b>
Strongly disagree	1	.5
Disagree	15	7.8
Not sure	18	9.3
Agree	112	58.0
Strongly agree	45	23.3
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100.0</b>

According to Table 4.4.8, the majority of respondents of 81.3 per cent have agreed or strongly agreed that cane farming has improved their lives. The findings have been consistent and have dismissed the idea that youth were negative about farming. A small percentage of respondents either disagreed or were not sure and the reasons could be that they do not appreciate that their parents use money from farming to support their families.

#### **4.4.4.9 Attitude towards cane farming**

According to Lundy et al. (2006:45) an attitude can be defined as a way of being “set” toward or against certain things. Perloff (in Lundy et al., 2006:45) states that attitudes are learned through socialization and are usually enduring influence on cognitions and behaviours. Respondents were asked to indicate their attitudes towards farming, and their findings are indicated in Table 9.

**Table 4.4.9: Attitude towards cane farming**

<b>Attitude towards cane farming</b>	<b>Frequency</b>	<b>Percent</b>
Negative	15	7.8
Not sure/ ambivalent	28	14.5
Positive	148	76.7
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100</b>

Table 4.4.9 summarises the respondents’ overall attitudes towards cane farming. An overwhelming majority of 76.7 per cent of respondents expressed a positive attitude towards cane farming. This is encouraging to the farming sector because it gives hope that the youth will succeed their parents in farming thereby ensuring sustainability of agricultural production.



#### **4.4.5. Conclusion and recommendations**

It can be concluded that the majority of the youth of the cane growers in North Coast have both positive perceptions and positive attitudes towards cane farming. The results of the study disproved the researchers' hypothesis that the offspring of the current small-scale growers (SSGs) perceive cane farming in a negative light. The findings also contradict the widespread assertions in literature that young people have negative attitudes towards agriculture and these bode well for the future of agriculture in general and cane farming in particular in the North Coast region of KwaZulu-Natal.

Should these young people ultimately choose cane farming as a result of these perceptions it will be important that measures are put in place to ensure that, to a certain degree, the positive perceptions can become a reality. These measures should, inter alia, include increasing the economic viability of cane farming. There is a need to deliberately promote agriculture to young people and develop programmes aimed at changing youth perceptions about agriculture.

It is recommended that public policies be adapted with the objective of attracting and retaining young people toward farming. In order for young people to be attracted to agriculture there is a need to look beyond the ordinary farming activities which are seen as physically straining. There is a need to expose the youth to the whole value chain, especially in the context of commercial farming, from the farm to value adding and eventually to the delivery of the produce to the end user. Graduating into commercial farming will help to meet the aspirations of the youth. There is a need to improve the viability of cane farming in order to attract young people to the industry. This is based on the assumption that, as young people realise that the socio-economic conditions of cane growers improve as a result of farming, their perceptions and attitudes will be positive and ultimately lead to their choosing of agriculture as a career. This is also consistent with the finding that the respondents will be prepared to take up farming if there is money to be made.

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## 4.5 ECONOMICS OF SMALL-SCALE CANE FARMING: YOUTH PERCEPTIONS VERSUS REALITY

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### Abstract

*This study focused on the sugar industry, which makes a significant contribution to the agricultural sector. The ageing cane grower population exerts pressure on the youth to prepare to succeed their parents. If these young people have negative perceptions of farming they are unlikely to take the baton from parents which will impact negatively on farm production. Perception and reality are two different things and this is the theme of this article. This paper looked at the perceptions of young people whose parents are small-scale cane growers regarding the profitability of cane farming. Contrary to popular belief, the results showed that the respondents have positive perceptions of farming and are prepared to choose agriculture and even become full-time farmers. Regarding the economics of cane farming, the respondents maintained these positive perceptions and stated that cane farming is profitable. But the objective analysis of the economics of small-scale farming shows a different picture, which may discourage these enthusiastic young people if not addressed. The paper concludes that even though there are challenges regarding the economic viability of small-scale cane farming, there is still an economic and development case for encouraging it especially in the context of fewer alternatives to it. In order to generate and maintain youth interest in rural areas that form part of the study, it is recommended that they have access to larger landholdings in order to capitalize on the economics of scale and improve economic viability of farming.*

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**Key words:** Small-scale cane growers, profitability, perception, reality, economics, sustainability, youth, farmer.

#### **4.5.1. Introduction and definition of the problem**

Sustainable agriculture is a philosophy that is embraced by practitioners of both development and agriculture. At the core of this philosophy is the need to ensure that production is sustained over a prolonged period and also ensure environmental stewardship. According to Dumanski (1997:15) sustainability is to leave future generations as many, if not more, opportunities as we have had ourselves. “Sustainability is about taking a long term view with the objective of ensuring long term availability of goods and services” Groenewald (2002:4). Groenewald further argues that sustainable agriculture should be seen as a process rather than an occurrence, a direction rather than a destination, and a philosophy and system of farming.

The main problem is that farmers are an ageing population and there is an urgent need to ensure that young people are ready to succeed their parents and follow agriculture. This is not only a South African challenge but an international one. Swaminathan (2001) in Sharma (2007:27) states that in the coming years, one of the biggest challenges for Indian agriculture would be retaining its youth in agriculture. Regarding evidence of the withdrawal of the youth from farming, Leavy and Hossain (2014:12) state that “historically, aspirations studies from the 1960s and 1970s, mainly in West Africa, suggest that young people in these societies expressed high aspirations and expectations taking them away from farming, which was considered to be low status”.

The problem that gave rise to this study is best captured by Leavy and Hossain (2014:3) when they state that

while de-agrarianisation is not new, policy makers are correct to be concerned about a withdrawal from the sector: smallholder productivity growth, and agricultural transformation more broadly, depend in part on the extent to which capable, skilled young people can be retained or attracted to farming, and on policies that support that retention. So who wants to farm, and under what conditions?

The focus of this study is on the sugar industry, and SASA (2015:17) states that there are approximately 22,500 registered growers and out of these at least 21,110 are described as small-scale growers (SSGs). SASA (2015:17) further highlights that the sugar industry generates an average of R12 billion per annum and is responsible for 79,000 direct jobs and 350,000 indirect jobs.

Since the sugar industry makes a significant contribution to the South African economy in general and more specifically in the provinces of KwaZulu-Natal and Mpumalanga, it is important to ensure the sustainability of this industry. Cane growers who supply various sugar mills are the bedrock of the sugar industry. The study seeks to understand whether young people whose parents are small-scale cane growers are prepared to follow in the footsteps of their parents and engage in agriculture. Furthermore, what are these youth's perceptions of agriculture in terms of income and other related factors? Are their perceptions close to reality or not? The researchers argue that unless young people have positive perceptions of agriculture and are prepared to succeed parents, agricultural production will be negatively affected. This challenge is exacerbated by the fact that the 21,110 SSGs are ageing. Since most of the small-scale cane growers operate in communally owned areas where land is acquired through traditional tenure it is expected that their offspring will inherit the land and if their offspring are not prepared to continue with farming it is expected that cane production will decline significantly. The hypothesis was that the offspring of small-scale farmers are not prepared to succeed their parents as farmers, mainly because of low income levels in small-scale cane farming.

#### **4.5.2. Procedure**

This study adopted a quantitative method of research design. The research technique that was adopted to collect data from the sample is a survey, since it is a form of quantitative research. According to Thi (2008:55) the biggest advantage of quantitative research is that it investigates social problems objectively, and he further argues that objectivity is the main concern in quantitative research because objectivity requires researchers to remove personal prejudices and bias and see things for what they are. Thi (2008:55) argues that objectivity is a significant indicator in establishing validity of information and in doing so investigators become neutral observers and analysts.

The youth who are between 14 and 35 years in terms of age were respondents of this study. A further criterion was that these young people were offspring or relatives of small-scale cane growers that supply five sugar mills that are located in the North Coast and Zululand Region of KwaZulu-Natal Province of South Africa. These mills are Maidstone, Darnall, Gledhow, Amatikulu and Felixton.

In different countries there are various definitions of the term “youth”. In South Africa, youth are defined as all people between the ages of 14 to 35, as per the *National Youth Commission Act 19 of 1996* and this is the definition that has been adopted in this study. Mathivha (2012:15) states that the data indicates that the number of youth between the ages of 14 to 35 years is estimated to be at 20.5 million, representing 40.9 per cent of the total population of 50 million in South Africa.

A probability sampling approach was adopted in this study which meant that each member of the survey population had a known and equal chance of being selected. There were five strata representing five sugar mills and simple random sampling was applied in each stratum of the total population. A total of 193 respondents were reached from a survey population of the offspring of 11,527 growers who delivered cane to the five mills under study in the 2013/14 season. Almost 99 per cent of respondents are located in communally owned areas that fall under the jurisdiction of traditional leaders. Except for three Indians all other respondents were Black South Africans. In addition to personal interviews, focus group discussions (FGDs) were undertaken.

According to Steyn (2005:9-10) there are various data gathering methods, namely observation, face-to-face interviews, self-administered methods, focus groups and personal interviews. Face-to-face interviews were conducted as the chief data gathering method in this study.

In terms of the data gathering instruments, a structured questionnaire was utilised since this is mainly quantitative research. The questionnaire was pilot-tested before the main data collection took place and some changes were subsequently made to the questionnaire. The gathered data was captured and manipulated using statistical software. As part of the analysis frequency distributions as well as statistical analyses such as Chi-squares were undertaken. In terms of ethical considerations, the respondents were assured that confidentiality would be maintained and that they were not forced to participate in the study.

#### **4.5.3. Findings and discussion**

This section presents the opinions of the youth whose parents are small-scale growers (SSGs) as to whether they are prepared to choose agricultural careers; seeks to understand their general insights into agriculture; examines their perceptions regarding the economics of cane

farming, while simultaneously comparing these perceptions with economic realities; establishes whether farm sizes affect youth perceptions and their level of involvement; and finally argues as to whether it is still worthwhile to continue with small-scale cane farming.

#### **4.5.3.1 Youth career choices**

Respondents had been asked whether they see themselves as full-time farmers and the results show that close to 75 per cent of respondents see themselves as full-time cane farmers. The researcher has doubts about the sustainability of this choice if these youth are to inherit very small farms. The question is whether these young people can sustain their careers as full-time farmers taking into cognisance the income levels in small-scale farming. However, these young people can still have fulfilling careers as full-time farmers if income levels of farming are addressed.

Young people whose parents are SSGs were further asked whether they were in a position to recommend farming as a career to others. Results show that an overwhelming 85 per cent of respondents would recommend farming as a career to others. Only 7.8 per cent were not sure while the other 5.2 per cent were not willing to recommend farming as a career to others. The results bode well for the future of farming because there is a need for young people to participate in agriculture and also influence other young people to follow suit.

Respondents were then asked for their views as to which they would choose between an agricultural career path and other careers. The findings show that an overwhelming 79.3 per cent indicated that they would choose agriculture over other careers and this has positive implications for the long term sustainability of cane farming. Only 14 per cent of the respondents indicated that they would choose other careers instead of agriculture. From a purely perception point of view these results are positive for the sustainability of cane farming. However, when faced with economic realities of small-scale farming will these young people stay in the agricultural sector? Based on the findings which confirm that the youth are interested in agricultural careers the researcher's argument is that small-scale farming will discourage ambitious youth if their access to land and larger farms is not addressed.

### 4.5.3.2 Youth perceptions about farming and sugarcane farming

There was one research question relating to youth perceptions about farming in general and sugarcane farming in particular, namely: What is it that youth disapprove of in cane farming? In addition there were two objectives, namely:

- To discover youth perceptions about cane farming, especially in the small-scale farming sector.
- To understand youth disapproval of cane farming and constraints that threaten their involvement in cane farming.

The following Table 4.5.1 deals with economic aspects of cane farming and respondents were asked their opinions.

**Table 4.5.1: Preferences for cane farming**

Response	I like cane farming as it generates income		I like cane farming as it creates jobs in our community	
	Frequency	Per cent	Frequency	Per cent
Disagree	7	3.7%	2	1.1%
Not sure	21	11.1%	3	1.6%
Agree	162	85.3%	184	97.4%
Total	190	100.0%	189	100.0%

According to Table 4.5.1 most respondents like cane farming because it generates income (85.3 per cent of respondents) and contributes to job creation in the community (97.4 per cent). The reasons highlighted above can be regarded as stimulators influencing young people positively about sugarcane agriculture.

Respondents were further asked whether they agreed with the statement that their lives have been improved by cane farming. An honest answer to this question is critical because it gives a clue as to whether they will seek careers in agriculture or they will look elsewhere. The following Table 4.5.2 succinctly captures the views of these young respondents.



**Table 4.5.2: Life improvement by cane farming**

<b>Responses</b>		<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	1	.5
	Disagree	15	7.8
	Not sure	18	9.3
	Agree	112	58.0
	Strongly agree	45	23.3
	<b>Total</b>	<b>191</b>	<b>99.0</b>
Missing	System	2	1.0
<b>Total</b>		<b>193</b>	<b>100.0</b>

According to Table 4.5.2 an overwhelming majority of respondents believe that their lives have been improved by farming in the context of small-scale farming. A total of 81.3 per cent of respondents either agree or strongly agree that their lives have been improved by cane farming and it is the researcher's assertion that these results have positive implications for the sustainability of cane farming through youth participation.

#### **4.5.3.3 Perception of farming as a profitable business**

There were two research questions relating to farming as a profitable enterprise. The first question was: "If it can be proven that there is money in cane farming, will the youth then participate in farming?" The results show that the majority of respondents (82.9 per cent) will choose agriculture if it can be proven that there is money to be made. Only a small percentage (4.7 per cent) responded with an emphatic negative answer to the question. Once again this response is consistent with other results which paint a positive picture in terms of youth perceptions about this important sector of the economy which contributes positively to job creation, especially in poverty stricken rural areas.

The second question was asked whether small-scale cane farming generates enough money to sustain a good living. The findings revealed that the majority (at least 62.7 per cent) of respondents agree and strongly agree that small-scale farming generates enough money to sustain a good living. In fact, this perception was proven correct in the case of a cane grower farming at least more than 10 hectares. This proof is reflected in Table 4.5.7 whereby the researcher calculated various net income levels per month depending on the farm size. The figures used in Table 4.5.7 were largely informed by Table 4.5.6 whereby Singels et al. (2014:17) showed net farm income per ton for different farming seasons (2011 to 2013). Table 4.5.7 shows that a cane grower farming 20 hectares will generate a net income of

R11,817 per month whereas a grower farming 30 hectares will yield a net income of R17,725.50 per month. At least 36.3 per cent of respondents disagreed, strongly disagreed or were not sure that small-scale farming generates enough money to sustain a good living. The results confirm the positive perceptions that young people have of cane farming's income generation potential. Generally this is not consistent with the wide-ranging views in literature that young people are negative towards agriculture.

Another important question that was asked to the respondents relates to cane farming as a profitable business. Table 4.5.3 shows results of respondents when asked whether they thought that cane farming is profitable or not.

**Table 4.5.3: Cane farming as a profitable business**

	<b>Responses</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	5	2.6
	Disagree	7	3.6
	Not sure	24	12.4
	Agree	118	61.1
	Strongly agree	37	19.2
	Total	191	99.0
Missing	System	2	1.0
<b>Total</b>		<b>193</b>	<b>100.0</b>

The objective of the question addressed in Table 4.5.3 was to assess how youth perceive the profitability of sugarcane farming. As reflected in Table 4.5.3 most of the respondents (80.3 per cent) either agree or strongly agree that cane farming is a profitable business. Once again, this finding undoubtedly confirms the positive perceptions that the youth have of cane farming. From a purely perception point of view this is a positive finding with a positive impact on the sustainability of cane farming going forward. But from an economic reality perspective this will be a different matter.

#### **4.5.3.4 Association between land size and level of involvement**

The objective of this section was to determine whether the sizes of the farms have an effect on the involvement of small-scale growers' (SSGs') offspring and their perception of cane farming. In this context involvement refers to any participation in farm activities from the planting process to the harvesting activities. This may include actual work as a farm worker or some supervisory duties. This objective was answered by looking for an association

between offspring's current involvement on the farms and the size of the farms and this association is reflected in the cross tabulation in Table 4.5.4.

**Table 4.5.4 Cross tabulation: Relationship between the size of the parent's farm and youth involvement in farming activities on these farms.**

What is the size of your parents' farm? * Are you currently involved in the farming activities on your parents' farm or other farms in the area?					
			Are you currently involved in the farming activities on your parents' farm or other farms in the area?		Total
			Not involved	Involved to some extent	
What is the size of your parents' farm?	1 to 50 ha	Count	19	68	87
		Expected Count	14.7	72.3	87.0
		% within What is the size of your parents' farm?	21.8%	78.2%	100.0%
		% within Are you currently involved in the farming activities on your parents' farm or other farms in the area?	73.1%	53.1%	
		% of Total	12.3%	44.2%	56.5%
	Over 50 ha	Count	7	60	67
		Expected Count	11.3	55.7	67.0
		% within What is the size of your parents' farm?	10.4%	89.6%	100.0%
		% within Are you currently involved in the farming activities on your parents' farm or other farms in the area?	26.9%	46.9%	
		% of Total	4.5%	39.0%	43.5%
Total	Count	26	128	154	
	Expected Count	26.0	128.0	154.0	
	% within What is the size of your parents' farm?	16.9%	83.1%	100.0%	
	% within Are you currently involved in the farming activities on your parents' farm or other farms in the area?	100.0%	100.0%		
	% of Total	16.9%	83.1%	100.0%	

Using the data from cross tabulation in Table 4.5.4, a chi-square test for association was conducted between "What is the size of your parents' farm?" and "Are you currently involved

in the farming activities on your parents' farm or other farms in the area?”. This chi-square test is reflected in Table 4.5.5.

**Table 4.5.5: Chi-square Test – Association between land size and level of youth involvement**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3.500	1	.061		
Continuity Correction <sup>b</sup>	2.735	1	.098		
Likelihood Ratio	3.650	1	.056		
Fisher's Exact Test				.082	.047
Linear-by-Linear Association	3.477	1	.062		
N of Valid Cases	154				

*a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.31.*

*b. Computed only for a 2x2 table*

All expected cell frequencies in Table 4.5.5 were greater than five. According to Table 4.5.5 there was not a statistically significant association between the size of the farm and involvement of offspring,  $\chi^2(1) = 3.5000$ ,  $p = 0.061$ . Thus, the size of the farm did not seem to influence involvement of offspring on the farm. However, the researcher cautions against taking the results at face value since this merely reflects a perception instead of an objective economic assessment. The reality is that size matters in cane farming and there is a need to capitalise on the economies of scale if the farm business is to be sustained financially.

The researcher is of the view that since parents normally do not share the state of their finances with young people the picture that young people have of economic returns from small-scale cane farming might not be realistic. Farm size matters in the sugar industry and this is the reality which differs from the perceptions.

#### 4.5.3.5 Economic reality of small-scale cane farming

Generally the profitability of small-scale farming is seriously questioned. Van Zyl et al. (2005:106) argue that large farm businesses enjoy the benefits of technical and economic economies of scale such as better utilisation of large tractors and technology and better bargaining power when purchasing inputs, which are not available to smaller farm businesses. The differences of responses show the extent of perceptions held by youth and farmers in general. Bergh and Theron (2003:104) state that “perception makes us aware of the world around us. Perception is a selective process by which we interpret and give meaning to external factors. It is seldom realistic and essentially a subjective process”. It is for this reason that there is a need to bring reality of the farming’s economic returns, hence Table 4.5.6.

**Table 4.5.6: Gross income, operational costs and net farm income per ton of cane harvested**

		Rain-fed			Irrigated		
Season:		2011	2012*	2013*	2011	2012	2013**
Gross Income (R/ton)		339.70	390.50	380.65	393.35	408.94	398.62
Expense Items (R/ton)							
Farm Staff		82.60	87.78	108.96	59.16	65.54	83.22
Chemicals		15.14	20.02	21.58	9.71	13.54	15.17
Fertilizer		49.63	54.97	59.69	40.99	47.42	53.12
Fuels and lubricants		23.10	26.15	29.32	19.28	22.63	26.03
Mechanical maintenance		25.06	26.95	27.84	30.23	33.69	35.68
Fixture maintenance		7.49	7.95	8.20	6.50	7.16	7.59
Services		8.13	9.10	9.47	43.29	50.88	54.85
Administration		16.58	18.56	19.22	12.33	14.26	15.10
Insurance		6.27	6.98	7.19	6.08	7.06	7.48
Licenses		0.74	0.82	0.84	0.33	0.39	0.41
Irrigation costs		0.14	0.15	0.15	1.16	1.30	1.38
Sundry		21.88	24.32	27.41	16.42	18.90	20.52
Cane transport		30.47	31.14	34.25	40.65	41.55	45.69
Total operational costs (R/ton)		287.23	314.89	354.12	286.13	324.32	366.24
Net farm income (R/ton)		52.47	75.61	26.53	107.22	84.62	32.38

Sources: Singels et al. (2014:17) & SACGA (2014)

Table 4.5.6 shows the gross income, operational costs and net farm income per ton of cane harvested over a three year period. Singels et al. (2014:17) define net farm income as the difference between gross income and total operational costs, and excluding managerial costs,

interest, rent, leases, depreciation and tax. It should be noted that Table 4.5.6 compares two farming systems which are rain-fed and irrigated. The rain-fed did not perform as well as the irrigated system. It should also be borne in mind that most cane growers in this study do not use irrigation. In cane farming the size of the farm plays a critical role and enables the farmer to capitalize on the economies of scale. The number of hectares farmed by small-scale growers (SSGs) typically range from 2 hectares to 30 hectares which limits the farmer from capitalizing on economies of scale. According to Van Zyl et al. (2005:105) farm managers are interested in the size of a farm business and the relationship between cost and size for many reasons, but mainly because they would like to determine the most profitable size for the farm business and economies of scale or economies of size deal with this aspect.

Using 2012 gross income data for rain-fed farms from Table 4.5.6 the researcher calculated various gross income levels (as reflected in Table 4.5.7), which can be generated by a SSG for various land size options. In this section the researcher strives to bridge the gap between perception and reality. As previously reflected in other sections in this paper young people whose parents are cane growers have positive perceptions about cane farming and they believe that there is sufficient income generation and furthermore they are of the view that cane farming is profitable.

**Table 4.5.7: Small-scale grower income levels (rain-fed production)**

	<b>Income/Costs Per Ton</b>	<b>2 ha Farm</b>	<b>10 ha Farm</b>	<b>20 ha Farm</b>	<b>30 ha Farm</b>
<b>GROSS INCOME</b>		2.00	10.00	20.00	30.00
		108.00	540.00	1,080.00	1,620.00
	<b>390.50</b>	<b>42,174.00</b>	<b>210,870.00</b>	<b>421,740.00</b>	<b>632,610.00</b>
<b>DEDUCTIONS / COSTS</b>					
Cut and Stack or Load	33.10	3,574.80	17,874.00	35,748.00	53,622.00
Haulage to Zone	33.10	3,574.80	17,874.00	35,748.00	53,622.00
Transshipment	17.00	1,836.00	9,180.00	18,360.00	27,540.00
Road Transport excl. any subsidy)	40.00	4,320.00	21,600.00	43,200.00	64,800.00
<b>DELIVERY COSTS</b>	<b>123.20</b>	<b>13,305.60</b>	<b>66,528.00</b>	<b>133,056.00</b>	<b>199,584.00</b>
Retention for Ratoon Management	130.00	14,040.00	70,200.00	140,400.00	210,600.00
Sundry Levies	6.00	648.00	3,240.00	6,480.00	9,720.00
<b>RATOONING AND SUNDRY COSTS</b>	<b>136.00</b>	<b>14,688.00</b>	<b>73,440.00</b>	<b>146,880.00</b>	<b>220,320.00</b>
<b>TOTAL DEDUCTIONS / COSTS</b>	<b>259.20</b>	<b>27,993.60</b>	<b>139,968.00</b>	<b>279,936.00</b>	<b>419,904.00</b>
<b>ANNUAL NET INCOME</b>	<b>131.30</b>	<b>14,180.40</b>	<b>70,902.00</b>	<b>141,804.00</b>	<b>212,706.00</b>
<b>Average net income per month</b>		<b>1,181.70</b>	<b>5,908.50</b>	<b>11,817.00</b>	<b>17,725.50</b>

The focus of Table 4.5.7 is on gross income levels. In order to understand Table 4.5.7 it is important to note that the income statement was based the following facts: all figures included VAT, cost of planting not considered, figures have been based on averages and the income of R390.50 per ton was used (Singels et al., 2014:17).

Table 4.5.7 depicts scenarios of farming by SSGs based on various farm sizes. They differ in terms of how each performs and they are discussed below.

The first one is a grower who has 2 hectares and delivers 108 tons of sugarcane per annum will, on average, achieve a gross income of R42,174. After taking into consideration the various costs and deductions totalling approximately R27,993.60 this SSG achieves a net income of R14,180.40. If this figure is averaged on a monthly basis this gives the grower a net income of R1,181.70 per month assuming a 12 month calendar year. It should be noted

that on average the sugar mills operate for 8 to 9 months in a year. As to whether this level of income will satisfy the aspirations of the youth, the researcher has serious reservations.

The second scenario is where a grower farms on 10 hectares and delivers 540 tons of sugarcane per annum and on average, achieves a gross income of R210,870. After taking into consideration the various costs and deductions totalling approximately R139,968 this SSG will achieve a net income of R70,902 per annum or R5,908.50 per month.

The third one is for a 20 hectare grower and the situation looks much better because of both increased hectares under cane and tonnage produced. This grower will, on average, yield 1 080 tons of sugarcane which will realize a gross income of R421,740. After taking into account the various costs which include delivery and input costs, the net income will be R141,804 per annum or R11,817 per month.

The last one is the 30 hectare scenario, which presents an even better illustration of the importance of economies of scale in cane production. This grower will, on average, yield 1,620 tons of sugarcane which will realize a gross income of R632,610. After taking into account the various costs which include delivery and input costs, the net income will be R212,706 per annum or R17,725.50 per month.

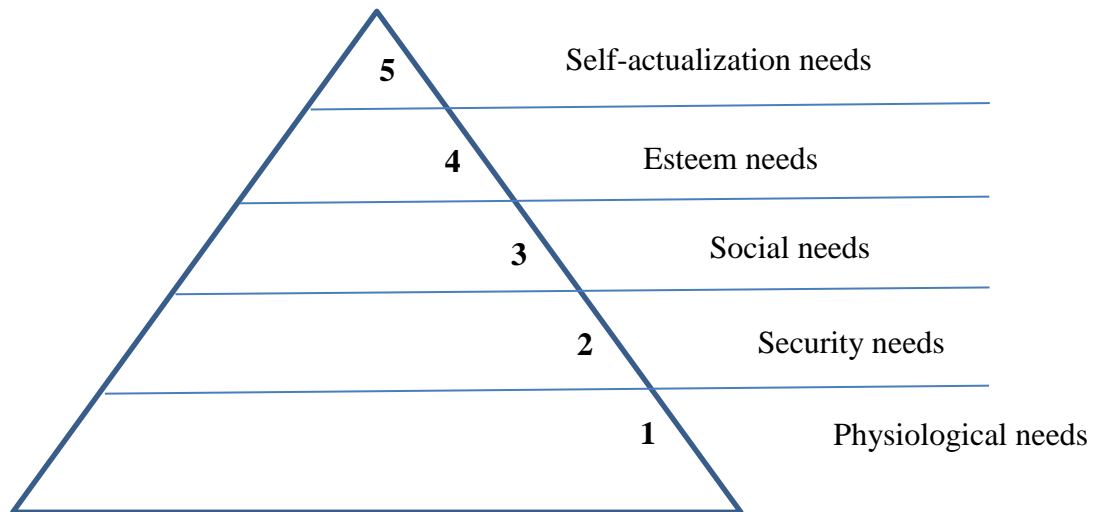
The researcher argues that young people will be attracted to the sugar industry if land sizes and associated incomes are larger. Young people have aspirations, which are bigger than their parents'. In order to put things into perspective, in the year 2012 the old age grant in South Africa was R1,200 per month or R14,400 per annum. It should be noted that the cost of servicing debt as a result of a planting loan was not taken into consideration. Had this been taken into account the net income levels would have been worse. Therefore, it cannot be realistically expected of a young person to inherit a 2 hectare or even a 5 hectare farm and be content with it. It is even worse if there are more siblings who expect a share of the farm's revenues.

#### **4.5.3.6 Is it still worthwhile to continue with small-scale cane farming?**

If the various income scenarios based on various areas under cane production are taken into consideration, then the question remains, "Is it still worthwhile to continue with small-scale cane production?" The researcher is of the view that it is still worthwhile for the person who would otherwise have no income. Although it might not make sense for a person to continue with small-scale cane farming when considering income levels, the Maslow's theory on the



Hierarchy of Needs explains the reasons why it still makes sense for poor people to continue farming at a small scale. Figure 4.5.1 illustrates Maslow's Hierarchy of Needs.



**Figure 4.5.1: Maslow's hierarchy of needs**

*Source: Smit & De J Cronje (1997:309)*

Smit and De J Cronje (1997:308-309) state that Maslow's theory of a Hierarchy of Needs is based on two important assumptions:

1. People always want more, and their needs depend on what they already possess. A need that has already been satisfied is not a motivator – only unsatisfied needs can influence behaviour.
2. People's needs are arranged in order of importance. When one need has been partially satisfied, the next one will come forward to be satisfied.

The researcher's argument is that, depending on their current poverty levels, young people will get involved up to a point where their basic needs are met. The researcher further argues that the aspirations of young people go beyond the basic level and cannot be satisfied by merely attending to their basic needs. Young people aspire to achieve social status, and if they are going to be retained in farming, the income levels should enable them to achieve this much desired status. On the other hand, if they decide to abandon agriculture because of low income levels, it could also be argued that most young people will join the employment queue in the cities because there are no guaranteed educational and economic opportunities. Therefore, continuing with agriculture, even at a small-scale level, can still be a good option for these young people if there are no alternatives.

Another argument for the continuation of small-scale cane farming is based on the fact that it is the main economic driver in the areas under study. There are no major alternative cash-generating crops or other productive land uses. The implication of this is that the opportunity cost of small-scale cane farming, in terms of land usage and other opportunities forfeited, is very low.

The researcher further argues that income from small-scale farming for cane growers who farm up to at least 5 hectares is best treated as supplementary income. Where there is more than one sibling who is to inherit a farm ranging from 2 hectares to 10 hectares, it will be difficult for that farm to economically sustain several individuals who are dependent on it. Where young people are involved in small-scale farming it will only be for the short term until a better opportunity that meets their aspirations is available. This opportunity may either be in commercial farming where financial returns are better than in small-scale cane farming, or alternatively they will opt for careers outside of agriculture.

#### **4.5.4. Conclusion and recommendations**

This paper specifically focused on the economics of cane growing by small-scale cane growers. The hypothesis was that these young people with high aspirations will be reluctant to succeed their parents. The results show that respondents confirmed that they see themselves as future cane farmers; they will recommend an agricultural career to others; they like cane farming because it can generate income; their lives have been improved by cane farming; they will choose agriculture if there is proof that there is money to be made; and that they believe that cane farming is a profitable business.

The researcher believes that even though currently young people have positive perceptions regarding the economics of sugarcane agriculture and are prepared to become farmers, the reality of low income levels will kick in and discourage these enthusiastic young people. The researcher concludes that the youth can be retained in farming if farm income levels increase. Until the income levels increase and be in line with the youth's aspirations these young people who reported to be passionate about farming will in future seize alternative opportunities, which will be promising better incomes than farming. In the meantime most of these young people are likely to remain in agriculture because alternative opportunities are limited.

It was also proven in the study that economies of scale are important in cane farming and that the greater the number of hectares under cane the greater the chances of increasing revenues that will attract youth into the sector. It is recommended that access to larger landholdings and other resources be made available to these young people who are passionate about farming, in order to enable them to run their own farm businesses, especially because it cannot be expected of them to wait years before they inherit their parents' farms.

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## CHAPTER FIVE

### 5. THE SUSTAINABILITY OF LAND REFORM GROWERS THROUGH YOUTH INVOLVEMENT

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#### Abstract

*This paper investigated the involvement of the offspring of land reform growers (LRGs) and its implications for sustainability of cane production. LRGs are those commercial growers who can be regarded as having been denied of farming opportunities as commercial farmers in the past. The hypothesis was that the youth whose parents are LRGs have positive attitudes towards cane farming and are prepared to succeed their parents and also become farmers. The results confirmed the hypothesis and this bodes well for the sustainability of agricultural production in general and cane farming in particular. Besides positive perceptions that the youth hold of commercial cane farming the economic realities also confirmed that cane farming can be economically viable under normal circumstances as long as the farm size is not small.*

**Key words:** land reform growers, sustainability, youth, involvement, perceptions, attitudes, sugar industry, economics

#### 5.1 Introduction

This article focuses on the land reform grower (LRG) category of emerging cane growers (ECGs). Based on SACGA's 2013/14 figures there are approximately 367 land reform growers (LRGs) in the sugar industry. There are various definitions and categories of growers who cannot be described as typical White commercial growers. For the purposes of this study

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this category is referred to as LRGs and they operate as commercial cane growers. LRGs include individual growers who made private arrangements to acquire their farms, individuals who received assistance such as Land Redistribution for Agricultural Development (LRAD) and those individuals who lease land from the state as part of government's Proactive Land Acquisition Strategy (PLAS). Communities whose land rights were restored as part of the restitution process are also included in this definition. Some of these growers bought their farms when some sugar millers sold their own sugarcane farms in order to advance government's land reform agenda.

SASA (2015:17) states that there are approximately 22,500 registered cane growers. At least 21,110 of these are small-scale growers (SSGs). According to SASA (2014:3) freehold land under sugarcane under Black ownership has increased from 5 per cent in 1994 to 22 per cent currently, or over 74,405 hectares under cane farmed by land reform beneficiaries.

Although some of the land reform beneficiaries received their land as part of the land reform programme it is unfortunate that some of their farms are under claim by various communities. In most cases the impact of these restitution claims has severely affected cane production. According to SASA (2014:4) with 39 per cent of the commercial freehold land under cane gazette under restitution claim in KwaZulu-Natal, the impact has been significant in terms of production. One of the unintended consequences of land claims is the reluctance of landowners to invest on their farms.

The hypothesis was that the heirs of the LRGs are prepared to take the baton of farming from their parents. This is because income levels of commercial land reform farms are higher when compared to that of small-scale farmers. Sustainability is all about the long term. The researcher's philosophy is that it is important to ensure the participation of the youth if cane production is to be sustained beyond the current generation of cane growers. If young people are not interested cane production will decline. Already it has been observed in many countries that farmers are an ageing population and therefore their children should be encouraged to take over farming. It should be borne in mind that the hypothesis proved in this study contradicts suggestions in literature that youth are not interested in agriculture and prefer careers outside of this sector. An example this literature includes a study by Juma (2007) – cited by Leavy and Hossain (2014:12) – which found that young people who were interviewed in the Tanzanian study considered farming to be dirty and undesirable, although “agriculture is regarded as an employer of the last resort to young people” (Juma, 2007:2).

Leavy and Hossain (2014:12) further stated that studies from India also suggest a trend towards young people exiting agriculture. This is prevalent across all sizes of landholdings, but with different motivations. Those with lower access to land are likely being pushed out of the sector while those with larger landholdings are capitalising on their relatively higher education and skill levels to exploit opportunities in other sectors. The main problem that gave rise to this study is that in terms of the S.A. government's land reform and restitution programmes more agricultural land is earmarked for transfer to Black Africans. If their children are not interested nor are they capable it can be realistically expected that agricultural production will be severely impacted.

The objectives of the study were the following:

- To understand the perceptions of the offspring of LRGs towards agriculture;
- to understand the attitudes of the offspring of LRGs towards agriculture;
- to investigate their current participation in farm operations;
- to understand the factors that drive youth participation; and
- to ascertain whether the young people are prepared to succeed their parents as cane growers or farmers in general.

## 5.2 Methodology

The study was conducted on 61 young people whose parents or relatives are LRGs. A stratified sampling approach was followed. This means that the survey population was divided into various strata with each stratum being represented *pro rata*. Table 5.1 shows the breakdown of respondents per mill area.

**Table 5.1: Breakdown of respondents per mill area**

<b>Mill Area</b>	<b>Total Survey Population</b>	<b>Respondents</b>	<b>Per cent</b>
Amatikulu	36	12	19.7
Darnall	60	20	32.8
Felixton	28	9	14.8
Gledhow	37	8	13.1
Maidstone Mill	29	12	19.7
<b>Total</b>	<b>190</b>	<b>61</b>	<b>100.0</b>

A structured questionnaire was used to collect data. Data analysis was conducted using SPSS software (2015, version 23). In addition to personal interviews focus group discussions (FGDs) were undertaken which comprised two categories of participants which are youth under study as well as their parents who are LRGs.

### **5.3 Findings and discussion**

This section deals with the actual findings and discussion thereof.

#### **5.3.1 Gender of respondents**

The results showed that that most of the respondents were male (78.7 per cent) while female respondents accounted for 21.3 per cent. This result is consistent with the finding that cane farming is dominated by males.

#### **5.3.2 Age of respondents**

Regarding the age of the focus has been on the age group 14 to 35 years. Results revealed that most of the respondents (39.3 per cent) are in the 25 to 30 age category followed by 19 to 24 age category which is 24.6 per cent. It can be assumed that most of the respondents below 25 years may still be at school or tertiary institutions. Therefore the number of respondents above 25 years is significant in the sense that this corresponds with the age where most people begin their careers and also start families. Respondents from 25 years and above comprised 57.3 per cent.

#### **5.3.3 Race of respondents**

Results show that most of the respondents (75.4 per cent) were Black Africans followed by Indians who accounted for 24.6 per cent of the respondents. This breakdown is not surprising because there are more Black commercial cane growers of African origin when compared to the Black commercial growers of Indian origin.

#### **5.3.4 Marital status of respondents**

A marital status reflects the level of responsibility by respondents. It is assumed that those who are married are more likely to have greater financial needs that will need to be met by the farm income. Table 5.2 is a reflection of the marital status of respondents.



**Table 5.2: Marital status of respondents**

<b>Marital Status</b>	<b>Frequency</b>	<b>Percent</b>
Single	48	78.7
Married	11	18.0
Divorced	1	1.6
Widowed	1	1.6
<b>Total</b>	<b>61</b>	<b>100.0</b>

As revealed in Table 5.2 most respondents are single (78.7 per cent). However, it is interesting to note that 18 per cent were already married. This corresponds with the remarks made earlier that most respondents are in the age category which allows them to start their own families. It is also interesting to note that 18 per cent are already married which means that they have family responsibilities which include dealing with financial matters of the family. It cannot be expected of these young people with families to remain in the industry where income levels cannot sustain their families and for them to remain in agriculture they need to make enough money to look after their families.

### **5.3.5 Dependents of respondents**

The researcher argues that having dependents will exert pressure on the respondents to ensure that they have income, hence the importance of ascertaining whether they have dependents or not. Results show that the majority of respondents (57.4 per cent) have dependents and this is not surprising when considering that 39.3 per cent are in the 25 to 30 age category.

### **5.3.6 Education of respondents**

Every sector of the economy requires educated and skilled workforce and it is for this reason that respondents were asked of their educational levels. The results showed the educational levels of respondents with the majority (57.4 per cent) having already completed Matric. It was interesting to find that 24.6 per cent of respondents had tertiary qualifications. "Other" refers to those who are still at school e.g. doing matric and this includes those who have done courses such as courses in Sugarcane Agriculture. It is difficult to assess the implication of good education to retain youth in agriculture. This is because it can give them access to better opportunities outside of agriculture and therefore regarded as a factor that will push them out of agriculture. On the other hand if these young and educated people are retained they can bring in new ideas and embrace new farming technologies and business methods that can take agriculture into a higher level.

### 5.3.7 Current occupation

It was necessary to understand the current occupations of respondents because this can give an indication of their level of maturity and development which enables them to make informed decisions about their current and future careers. Table 5.3 shows the current occupation of respondents in the LRG category of respondents.

**Table 5.3: Current occupation of respondents**

<b>Occupation</b>	<b>Frequency</b>	<b>Percent</b>
Studying - Full time	13	21.3
Studying - Part time	6	9.8
Employed - Full time	6	9.8
Employed - Part time	5	8.2
Employed full time and studying part time	10	16.4
Running a business	11	18.0
Unemployed	8	13.1
Other	2	3.3
<b>Total</b>	<b>61</b>	<b>100.0</b>

Table 5.3 shows that only 21.3 per cent of the respondents are full-time students. This is consistent with the results which showed that the age 14-18 category comprised 16.4 per cent of respondents and this is the age where most people are studying full time. It can be argued that the remainder of the 21.3 per cent comes mostly from the 19 to 24 age category. It is also encouraging to note that 18 per cent are running a business and the other 16.4 per cent are employed full time but also studying part time. This shows that they value education which will have positive implications for sustainability of agriculture assuming they are retained in the sector. The percentages of those running businesses or employed full time are consistent with statistics which showed that 18 per cent of respondents are married and therefore the occupational details reflected in Table 5.3 are not surprising. “Other” in Table 5.3 refers to those who are already farming or learning farming. It was not clear whether those who are unemployed are assisting in their parents’ farms or not.

### 5.3.8. Profile of family and farm

The importance of family farming was underscored by the declaration of the year 2014 as the International Year of Family Farming by the United Nations. The aim was to recognize farming families for their critical role in food production. The Food and Agriculture Organisation (FAO) of the United Nations (2014) states that family farming is the predominant mode of agricultural production in the world, with more than 500 million family farms in the world out of 570 million farms.

#### 5.3.8.1 Parents involved in farming

Since the participation of men and women in farming is not necessarily the same a question was asked as to which of the parents is involved in farming. Table 5.4 seeks to understand which of the parents are involved in farming on behalf of the family.

**Table 5.4: Parents of respondents involved in farming**

<b>Parent Involved</b>	<b>Frequency</b>	<b>Percent</b>
Mother	9	14.8
Father	29	47.5
Both parents	16	26.2
Other	7	11.5
<b>Total</b>	<b>61</b>	<b>100.0</b>

The results of Table 5.4 show that 47.5 per cent are male parents, with both parents accounting for 26.2 per cent. This means that 73.7 per cent of male parents are involved in farming. “Other” refers to brother, sister, uncle and self-farming by the respondent. The results also show that cane farming is still male dominated. It is important to note that answers in Table 5.4 refer to the person overseeing the running of the farm and not necessarily working in the fields from sunrise to sunset. In the context of land reform cane farming these farms, in addition to family labour, also employ farm workers. This is because of larger land holdings. When it comes to actual working the FAO reports in its *State of Food and Agriculture* report (2011) that, on average, women make up a greater share of the agricultural labour force in Sub Saharan Africa.

Table 5.5 reflects the ages of maternal parents involved in farming.

**Table 5.5: Age of mother of a respondent**

<b>Age of mother</b>	<b>Frequency</b>	<b>Per cent</b>
40 years old and less	1	4.2
41-50 years old	10	41.7
51-60 years old	6	25.0
Older than 60 years	7	29.2
<b>Total</b>	<b>24</b>	<b>100.0</b>

Table 5.5 shows that most of the maternal parents are in the age category 41-50 years and this stands at 41.7 per cent followed by the over 60 years category which stands at 29.2 per cent. One of the 25 people in Table 5.5 who answered “mother” or “both parents” did not indicate their mother’s age.

The age of fathers involved in farming is reflected in Table 5.6 below.

**Table 5.6: Age of father of a respondent**

<b>Age category</b>	<b>Frequency</b>	<b>Per cent</b>
41-50 years old	12	26.7
51-60 years old	14	31.1
Older than 60 years	18	40.0
Don't know	1	2.2
<b>Total</b>	<b>45</b>	<b>100.0</b>

As per Table 5.6, it can be seen that most fathers (40 per cent) are in the age category which is over 60 years, followed by the 51 to 60 years category which stands at 31.1 per cent. These results confirm the hypothesis that the cane growers are an ageing population, hence the urgent need for youth involvement in order to sustain cane production. The implication of the results of Table 5.6 are not good for the sugar industry when taking into cognisance the fact that cane farming is still male dominated. The results also confirm the concerns regarding the ageing farmer population such as those of Schweitzer in Wiley, Rose and Halpin (2009:3), who stated that the average age of a U.S. farmer today is nearing 60, up from 50 in 1978. “Just 5% of farmers in 2002 were between the ages of 25 and 34” (2009:3). When looking at the Nigerian farmer and the farming environment, Aphunu and Atoma remarked that “the Nigerian farmer is ageing with an average of 50 years” (2010:47).

### 5.3.8.2 Farm profile

Respondents were also asked about the size of their family farms and the results are shown below in Table 5.7. This is an important question, because a larger farm has the potential for higher revenues that can take care of the family financially and also encourage the respondents to remain in agriculture and follow in the footsteps of their parents.

**Table 5.7: Size of the family farm**

	<b>Farm Size (Ha)</b>	<b>Frequency</b>	<b>Per cent</b>
	51-70 ha	3	4.9
	71-100 ha	12	19.7
	Over 100 ha	39	63.9
	Don't know	6	9.8
	Total	60	98.4
<b>Missing</b>	<b>System</b>	<b>1</b>	<b>1.6</b>
<b>Total</b>		<b>61</b>	<b>100.0</b>

According to Table 5.7 most farms under the LRG category are over 100 hectares each in terms of size. The over 100 hectare category is 63.9 per cent followed by the 71 to 100 hectare category which is 19.7 per cent. From a sustainability perspective it was encouraging to note that these young people know the sizes of their farms, which is an indication of interest and even possibly participation in farm operations. Furthermore, the size of landholdings is critical because the larger the farm size the greater the chances of farming it profitably, assuming it is run efficiently. This is because sugarcane farming requires a critical mass and therefore economies of scale are important.

The influence of land size is studied further in Section 5.10 of this chapter that deals with the economic realities of cane farming. In a nutshell Section 5.10 shows that as the number of hectares increases farm incomes also rise with a positive impact on farm sustainability.

### 5.3.8.3 Other income sources

Bezu and Holden (2014:260) confirm that many farmers engage in non-farming activities as an additional source of income. Respondents were then asked whether there are other sources of income for the family. The results show that in most cane growing families in the LRG category the only source of income is cane farming, as indicated by 41 per cent of respondents. However, this figure may be distorted because 13.1 per cent of respondents were

reluctant to answer this question. At least 36.1 per cent have other sources of income. Other income sources improve family livelihoods and can be counted on to supplement farm income. From a sustainability point of view this could be considered a positive development especially because there are times when farm incomes cannot be guaranteed in dire situations such as the drought and other risk incidents.

As a follow-up question the respondents were asked to identify the sources of other income. The findings revealed that out of the 22 families (36 per cent) that have other income sources only one earns an old age pension and another one gets a social grant. From a sustainability point of view this might be an indication of more dependency on farm income instead of government grants. This might also indicate that most of them have not yet reached the minimum age of 60 which qualifies a person to earn old age pension. Taking into cognisance the concerns regarding the ageing farmer population this is a good finding in terms of sustainability. The other 27.3 per cent of other income sources is derived from employment. It could not be established whether this is full-time employment or part-time employment.

Results also indicated that 18.2 per cent of families with other income sources receive support from family members and another 27.3 per cent are involved in other farming enterprises while there is one family (4.5 per cent) that receives rental income.

### **5.3.9 Sustainability through youth involvement, knowledge and experience of farming**

This section looks at various factors that impact on the sustainability of cane farming. The factors considered are involvement, knowledge and experience of the respondents.

#### **5.3.9.1 Exposure to agricultural training**

A question was asked as to whether respondents had done agricultural subjects at school. This question was viewed as being indicative of the knowledge and interest of youth regarding farming.

It was found that there were fewer respondents (24.6 per cent) who had done agricultural subjects at school than those who had not done it (68.9 per cent) with 6.6 per cent not being part of the analysis. This result, however, is not necessarily a reflection of their choices because in some schools agriculture is not offered as a subject. However, in cases where this subject is offered and there are fewer takers this can be regarded as a rejection of agriculture by the youth.

A chi-square goodness of fit was conducted to compare a collection of categorical data with some theoretical expected distribution. Results show that there was a statistically significant relationship in the number of people who answered "Yes" they have had agricultural subjects at school, and the number who answered "No" they have not had agricultural subjects at school ( $X^2(1) = 12.789$ ;  $p = 0.000$ ). More individuals indicated that they did not have agricultural subjects.

Respondents were also asked whether they had undergone any specific training in sugarcane agriculture or not. It was discovered that only 19 out of 61 respondents have not been trained at all while 42 out of 61 have been trained either formally or informally. In terms of percentages those who have undergone some form of training comprise 68.9 per cent. This high percentage is a good indicator of youth interest and involvement because it could be argued that they would not have undergone this training if they were not interested at all. A follow up chi-square test result revealed that there was a statistically significant relationship in the number of people who answered that they have not formally been trained in sugarcane agriculture, and those who answered that they have been trained (either formally or informally) ( $X^2(1) = 8.672$ ;  $p = 0.003$ ). More individuals than expected indicated that they have been trained in sugarcane agriculture.

### **5.3.9.2 Youth experience and involvement in sugarcane farming**

The following questions were viewed as indicative of the experience of the youth in sugarcane agriculture: Do you have any cane farming experience on farms other than on your parents' farm?, If involved, how long have you been involved in farming activities? Most respondents (65.6 per cent of 61 respondents) have not had any exposure to farms other than parents' farms. Regarding those who have had exposure to other farms this could be a good and reliable indicator of interest and participation by the youth. The reasoning is that they can get involved in their family farms due to pressure from the parents but it is highly unlikely that they will be forced into participating in non-family farms. Table 5.8 elaborates and provides a statistical analysis in the form of a chi square.

**Table 5.8: Test statistic of cane farming experience on other farms**

	Observed	Expected	Difference	Difference Sq.	Diff. Sq. / Exp Fr.
<b>No</b>	40	30.5	9.50	90.25	2.96
<b>Yes</b>	21	30.5	-9.50	90.25	2.96
					5.918

*The Chi<sup>2</sup> value is 5.918. The P-Value is 0.015. The result is significant at  $p \leq 0.05$ .*

From the test statistic in Table 5.8 it can be seen that there was a statistically significant relationship in the number of people who answered "Yes", they do have cane farming experience on farms other than their parents' farm, and those who answered "No", they do not have any farming experience other than on their parents' farm ( $X^2(1) = 5.918$ ;  $p = 0.015$ ). More individuals indicated that they did not have any cane farming experience on farms other than their parents' farm.

The following Table 5.9 reflects the level of involvement by respondents in the farming operations of their family farms. It is an important question because it gives an indication as to whether these young people are staying in agriculture or exiting.

**Table 5.9: Respondents' current involvement in the farming operations**

<b>Current Involvement</b>	<b>Frequency</b>	<b>Per cent</b>
Not involved at all	8	13.1
To a certain level - Few days a week	20	32.8
Fully involved - Every working day	33	54.1
<b>Total</b>	<b>61</b>	<b>100.0</b>

The results from Table 5.9 show that only 13.1 per cent are not involved at all while the rest (86.9 per cent) are involved to a certain degree from a few days a week to every working day. This high level of involvement is good for sustainability and is not consistent with the general views that there is a serious lack of youth involvement in agriculture.

The duration of involvement in farming activities might be an indication of the level of commitment by those involved. Table 5.16 reflects the duration of involvement by respondents.



**Table 5.10: Respondents' duration of involvement in the farming operations**

<b>Duration of involvement</b>	<b>Frequency</b>	<b>Per cent</b>
Up to 12 months	13	24.5
Over 1 year and up to 5 years	27	50.9
Over 5 years and up to 10 years	8	15.1
More than 10 years	5	9.4
<b>Total</b>	<b>53</b>	<b>100.0</b>

Results of Table 5.10 show, of those involved in farm operations, 50.9 per cent have been involved for more than a year but less than 5 years. It was encouraging to observe that some (24.5 per cent) have been involved for more than 5 years which includes those who have been involved in the farming operations for more than 10 years. The high number of years spent in the farming operations can also be regarded as a reliable indicator of youth commitment to agriculture and this bodes well for the future of farming.

Using data from Table 5.10 a statistical analysis of respondents' duration of involvement in farming operation was conducted in order to understand whether the stated responses were statistically significant. From test statistic results it is shown that there was a statistically significant relationship in the number of people who answered that they have been involved in farming activities up to five years, and those who have been involved more than five years ( $X^2(1) = 13.755$ ;  $p = 0.000$ ). More individuals indicated that they have been involved up to five years, instead of more than five years.

Respondents were also asked whether their siblings are involved in farming operations in their parents' farms or other farms in the area. The following Table 5.17 reflects the responses from the youth who participated.

**Table 5.11: Respondents' siblings' involvement in the farming operations**

<b>Siblings' involvement</b>		<b>Frequency</b>	<b>Per cent</b>
Valid	No	24	39.3
	Yes	37	60.7
	Total	61	100.0

The results reflected in Table 5.11 show that 60.7 per cent answered positively. These results are even more encouraging from a long term sustainability perspective because they show that more young people are involved instead of just the respondents.

A chi-square goodness of fit test (Table 5.12) was conducted to test whether equal numbers of participants answered "Yes" and "No" to the question of whether their siblings were involved in the cane farming of their parents.

**Table 5.12: Test statistic - Besides you, are your siblings currently involved in cane farming in your parents' farm or other farms in the area?**

	Observed	Expected	Difference	Difference Sq.	Diff. Sq. / Exp Fr.
<b>No</b>	24	30.5	-6.50	42.25	1.39
<b>Yes</b>	37	30.5	6.50	42.25	1.39
					2.770

*The Chi<sup>2</sup> value is 2.77. The P-Value is 0.096. The result is not significant at  $p \leq 0.05$ .*

From the Table 5.12 it can be seen that there was no statistically significant relationship in the number of people who indicated "Yes" and "No", ( $\chi^2(1) = 2.770, p = 0.096$ ). Thus, the number of individuals whose siblings were involved was roughly equal to the number whose siblings were not involved.

### **5.3.10 Succession and choosing agriculture as a career**

This section deals with matters pertaining to succession discussion at home and willingness of the responding youth to become farmers.

Do the land reform cane farmers see the importance of succession planning or not? The main question in the questionnaire addressing this issue was "Has the issue of succession planning been discussed in the family?" Respondents were asked whether discussions on succession planning had taken place in the family or not. The results showed that in 73.8 per cent of cases this discussion has taken place. It is also important to take into cognisance the influence of culture on succession planning discussion. From the focus group discussions (FGDs) both ECGs and their offspring indicated complications with regard to succession planning. Generally this is not an easy discussion to hold because of family dynamics such as culture and the fact that there is more than one possible heir in each family.

A test statistic was then conducted regarding the issue of succession discussion in the family. If the land reform cane growers do see the importance of succession planning, you would

expect more people to answer "Yes" to the question regarding succession discussions than the ones who answered "No", and not equal proportions answering "Yes" and "No". A Chi-Square goodness of fit test was conducted to test whether equal numbers of participants answered "Yes" and "No".

**Table 5.13: Test statistic - Has the issue of succession planning been discussed in the family?**

	Observed	Expected	Difference	Difference Sq.	Diff. Sq. / Exp Fr.
<b>No</b>	16	30.5	-14.50	210.25	6.89
<b>Yes</b>	45	30.5	14.50	210.25	6.89
					13.787

*The Chi<sup>2</sup> value is 13.787. The P-Value is < 0.001. The result is significant at  $p \leq 0.05$ .*

In the table 5.13 above it can be seen that there was a statistically significant relationship in the number of people who indicated "Yes" and "No", with more people indicating "Yes" ( $\chi^2(1) = 13.787$ ,  $p = 0.000$ ). It thus seems that in this group of people, significantly more people have discussed the issue of succession planning, and thus they do seem to see the importance of succession planning. This will impact positively on the sustainability of cane farming in the future.

As a follow up to a question on succession discussion it is important to ascertain whether there is someone, other than the respondent, in the family who is willing to take over the farm and succeed parents. In most cases (70.5 per cent) the respondents confirmed that there is someone in the family who is willing to take over. Only 11.5 per cent stated that there is no one at home who is prepared to take over. The "don't know" responses (18 per cent) might be related to cases where succession discussion has not taken place. The large number reflecting that there is someone within the family who is willing to take over the family farm will have positive implications for the sustainability of cane production. This is even more important when taking into cognisance the responses of respondents themselves who also showed willingness to continue with the family tradition of farming.

Respondents were asked whether they are personally willing to succeed their parents and take over the running of their parents' farms. The findings revealed that the majority (86.9 per cent) confirmed that they are willing and this bodes well for the future of farming in the context of land reform growers (LRGs). A follow up statistical analysis was conducted and

the result of the test statistic showed that there was a statistically significant relationship in the number of people who answered "No" or "I don't know" to whether they are prepared to take over the farm from their parents, and those who answered "Yes" they were willing to take over the farm from their parents ( $X^2(1) = 33.197$ ;  $p = 0.000$ ). More individuals indicated that they were willing to take over the farm from their parents.

The researcher was interested in the broader impact on sustainability, hence the need to investigate beyond the household of the respondent. The study sought to understand whether there are other young people in the area who are involved in cane farming. The respondents stated that in most cases (75.4 per cent) they know of other young people who are involved in cane farming. The other categories ("no" and "do not know") consisted of 23 per cent of respondents. This is consistent with other findings in this thesis showing youth commitment to cane farming which can be seen in a positive light from a sustainability viewpoint. It has also been found that those who are involved are more likely to succeed parents as farmers and the researcher argues that this is more likely to happen even in the case of other young people in the area who were not necessarily interviewed. A Chi-Square goodness of fit test was then conducted to test whether equal numbers of participants answered "Yes" and "No" to the question of whether there are any young people in the area who are involved in cane farming. The results showed that there was a statistically significant relationship in the number of people who indicated "Yes" and "No", ( $\chi^2(1) = 23.143$ ,  $p = 0.000$ ). More people indicated "Yes", young people are involved in cane farming than "No".

Respondents were further asked whether they would recommend agriculture as a career to friends. It was discovered that the majority (86.9 per cent) will definitely recommend agriculture to others. Only 6.6 per cent of respondents expressed unwillingness to recommend agriculture as a career to friends. This has positive implications for the future of agriculture if it is assumed that it will be difficult for the respondents to recommend something that they themselves will not be comfortable with.

### **5.3.11 General youth perceptions about farming in general and sugarcane farming in particular**

There was one research question relating to youth perceptions about farming and sugarcane farming, namely: What is it that youth disapprove of in cane farming? In addition there were two objectives namely: To discover youth perception about cane farming by LRGs and to

understand youth disapproval in cane farming and constrains that threatens their involvement in cane farming.

### 5.3.11.1 What young people like about farming

What young people like about farming can be regarded as motivators or stimulators that will encourage them to take up farming as a career. Table 5.14 (a) reflects whether respondents like agriculture because of its income generation and whether they like a farming career.

**Table 5.14 (a): What respondents like about agriculture**

I like farming as it generates income			I like farming as a career	
	Frequency	Per cent	Frequency	Per cent
Valid	Disagree	4	2	3.3
	Not sure	5	7	11.5
	Agree	50	52	85.2
	Sub Total	59	<b>61</b>	<b>100.0</b>
Missing	System	2		
Total		<b>61</b>		

Table 5.14 (a) shows that the majority of respondents like the following about cane farming:

- Income generation (82 per cent of respondents)
- Farming as a career (85.2 per cent of respondents)

Respondents also stated whether they like farming because of job creation and the fact that it is not a complicated business. Results are presented in Table 5.14 (b) below.

**Table 5.14 (b): What respondents like about agriculture**

	I like farming because it is not a complicated business		I like farming as it creates jobs in our community	
	Frequency	Per cent	Frequency	Per cent
Disagree	14	23.0	<b>61</b>	<b>100.0</b>
Not sure	6	9.8		
Agree	41	67.2		
Total	<b>61</b>	<b>100.0</b>		

Tables 5.14 (b) shows that the majority of respondents like the following about cane farming:

- It is not a complicated enterprise (67.2 per cent of respondents)

- Job creation (100 per cent of respondents)

The results from Tables 5.14 (a) and 5.14 (b) augur well for the future of cane farming because these will undoubtedly influence the career choices of the youth.

### 5.3.11.2 What young people do not like about farming

Questions to Table 5.15 (a) had been phrased taking into account the assumption that most young people do not like farming as well as the reasons normally advanced in literature.

**Table 5.15 (a): What respondents dislike about agriculture**

I dislike farming because the type of work conducted is difficult			I dislike cane farming because of its low socio-economic status		I dislike farming because low income is generated	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Disagree	54	88.5	54	88.5	53	86.9
Not sure	4	6.6	5	8.2	6	9.8
Agree	3	4.9	1	1.6	2	3.3
Total	61	100.0	60	98.4	61	100.0
Missing System			1	1.6		
Total			61	100.0		

The results of Table 5.15 (a) disproved the assumption that most young people dislike farming in that most young people who were respondents disagreed that they do not like the agriculture. The results revealed the following:

- 88.5 per cent disagreed with the statement that they dislike farming because of its difficult nature.
- 90 per cent disagreed with the assumptions that cane farming is characterized by low socio-economic status.
- 86.9 per cent did not agree that income generated from farming is too low.

Like in the previous question whose results are reflected in Table 5.15 (a) questions to Table 5.15 (b) had been phrased taking into account the assumption that most young people do not like farming as well as the reasons normally advanced in literature.

**Table 5.15 (b): What respondents dislike about agriculture**

I dislike farming because of its low status			I dislike cane farming because it is too rural		I dislike cane farming because it is dominated by the old generation	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Valid Disagree	58	95.1	58	95.1	55	90.2
Not sure	2	3.3	3	4.9	6	9.8
Agree	1	1.6				
<b>Total</b>	<b>61</b>	<b>100.0</b>	<b>61</b>	<b>100.0</b>	<b>61</b>	<b>100.0</b>

The results in Table 5.15 (b) disproved the assumptions because most young people who were respondents disagreed with the assumptions that they do not like the agriculture. The results revealed the following:

- 95.1 per cent disagreed with the statement that farming is of a low status.
- 95.1 per cent do not agree with the statement that farming is too rural.
- 90.2 per cent disagreed with the statement that cane farming is dominated by the old generation.

Respondents were asked whether they would be prepared to take up farming if it can be proven that there is money to be made. The majority of respondents (95.1 per cent) agreed that they would definitely take up farming which can be regarded as a positive response in the context of sustainability of agricultural production beyond the current generation of cane growers.

General attitudes towards farming are critical in the sense that they influence whether young people will remain in agriculture or not. Table 5.16 investigates the attitudes towards cane farming.

**Table 5.16: Respondents' attitude towards cane farming**

Attitude	Frequency	Per cent
Not sure/ ambivalent	6	9.8
Positive	55	90.2
<b>Total</b>	<b>61</b>	<b>100.0</b>

The fact that, according to Table 5.16 above, the majority (90.2 per cent) of land reform cane growers' heirs have positive attitudes towards farming has positive implications for the sustainability of cane production. As a follow up to responses in Table 5.16 a chi-square test was carried out. There was a statistically significant relationship in the number of people who answered that they were not sure/ambivalent towards the cane farming business, and those who answered that they were positive about land reform cane farming ( $X^2(1) = 39.361$ ;  $p = 0.000$ ). More individuals indicated that they were positive about land reform cane farming. It should also be noted that none of the participants indicated a negative attitude.

Respondents were asked whether they are contemplating careers as full-time farmers. The findings revealed that the majority (83.6 per cent) of respondents see themselves as future full-time farmers. Only 3.3 per cent of respondents stated that they do not consider a full time farming career. This has positive implications for the sustainability of cane production. This finding is consistent with the positive perceptions that the respondents have of farming.

### 5.3.12 Perceptions of cane farming in terms of income levels and other related factors

It is difficult to meet the aspirations of young people without addressing income levels of the career they are choosing. The researcher is of the view that money will be the strong motivator in retaining young people in cane farming. In addition to this money factor there are non-economic factors that are dealt with in this section whose influence cannot be underestimated. Respondents were asked whether they believe that land reform commercial cane farming generates enough income to sustain a good living. The results are presented below in Table 5.17.

**Table 5.17: Perceived income generation of land reform cane farming**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	6	9.8
	Disagree	4	6.6
	Not sure	7	11.5
	Agree	24	39.3
	Strongly agree	19	31.1
	Total	60	98.4
Missing	System	1	1.6
<b>Total</b>		<b>61</b>	<b>100.0</b>



According to the findings in Table 5.17 the majority of respondents (70.4 per cent) believe that income generation is sufficient. Only 16.4 per cent strongly disagreed or disagreed with the statement. This positive perception will have a great influence on their choice of careers and this puts agriculture in a good stead.

As a follow up question respondents were asked to compare economic returns from farming with the economic returns from non-farming activities in urban areas. The main finding was that only 32.8 per cent of respondents believe that returns from farming are lower than returns achieved in non-farming activities in urban areas. About 42.6 per cent of respondents strongly disagreed or disagreed with the assumption that farming returns are lower than returns from non-farming activities. At least 24.6 per cent of respondents were not sure. Taking into account the “not sure” responses it can be assumed that the responses were mixed although they are still positive from a sustainability perspective.

Since questions regarding economic returns are mainly based on perceptions it was necessary to gauge whether other factors can influence their choices of agriculture as a career. Since agriculture is practiced mainly in rural areas respondents were asked of their preferred area to work and settle. They had to choose mainly between rural areas and urban areas. Findings did not confirm the general view that youth prefer to work in the cities. Most of the respondents (67.2 per cent) prefer to work and settle in rural areas. The reasons for this choice may be that they are familiar with this rural environment. The results are consistent with other response such as preferring to become farmers and succeeding their parents.

A statement was made to the respondents that the “youth are trendy and socially active and find it difficult to adapt to the dull pattern of rural areas”. They had to state whether they agreed with this statement or not. The results showed that the majority which is 55.8 per cent either agree or strongly agree with this statement while the other 4.9 per cent were unsure. The rest (36.10 per cent) strongly disagree or disagree with this statement. These results are not surprising and are consistent with other responses such as preferring to work in rural areas. It should also be noted that already these young people who respondent reside in rural areas and are familiar with this lifestyle. However, the responses would have been different if the question had been put to urban youth.

Respondents were asked to indicate which ones they would choose between agriculture and other careers. The major finding was that the majority (78.7 per cent) would choose agriculture. One of the reasons for this choice is because they are already exposed to this type

of life. This result is consistent with the other results in this study where the youth indicated that they are even considering becoming full-time farmers.

For any person to embark on a particular career it is important to make informed decisions. It is for this reason that the respondents were asked whether they thought they had enough information about farming as career. Table 5.18 presents the results.

**Table 5.18: Possession of enough information about farming as a career**

<b>Responses</b>	<b>Frequency</b>	<b>Per cent</b>
No	13	21.3
Not sure	16	26.2
Yes	32	52.5
<b>Total</b>	<b>61</b>	<b>100.0</b>

Table 5.18 shows that just over half of the respondents (52.5 per cent) are of the view that they possess adequate information about farming as a career option.

### **5.3.13 Sustainability of land reform cane growing business**

According to literature review in this thesis, sustainability is measured by five pillars, each with a number of indicators. According to (Groenewald, 2002:5) these pillars are:

- Economic viability
- Social acceptability
- Environmental protection
- Biological productivity
- Risk protection

However, in the questionnaire only two of the pillars are covered to some extent, namely Social Responsibility and Economic viability. Three of the indicators of Social Responsibility covered in the questionnaire are participation of youth, contribution to community upliftment, and to some extent jobs created. Participation of youth was already analysed previously. For economic viability, the only indicator covered to some extent was profitability of cane. It should be noted that the question in the questionnaire covering this indicator is not an objective measure of profitability, but rather the opinion of participants.

### 5.3.13.1 Social responsibility: Contribution to community upliftment

In order for an economic activity to be sustainable it is important that it should be socially acceptable. If cane farming cannot improve the lives of participants then it cannot be sustained, hence the importance of results of Table 5.19 where respondents had been asked if their lives had been improved by cane farming.

**Table 5.19: Life improvement by land reform cane farming**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	2	3.3
	Disagree	6	9.8
	Not sure	4	6.6
	Agree	29	47.5
	Strongly agree	19	31.1
	Total	60	98.4
Missing	System	1	1.6
<b>Total</b>		<b>61</b>	<b>100.0</b>

According to Table 5.19 the majority of respondents, which equates to 78.6 per cent (48 out of 60 respondents), either agreed or strongly agreed with the statement that their lives had been improved by land reform cane farming. As a follow up a chi-square goodness-of-fit test on was conducted to determine whether equal numbers of people indicated that they disagreed to some extent that their lives have been improved, were not sure, or agreed to some extent that their lives have been improved. The findings show that the different response categories were chosen by unequal numbers of people ( $X^2(2) = 59.200$ ;  $p = 0.000$ ) and the result is significant.

### 5.3.13.2 Youth perceptions regarding economic viability of cane farming

This section deals with the analysis of the question: Cane farming is a profitable business? Respondents were asked whether they thought cane farming is profitable or not. It should be emphasised that the responses merely reflect perceptions of respondents and no objective assessment had been done at this stage. Table 5.33 reflects the answers of the respondents to this question.

**Table 5.20: Cane farming is a profitable business**

Responses	Frequency	Per cent
Disagree	4	6.6
Not sure	6	9.8
Agree	34	55.7
Strongly agree	17	27.9
<b>Total</b>	<b>61</b>	<b>100.0</b>

According to Table 5.20 at least 51 out of 61 (83.6 per cent) respondents are of the view that cane farming is profitable.

A follow up chi-square goodness-of-fit test (Table 5.21) was conducted to determine whether equal numbers of people indicated that they disagreed to some extent that cane farming is a profitable business, were not sure, or agreed to some extent that cane farming is a profitable business.

**Table 5.21: Test statistic – Cane farming profitability**

	Observed	Expected	Difference	Difference Sq.	Diff. Sq. / Exp Fr.
<b>Disagree to some extent</b>	4	20.333	-16.33	266.77	13.12
<b>Not sure</b>	6	20.334	-14.33	205.46	10.10
<b>Agree to some extent</b>	51	20.333	30.67	940.46	46.25
					69.477

*The Chi<sup>2</sup> value is 69.477. The P-Value is < 0.001. The result is significant at  $p \leq 0.05$ .*

As can be seen from Table 5.21 above, the different response categories were chosen by unequal numbers of people ( $X^2(2) = 69.477$ ;  $p = 0.000$ ) and the result was significant.

To determine which of the three response options deviated significantly from the expected frequencies for equal proportions, follow-up post hoc tests were conducted. Each of the response options were compared to the sum of all other options. A Bonferonni correction was applied for multiple comparisons ( $p < 0.0167$  for statistical significance) and follow up chi-square tests were conducted and the results are summarized as follows:

- Significantly fewer people than the number expected for equal proportions indicated that they disagreed to some extent that sugarcane farming is a profitable business ( $X^2(1) = 46.049$ ;  $p = 0.000$ ).

- Significantly fewer people than the number expected for equal proportions indicated that they were not sure whether sugarcane farming is a profitable business ( $X^2(1)=39.361$ ;  $p=0.000$ ).
- Significantly more people than the number expected for equal proportions indicated that they agreed to some extent that sugarcane farming is a profitable business ( $X^2(1)=27.557$ ;  $p=0.000$ ).

### 5.3.14 Economic viability of land reform cane farming: Perceptions versus reality

The analysis has thus far focused on perceptions. In this section the researcher brings reality to the economics of cane farming.

#### 5.3.14.1 Economic reality of cane farming

For economic viability, the only indicator covered to some extent was profitability of cane. It should be noted that the question in the questionnaire covering this indicator is not an objective measure of profitability, but rather the opinion of participants. However, in order to address the question of economic sustainability objectively the researcher has developed a model looking at the economic realities of cane farming.

It has already been shown in Table 5.20 that the perceptions of the youth whose parents are land reform cane growers regarding the profitability of cane farming are positive. Table 5.21 showed that 83.6 per cent of the youth whose parents are land reform cane growers perceive cane farming to be profitable.

Another factor that greatly influences economics of farming is the size of the farm. Table 5.22 shows the sizes of the family farms of the respondents.

**Table 5.22: Size of the family farm**

	<b>Farm Size</b>	<b>Frequency</b>	<b>Per cent</b>
	51-70 ha	3	4.9
	71-100 ha	12	19.7
	Over 100 ha	39	63.9
	Don't know	6	9.8
	Total	60	98.4
Missing	System	1	1.6
<b>Total</b>		<b>61</b>	<b>100.0</b>

According to Table 5.22 most farms under the LRG category are over 100 hectares each in terms of size. The over 100 hectare category is 63.9 per cent followed by the 71 – 100 hectare category which is 19.7 per cent. From a sustainability perspective it was encouraging to note that these young people know the sizes of their farms, which is an indication of interest and even possibly participation in farm operations. Furthermore, the size of landholdings is critical because the larger the farm size the greater the chances of farming it profitably, assuming it is run efficiently. This is because sugarcane farming requires a critical mass and therefore economies of scale are important.

According to Van Zyl et al. (2005:105) farm managers are interested in the size of a farm business and the relationship between cost and size for many reasons, but mainly because they would like to determine the most profitable size for the farm business and economies of scale or economies of size deal with this aspect. Van Zyl et al. (2005:106) further argue that large farm businesses enjoy the benefits of technical and economic economies of scale such as better utilisation of large tractors and technology and better bargaining power when purchasing inputs, which are not available to smaller farm businesses.

For all purposes LRGs are commercial growers and the only uniqueness they have is that they were previously disadvantaged in terms of access to land and farming opportunities in the past. Therefore, costs and revenue benchmarks are based on those of typical commercial sugarcane growers.

An investigation into income levels in the sugar industry had been conducted and this is reflected in Table 5.23. The table shows the gross income, operational costs and net farm income per ton of cane harvested. Singels et al. (2014:17) define net farm income as the difference between gross income and total operational costs, and excluding managerial costs, interest, rent, leases, depreciation and tax.

**Table 5.23: Gross income, operational costs and net farm income per ton of cane harvested**

		Rain-fed			Irrigated		
	Season:	2011	2012*	2013*	2011	2012	2013**
Gross Income (R/ton)		339.70	390.50	380.65	393.35	408.94	398.62
Expense Items (R/ton)							
Farm Staff		82.60	87.78	108.96	59.16	65.54	83.22
Chemicals		15.14	20.02	21.58	9.71	13.54	15.17
Fertilizer		49.63	54.97	59.69	40.99	47.42	53.12
Fuels and lubricants		23.10	26.15	29.32	19.28	22.63	26.03
Mechanical maintenance		25.06	26.95	27.84	30.23	33.69	35.68
Fixture maintenance		7.49	7.95	8.20	6.50	7.16	7.59
Services		8.13	9.10	9.47	43.29	50.88	54.85
Administration		16.58	18.56	19.22	12.33	14.26	15.10
Insurance		6.27	6.98	7.19	6.08	7.06	7.48
Licenses		0.74	0.82	0.84	0.33	0.39	0.41
Irrigation costs		0.14	0.15	0.15	1.16	1.30	1.38
Sundry		21.88	24.32	27.41	16.42	18.90	20.52
Cane transport		30.47	31.14	34.25	40.65	41.55	45.69
Total operational costs (R/ton)		287.23	314.89	354.12	286.13	324.32	366.24
Net farm income (R/ton)		52.47	75.61	26.53	107.22	84.62	32.38

*Sources: Singels et al. (2014:17) & SACGA (2013)*

#### **5.3.14.2 Various income levels for different farm sizes**

The following Table 5.24 shows different income levels various farm sizes which are 70 Ha, 100 Ha, 150 hectares and 200 hectares respectively. Figures are based on 2012 figures from the previous Table 5.23. The assumption is that of a rain-fed farm.

**Table 5.24: Income levels for different farm sizes**

			Farm Size	Ha	70	100	150	200
				Tons	3360.00	4800.00	7200.00	9600.00
			2012*					
<b>Gross Income (R/ton)</b>			<b>390.50</b>		<b>1,312,080.00</b>	<b>1,874,400.00</b>	<b>2,811,600.00</b>	<b>3,748,800.00</b>
<b>Expense Items (R/ton)</b>								
	<b>Fixed Cost</b>	<b>Variable Cost</b>						
Farm Staff	17.56	70.22	87.78		320,221.44	421,344.00	589,881.60	758,419.20
Chemicals	0.00	20.02	20.02		67,267.20	96,096.00	144,144.00	192,192.00
Fertilizer	0.00	54.97	54.97		184,699.20	263,856.00	395,784.00	527,712.00
Fuels and lubricants	1.31	24.84	26.15		89,746.80	125,520.00	185,142.00	244,764.00
Mechanical maintenance	2.70	24.26	26.95		94,432.80	129,360.00	187,572.00	245,784.00
Fixture maintenance	3.98	3.98	7.95		32,436.00	38,160.00	47,700.00	57,240.00
Services	4.55	4.55	9.10		37,128.00	43,680.00	54,600.00	65,520.00
Administration	9.28	9.28	18.56		75,724.80	89,088.00	111,360.00	133,632.00
Insurance	3.49	3.49	6.98		28,478.40	33,504.00	41,880.00	50,256.00
Licenses	0.66	0.16	0.82		3,699.84	3,936.00	4,329.60	4,723.20
Irrigation costs	0.00	0.00	0.15		0.00	0.00	0.00	0.00
Sundry	12.16	12.16	24.32		99,225.60	116,736.00	145,920.00	175,104.00
Cane transport	0.00	31.14	31.14		104,630.40	149,472.00	224,208.00	298,944.00
<b>Total operational costs</b>	<b>55.67</b>	<b>259.07</b>	<b>314.89</b>		<b>1,137,690.48</b>	<b>1,510,752.00</b>	<b>2,132,521.20</b>	<b>2,754,290.40</b>
<b>Net farm income</b>					<b>174,389.52</b>	<b>363,648.00</b>	<b>679,078.80</b>	<b>994,509.60</b>
<b>Net Farm Income per Month</b>					<b>14,532.46</b>	<b>30,304.00</b>	<b>56,589.90</b>	<b>82,875.80</b>

The various estimated annual income levels as displayed in Table 5.24 are as follows:

- For a 70 hectare farm the income is R174,389.52. If this is converted to monthly income this will be R14,532.46.
- For a 100 hectare farm the income is R363,348. If this is converted to monthly income this will be R30,304.
- For a 150 hectare farm the income is R679,078.80. If this is converted to monthly income this will be R56,589.90.
- In the case of a 200 hectare farm the annual net farm income is R994,508.60 which can be translated to monthly income of R82,875.72.

The income levels, based in Table 5.24 clearly show that the total net farm incomes are higher compared to those of small farms that are operated by small-scale growers (SSGs). Table 5.24 shows that the number of hectares farmed will have an effect on the total income levels and this is what counts at the end of the day. The comparatively realistic figures of Table 5.24 are aligned with the positive perceptions of the profitability of land reform farming.



The main question on the interpretation of various income levels is whether these levels of income will meet the aspirations of young people who are ambitious. Depending on the farm size, the number of siblings involved and the family size the figures show that as the number of hectares under cane increases (assuming the farm is run efficiently) the total farm incomes increase and this can attract and retain youth in agriculture in general and cane farming in particular. As a result the sustainability of agricultural production will be assured and the farms can be sustained beyond this current generation.

In order to prove the importance of economies of scale especially its ability to reduce the cost per unit as production increases the following Table 5.25 was developed. Table 5.25 shows the effects of farm size on the farm costs.

**Table 5.25: Different cost elements and the benefits of economies of scale**

	<b>70 ha Farm</b>	<b>100 Ha Farm</b>	<b>150 ha Farm</b>	<b>200 ha Farm</b>
Tonnage produced	3360	4800	7200	9600
<b>Cost type</b>	<b>Cost (Rands)</b>	<b>Cost (Rands)</b>	<b>Cost (Rands)</b>	<b>Cost (Rands)</b>
Cost per ton	338.60	314.74	296.18	286.91
Total Variable Cost	870,476.88	1,243,538.40	1,865,307.60	2,487,076.80
Total Fixed Costs	267,213.60	267,213.60	267,213.60	267,213.60
Total Costs	1,137,690.48	1,510,752.00	2,132,521.20	2,754,290.40
Average Variable Cost	259.07	259.07	259.07	259.07
Average Fixed Cost	79.53	55.67	37.11	27.83
Average Total Cost	338.60	314.74	296.18	286.91

The figures in Table 5.25 are based on the following assumptions made by the researcher:

- The fixed costs for a farm of 70 hectares and a farm of 200 hectares will be the same. This has the effect of reducing the total cost per ton or the average total cost. The assumption has been that the R314.74 per ton reflected in Table 5.24 (after removing the R0.15 irrigation costs in 2012) is for a 100 hectare farm. As hectares increase the cost per ton produced decreases because the fixed costs of Table 5.25 remain constant regardless of whether the farm is 100 hectares or 150 hectares to 200 ha.
- The portions of the total cost that have deemed to be fixed costs were determined to show the trend and are not representative of all farms.

#### **5.4 Summary and conclusion**

The results confirm the main hypothesis that the majority of the youth of the land reform cane growers do seem to have a positive attitude regarding land reform cane farming, and also do seem willing to take over the farms from their parents. The results agree with the hypothesis. It was also found that most youth of land reform cane growers have been exposed to sugarcane agricultural training and have also participated in farming operations. A high number will also choose agriculture as a career and they do not have a problem with settling in rural areas. The results do not agree with the studies that suggest that young people are exiting agriculture. It was also encouraging that it was not only the respondents themselves who were involved in farming activities but their siblings were also involved in farming operations. The main driver for the participation of these youth is money. The results also showed that some of the farming families had other sources of income. The level of discussions in families regarding succession was found to be important.

Regarding the profitability of cane farming the perception of respondents is that this is profitable and they can be able to sustain a living from cane income. A reality check was conducted and this confirmed that on the average assuming all other factors (such as reasonably large number of hectares under cane and the farmer applying good farming practices) remaining constant cane farming can indeed be profitable.

The results augur well for the sustainability of cane farming beyond this generation of cane growers.

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## **CHAPTER SIX**

### **6. YOUTH IN IN AGRICULTURE: THE LEGACY OF EMERGING CANE GROWERS**

#### **6.1 Introduction**

This chapter investigates youth involvement and the implications for the sustainability of emerging cane growers (ECGs). In the S.A. sugar industry there are two broad categories of Black cane growers which are described as land reform growers (LRGs) and small-scale growers (SSGs). Since this study looks at both categories of cane growers the term used in this study (which is not necessarily widely used in the sugar industry) will be an umbrella one which is called emerging cane growers. This term refers to all categories of cane growers other than the typical commercial cane growers. ECGs, just like a widely used term of emerging farmers, describes those growers who had limited farming opportunities in the past because of various reasons such as lack of access to adequate and arable farming land, lack of financing and lack of security of tenure in cases where land was available. This paper is concerned with the legacy that these growers will leave when they exit the industry because of various reasons such as ill health, retirement or even death. Will they leave the offspring who will embrace this legacy of farming and continue with it?

This main chapter dealing with the sustainability of ECGs through youth involvement is divided into the following sub-chapters or articles:

6.2 Socio-economic profile of ECGs and their offspring.

6.3 Perceptions and attitudes of the youth towards agriculture

6.4 Preparedness of heirs of ECGs to succeed their parents

6.5 Predictors of willingness to take over family farms

6.6 Qualitative study on the sustainability of cane farming through youth involvement

Various variables impacting on the sustainability of cane production beyond the current generation of cane growers will be investigated. Variables that will be dealt with in the various articles range from perception that young people hold of farming, their attitudes

towards farming, their level of involvement in farming operations, their preparedness to become future cane growers, perceived profitability of cane farming and the reality of the economics of cane farming, among other variables.

## 6.2 SOCIO-ECONOMIC PROFILE OF EMERGING CANE GROWERS AND THEIR OFFSPRING

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### Abstract

*Youth face different challenges depending on whether they are based in rural or urban areas. The generic problem is that of youth unemployment and underemployment. This paper looks at the socio-economic profile of these youth and their parents who are emerging cane growers (ECGs). This study was carried out in the sugar industry amongst 254 young people in the North Coast of KwaZulu-Natal, South Africa. Most of the respondents were male and the respondents from age categories 19 to 24 and 25 to 30 made up 30.3 per cent and 33.1 per cent respectively. Most respondents were single but a large percentage had dependents. More than half had completed Grade 12 education, with another significant figure having completed tertiary education. It was found that the cane growers are ageing and there were more men than women who were involved in cane growing. Some of the young people claimed to be unemployed, which was strange in an industry where there is a critical shortage of cane cutters. Their families also had other sources of income.*

**Key words:** Cane grower, offspring, age, gender, marital status, parents, training, occupation, income, farm size.

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### **6.2.1 Introduction**

This paper is an overview of the socio-economic profile of emerging cane growers (ECGs) and their offspring. Their offspring were interviewed as part of the study on youth involvement and the sustainability of ECGs. The *Draft National Youth Policy 2009-2014* refers to young people as those falling within the age group of 14 to 35 years and this is the category that was researched as part of this study. At least 55.9 per cent of respondents were between the ages 25 to 35 years while the age 14-24 consisted of 43.7 per cent of the 254 young people interviewed. According to Mathivha (2012:13) at 37 per cent of the entire population, the youth constitute the biggest age category of the South African population and Mathivha further states that of the 37 per cent, Africans make about 80 per cent of the total youth population.

Youth unemployment and poverty are the twin challenges facing the youth. Mathivha (2012:13) states that about 60 per cent of youth between 15 to 24 years in seven of the South Africa's nine provinces live in households with low income. Human Sciences Research Council (HSRC, 2003:139) state that approximately a third (34 per cent) of young South Africans between the ages 18 and 35 years were living in poverty, with 16 per cent being ultra-poor. HSRC (2003:132) claims that urban-rural location plays a key role in the distribution of poverty, with the majority of poor people living in rural areas. Since this study was conducted in rural areas these findings are relevant to these youth and their contemporaries.

### **6.2.2 Methodology**

This study was carried out in the sugar industry amongst 254 young people in the North Coast of KwaZulu-Natal, South Africa. The respondents were youth between ages 14-35 whose parents are emerging cane growers. A structured questionnaire was used to collect data.

### **6.2.3 Findings and discussion**

This section deals with findings and discussion thereof.



### 6.2.3.1 Types of growers

In the sugar industry there are various categories of cane growers such as large-scale growers, land reform growers (LRGs) and small-scale growers (SSGs). The two categories that are relevant to this study are reflected in Table 6.2.1.

**Table 6.2.1: Types of growers**

	<b>Frequency</b>	<b>Per cent</b>
Valid Small-Scale Growers	193	76.0
Land Reform Growers	61	24.0
<b>Total</b>	<b>254</b>	<b>100.0</b>

Table 6.2.1 provides a breakdown of the two categories of growers whose offspring were respondents and shows that 76 per cent were part of the SSG category whereas the 24 per cent were part of the LRG category. The figures reflected in Table 6.2.1 are representative of the two categories of growers in the sugar industry.

### 6.2.3.2 Gender of respondents

Both females and males were respondents in this study and Table 6.2.2 below reflects the gender of interviewees. This is also a reflection of the fact that there are both male and female cane growers.

**Table 6.2.2: Gender of respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Per cent</b>
Male	158	62.2
Female	96	37.8
<b>Total</b>	<b>254</b>	<b>100.0</b>

Table 6.2.2 reflects that 62.2 per cent of respondents were male and 37.8 per cent were female. The gender breakdown of respondents in Table 6.2.3 is also consistent with the results of Table 6.2.11 which shows that cane farming is male dominated.

### 6.2.3.3 Age of respondents

The age of respondents is presented in Table 6.2.3 below.

**Table 6.2.3: Age of respondents**

<b>Age</b>		<b>Frequency</b>	<b>Per cent</b>
Valid	14-18 years	34	13.4
	19-24 years	77	30.3
	25-30 years	84	33.1
	31-35 years	58	22.8
	Total	253	99.6
Missing	System	1	.4
<b>Total</b>		<b>254</b>	<b>100.0</b>

Table 6.2.3 shows that most respondents (33.1 per cent) are in the age category 25 to 30 years. When combining different age categories at least close to 56 per cent of the respondents are in the age category 25-35 which is the age at which most people begin their careers and start families. This is the age at which major decisions are taken by individuals about their lives.

### 6.2.3.4 Race of respondents

The racial breakdown of the youth who were respondents shows that almost 93 per cent were Black Africans. This is consistent with the racial composition of growers in the sugar industry.

### 6.2.3.5 Marital status of respondents

Findings revealed that most respondents (91.7 per cent) are single. Only 7.1 per cent are married. However, these figures are slightly distorted because the breakdown per grower category shows that 18 per cent of the respondents in the LRG category are married whereas only 3.6 per cent in the SSG category are married.

These respondents were still living with their parents yet married which might be an indication that they are still dependent on their parents. HSRC (2003:159) argues that a crucial factor both for improvement in young people's financial situations and their transition to adulthood, is the extent to which they are able to access jobs and become financially independent of their households of origin. The worrying factor is that if farming does not

generate enough money these young people will be discouraged and ultimately turn their backs on the agricultural sector.

### 6.2.3.6 Dependents of respondents

A question was asked whether the respondents have dependents or not. The answers are reflected in Table 6.2.4 below.

**Table 6.2.4: Dependents of respondents**

<b>Dependents</b>	<b>Frequency</b>	<b>Per cent</b>
Yes	114	44.9
No	140	55.1
<b>Total</b>	<b>254</b>	<b>100.0</b>

Table 6.2.4 shows that 45 per cent of the youth who were interviewed have their own dependents. It is interesting to compare the low married rate of (7.1 per cent) with the high rate of dependents in Table 6.2.4. The fact that some have dependents may explain the reasons why they are actively involved in farming operations as shown in some of the results of this study. They would rather be involved in farming regardless of whether they like it so that they will be able to earn income and support their dependents. The researcher's argument is that unless a better opportunity regarded as an alternative to farming is available these young people will continue to be involved in farming. At least 57.4 per cent of respondents in the LRG category have dependents whereas this figure is only 40.9 per cent in the SSG category. The comments made in reference to Section 6.2.6 regarding marital status and its implications also apply to the results of Table 6.2.4 and HSRC (2003:159) further state that there was a high degree of consensus amongst all youth categories that being able to set up and maintain a nurturing context for children, was key to the attainment of adulthood.

### 6.2.3.7 Education and training of respondents

Education has had an effect of pulling the educated youth away from agriculture which is practiced mainly in rural areas. Respondents were also asked of their educational levels and the results are shown in Table 6.2.5.

**Table 6.2.5: Level of education**

<b>Education</b>	<b>Frequency</b>	<b>Per cent</b>
Never been to school	4	1.6
Completed primary (i.e. Grade 7)	35	13.8
Completed matric (i.e. Grade 12)	145	57.1
Tertiary qualification	42	16.5
Other	28	11.0
<b>Total</b>	<b>254</b>	<b>100.0</b>

Table 6.2.5 shows that majority of respondents (57.1 per cent) have Matric as their highest educational level whereas 16.5 per cent have attained tertiary qualifications. Results further show that, in terms of percentages, more respondents from the LRG category have attained tertiary education and this figure is 24.6 per cent while in the SSG category this figure stands at only 14 per cent. The 1.6 per cent that has never been to school, as reflected in Table 6.2.5, comes from the SSG category of respondents. Other refers mainly to those who are still at high school between grades 8 and 11. It is the researcher's view that better education by the youth, if not properly harnessed in the context of rural challenges and education's ability to provide solutions, it will instead drive them away from agriculture. Leavy and Hossain (2014:9) argue that better education and communications appear to have had the effect of dramatizing the hardships of a farming life. However, the researcher argues that, with proper guidance and information given to young people, agriculture can still be attractive to young people especially as it becomes sophisticated.

### 6.2.3.8 Taking agricultural subjects at school

Table 6.2.6 is a response to the question that sought to understand whether they had done agricultural subjects at school or not.

**Table 6.2.6: Agricultural subjects at school**

<b>Agricultural subjects at school</b>	<b>Frequency</b>	<b>Per cent</b>
No	158	62.2%
Yes	92	36.2%
Total	250	98.4%
Missing System	4	1.6%
<b>Total</b>	<b>254</b>	<b>100.0%</b>

Results of Table 6.2.6 show that only 36.2 per cent had done agricultural subjects at school. Although most of the respondents have not done agricultural subjects at school it might not be a reflection of the respondents' accurate preferences. This is because some schools do not offer agricultural subjects. This findings in Table 6.2.6 regarding the low number of respondents doing agricultural subjects is not surprising when considering that Terblanché (2006:132) found that Agricultural Science was perceived as unimportant to further their career and only 43 per cent took the subject out of own choice. Teacher quality, knowledge, attitude and their enthusiasm were perceived by the learners as insufficient and negative.

### 6.2.3.9 Previous training in sugarcane agriculture

Respondents were asked to state whether they had undergone any training in sugarcane agriculture. The results are presented in the following Table 6.2.7.

**Table 6.2.7: Training in sugarcane agriculture**

<b>Training</b>		<b>Frequency</b>	<b>Per cent</b>
	I have not been trained	91	35.8
	Formally	31	12.2
	Informally	93	36.6
	Both formally and informally	36	14.2
	Total	251	98.8
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

In Table 6.2.7 the number of those that have not been trained at all (35.8 per cent) should be read in conjunction with the number of those who had not received the opportunity because they are studying full time or employed full time in a non-agricultural environment (Table 6.2.8). The fact that the rest have been trained either formally or informally augurs well for the sustainability of cane growers because the future farmers would have been trained. By formal training the researcher refers to courses run by the sugarcane industry at their training centres or at different areas where growers operate.

### 6.2.3.10 Current occupation

Table 6.2.8 below is a response to question regarding their current occupation.

**Table 6.2.8: Current occupation**

	<b>Occupation</b>	<b>Frequency</b>	<b>Per cent</b>
	Studying - Full time	56	22.0
	Studying - Part time	12	4.7
	Employed - Full time	44	17.3
	Employed - Part time	22	8.7
	Employed full time and studying part time	18	7.1
	Running a business	25	9.8
	Unemployed	74	29.1
	Other	2	.8
	Total	253	99.6
Missing	System	1	.4
<b>Total</b>		<b>254</b>	<b>100.0</b>

Table 6.2.8 shows that only 22 per cent are full-time students. The rest of the respondents fall in the category such as unemployed (29.1 per cent), running a business (almost 10 per cent), full-time employment (17.3 per cent) and part-time employment (8.7 per cent). It was interesting to observe that 7.1 per cent are employed full time and studying part time. This shows the seriousness of these young people about their future. The two respondents who responded “other” are already in full-time farming or learning to farm. The focus group discussions (FGDs) revealed that most young people are well educated and some have even done formal courses in agriculture. Furthermore these young people are already involved in farm operations. More results from FGDs involving the youth are reflected in section 6.6 which is a qualitative study that was conducted as part of this research.

The interesting finding related to the 29 per cent that regarded themselves as unemployed. This is consistent with the argument by White (2012:9) that youth unemployment and underemployment are serious problems in most countries, and often more severe in rural than in urban areas. “Each new generation of rural young men and women now grows up, on the whole, better educated than their parents. But this has not been matched with expansion of employment opportunities for the growing numbers of relatively educated youth” (White, 2012:10). The findings could not determine whether the 29 per cent young people who are unemployed are currently involved in farming operations and assisting their parents or they do not see their future in agriculture. It is even strange that these young people consider themselves unemployed in the context of the sugar industry where there is a critical shortage of cane cutters. Most of the cane cutters, especially in the Province of KwaZulu-Natal where

this study was conducted, come from outside the province. Most cane cutters come from the Eastern Cape and Mozambique. The conclusion of the researcher is that youth like agriculture but they are choosy when it comes to farming activities they will be involved in, therefore, it is a status thing and most are likely to remain in agriculture as long as they own or manage farms and are also involved in a wider agricultural value chain instead of being engaged in manual farm work. However, the issue of youth employment is not a simple one in rural farming areas because they are competing for work with people who normally work past their retirement age and this may get more complicated for the youth as the life expectancy of South Africans continue to improve.

### 6.2.3.11 Parents involved in farming

Realizing the importance of family farming the Food and Agriculture Organisation of the United Nations (2014) declared the year 2014 the International Year of Family Farming. Table 6.2.9 is an indication of which parent is involved in the running of the family farm. In some cases a single parent is involved while in some cases both parents are involved.

**Table 6.2.9: Parents involved in farming**

<b>Parent involved</b>	<b>Frequency</b>	<b>Per cent</b>
Mother	69	27.2
Father	88	34.6
Both parents	48	18.9
Other	49	19.3
<b>Total</b>	<b>254</b>	<b>100.0</b>

Table 6.2.9 shows that cane farming is still male dominated as 34.6 per cent (excluding the “both parents’ option) of those involved are males as opposed to 27.2 per cent females. This figure is worse in the LRG category which shows that 47.5 per cent of those involved are males. However, in the SSG category the figure of involvement by parents is almost equal between males and females. Other refers to grandparents, siblings, uncles and aunties and these were 45 per cent, 14 per cent, 14 per cent and 6 per cent of the 49 respondents, respectively. In the context of communal areas where most SSGs operate more women are involved in cane farming because most men work in the cities. Even though the tenure rights are in the name of men it is mostly women who farm or are engaged in manual farm work. However, in the context of LRGs it is mostly men who acquire farm through outright purchases or lease arrangements with the State.

Tables 6.2.10 and 6.2.11 reflect the ages of parents. Table 6.2.10 presents the ages of mothers involved in farming.

**Table 6.2.10 Age of mother involved in farming**

<b>Age of mother</b>	<b>Frequency</b>	<b>Per cent</b>
Less than 40 years old	4	3.41
41-50 years old	34	29.05
51-60 years old	44	37.60
Older than 60 years	30	25.64
Don't know	2	1.70
No answer	3	2.56
<b>Total</b>	<b>117</b>	<b>100</b>

The results confirm from Table 6.2.10 show that 32.46 per cent of mothers involved in farming are below the age of 51 whereas only 25 per cent of fathers are below the age of 51. In fact 71.32 per cent and 63.24 per cent of fathers and mothers respectively are in the age categories over 51 years. These figures confirm the assumptions made in this study that cane growers are an ageing population. The results of Table 6.2.10 show that more than 25 per cent of participating mothers are older than 60 years and this figure is even worse when participating fathers are considered because a comparing figure stands at 36.76 (Table 6.2.11). From a sustainability point of view these figures are alarming if there is no clear succession plan in place.

**Table 6.2.11: Age of father involved in farming**

<b>Age of father involved</b>	<b>Frequency</b>	<b>Per cent</b>
Less than 40 years old	2	1.47
41-50 years old	32	23.53
51-60 years old	47	34.56
Older than 60 years	50	36.76
Don't know	4	2.94
No Answer	1	0.73
<b>Total</b>	<b>136</b>	<b>100.0</b>

The results of Table 6.2.10 and 6.2.11 confirm that in the study area the problem of ageing farmer population is also experienced. According to Wiley, Rose and Halpin (2009:4) the



average age of a U.S. farmer today is nearing 60, up from 50 in 1978. Wiley, Rose and Halpin (2009:3) further quote remarks by Schweitzer that “just 5% of farmers in 2002 were between the ages of 25 and 34”. Aphunu and Atoma (2010:47) also remarked that the “Nigerian farmer is ageing with an average of 50 years”.

### 6.2.3.12 Family farm size

Table 6.2.12 shows the farm sizes of the farms owned or operated by the parents of the respondents.

**Table 6.2.12: Farm size**

Farm Size		Frequency	Per cent
	1-50 ha	88	34.6
	51-70 ha	33	13.0
	71-100 ha	23	9.1
	Over 100 ha	65	25.6
	Don't know	41	16.1
	Total	250	98.4
Missing	System	4	1.6
<b>Total</b>		<b>254</b>	<b>100.0</b>

It is worrisome to note that Table 6.2.12 shows that 16.1 per cent of the respondents did not know the farm sizes. It is not clear whether the reason is the lack of interest or other reasons. Other results, particularly amongst offspring of SSGs showed that the size of the farm did not influence current involvement. However, during focus group discussions (FGDs) it was shown the size of the farm will greatly influence youth participation in the future. The results of the FGDs confirmed the researcher’s hypothesis about the influence of land size. The economies of scale do play a significant role and it will not be economically possible for one small farm to cater for the needs of both the parents and their offspring. In emphasizing the importance of land availability Leavy and Hossain (2014:13) argue that the factors identified as key drivers of deagrarianisation are also those cited as reasons why young people are turning away from agriculture and these include reduced land availability.

### 6.2.3.13 Other income sources

The respondents were asked whether, besides farming, the family has other sources of income and the results are presented in Table 6.2.13.

**Table 6.2.13: Other income sources for the family**

Other income		Frequency	Per cent
	I prefer not to answer the question	24	9.4
	No	59	23.2
	Not sure	8	3.1
	Yes	161	63.4
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

Table 6.2.13 shows that 63.4 per cent have other income sources. In the LRG category those who have other sources of income account for only 36 per cent of the 61 respondents. This shows that the majority with other sources of income comes from the SSG category. Generally, income for the SSG category is lower due to the small sizes of their farms and the possibility is that cane income is supplemented by other income to make up for the shortfall. Bezu and Holden (2014:260) confirm that many farmers engage in non-farming activities as an additional source of income.

### 6.2.3.14 Types of other income sources

Respondents who indicated that they had other sources of income were then asked to indicate the types of income sources. Table 6.2.14 (a) and 6.2.14 (b) reflect the sources of other income which include old age pension, social grants, employment, support from family members, rentals and other enterprises.

**Table 6.2.14 (a): Types of income sources**

	Old age pension		Social Grant		Employed		Support from family member(s)	
	Frequency	Valid Per cent	Frequency	Valid Per cent	Frequency	Valid Per cent	Frequency	Valid Per cent
No	90	55.9	113	70.2	92	57.1	125	77.6
Yes	71	44.1	48	29.8	69	42.9	36	22.4
Total	161	100.0	161	100.0	161	100.0	161	100.0

Table 6.2.14 (a) shows that 44.1 per cent of the 161 families earn an old age grant, 29.8 per cent of the families earn a social grant, 42.9 per cent earn income from employment other than farming, and that 22.4 per cent of the 161 families get financial support from family members.

More types of income sources are presented in Table 6.2.14 (b).

**Table 6.2.14 (b): More types of income sources**

	Involved in other farming enterprises		Rentals		Other	
	Frequency	Valid Per cent	Frequency	Valid Per cent	Frequency	Valid Per cent
No	144	89.4	155	96.3	142	88.2
Yes	17	10.6	6	3.7	19	11.8
Total	161	100.0	161	100.0	161	100.0

Table 6.2.14 (b) shows that 10.6 per cent of 161 farming families participating in the study are involved in other farming enterprises besides sugarcane farming and that 3.7 per cent get rental income. “Other” referred to involvement in activities such as running a business (48 per cent), vegetable farming (11 per cent) and receiving disability pension (5 per cent).

The researcher argues that having other sources of income for the family is good and can improve sustainability. This is because sometimes farms are vulnerable to production and financial risks because of uncontrollable factors such as drought, floods and fire risks.

#### **6.2.4 Conclusion**

This paper dealt with the socio-economic profile of emerging cane growers (ECGs) and their offspring. The information was based on the responses from the youth whose parents are ECGs. It was found that, in the study area, cane growers are an ageing population when judging by their ages. It was found that these farming families also have other sources of income which is a good thing in cases where farms face difficulty. In terms of occupation of respondents, the responses varied from studying full time to unemployment.

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## 6.3 PERCEPTIONS AND ATTITUDES OF HEIRS OF EMERGING CANE GROWERS TOWARDS AGRICULTURE

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### Abstract

*This article focused on the perceptions and attitudes of the youth whose parents are emerging cane growers (ECGs). Contrary to popular views in literature the findings revealed that these young people perceive farming in a positive light and their general attitudes towards agriculture are positive. Most respondents like agriculture mainly because of its income generation and ability to create jobs in the community. Most respondents did not agree that cane farming in particular is of a low economic status, nor did they believe farming to be difficult. Findings also found the positive association between training in sugarcane agriculture and the respondents' attitudes towards cane farming. Furthermore, another positive association was established between having information about cane farming and their attitudes. The results augur well for the sustainability of agriculture in general and cane farming in particular because perceptions and attitudes influence career choices.*

**Key words:** Perception, attitude, youth, sustainability, emerging cane grower.

### 6.3.1 Introduction

Agriculture remains an important contributor to the economies of the third world. This contribution is even more significant when it is considered that agriculture is labour-intensive and contributes to both employment and poverty reduction. Food security also depends on the

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sustained contribution of agriculture. The challenge facing agriculture worldwide is that of youth exiting the sector in search of “greener pastures” away from agriculture. The problem is compounded by the findings that farmers are ageing and youth perceive agriculture in a negative light. “Notwithstanding the importance of the youth in future agricultural development, there seems to be a lack of interest in agriculture by the youth as a future career. Parents and teachers often regard education as a path to a better life in the city, while agricultural work is seen as a type of punishment suitable for those who have not been doing well at school” (Machinga, in Terblanché, 2006:133).

The study was conducted in the sugar industry and sought to understand whether the perceptions and attitudes of the youth whose parents are emerging cane growers (ECGs) are positive. In the context of this study ECGs as a collective group consists of small-scale cane growers (SSGs) and land reform cane growers (LRGs).

Generally literature abounds with evidence of youth having negative perceptions of agriculture. Regarding the issue of perceptions of youth on changing realities of agriculture, Omoti (2012:ix) states that the majority of youth seem to have a lacklustre attitude towards agriculture. Omoti (2012:ix) goes on to highlight the remark of one youth who stated that, “If you look at the conditions of farmers, there is no way you can be attracted to be a farmer”. The synthesis report by Omoti (2012) on current and emerging youth policies with links to agriculture in Southern Africa decries lack of information, inadequate enabling environment as some of the factors affecting youth perception about agriculture, particularly its potential and opportunities.

The researcher starts from the premise that if young people perceive agriculture in a favourable light they are more likely to choose agriculture and follow in the footsteps of their parents and this will undoubtedly impact positively on sustainability of agriculture in general and cane farming in particular. The hypothesis was that the youth whose parents are LRGs will have positive perceptions of agriculture while the perceptions of those who come from the SSG category will be negative. From the researcher’s perspective the main reasons for these assumed differences relate to farm sizes and potential total farm incomes. In the LRG category total incomes are higher due to larger farm sizes while the opposite is true for SSGs.

The sugar industry is a significant contributor to the economies of the of KwaZulu-Natal and Mpumalanga provinces. SASA (2015:17) highlights that the industry generates an average of R12 billion annually and creates 79,000 direct jobs and 350,000 indirect jobs. Therefore, it will be critical to sustain this industry and this study's main contribution is that the findings will give signals as to whether there will be future cane growers beyond this current generation of ageing cane growers. On the issue of ageing cane grower population, Mtembu (2010:2) states that this generation wants to work overseas, tour the world, work in other industries and this poses a risk to our SSG sector mainly because the average age of a grower in that sector is about 53 years old.

“Perception makes us aware of the world around us. Perception is a selective process by which we interpret and give meaning to external factors. It is seldom realistic and essentially a subjective process” Bergh and Theron (2003:104). According to Murphy, Murphy and Newcomb (1937) in Lundy et al. (2006:45), an attitude can be defined as a way of being “set” toward or against certain things. Perloff (1993) in Lundy et al. (2006:45) states that attitudes are learned through socialization, and usually constitute an enduring influence on cognitions and behaviours. Eagly and Chaiken (1995) in Lundy et al. (2006:43) propose that a key consequence of attitude strength is resistance to change.

Naamwintome and Bagson (2013:63) found that in Ghana, there is an insufficient youth participation in the agricultural sector even though this class of people is the most productive of any society as it contains people in the prime of their lives physically and mentally. Unless the youth have positive perceptions of cane farming and are prepared to succeed parents as farmers the sustainability of cane production will be severely affected. It is the researcher's main argument that current youth perceptions and attitudes will be reliable predictors of youth's willingness to pursue agricultural careers.

### **6.3.2 Methodology**

The study was conducted amongst the youth in age category 14 to 35 years who are located in the areas of KwaZulu-Natal North Coast and Zululand Region. There are seven mills on the North Coast of KwaZulu-Natal. The respondents were the young people whose parents or close relatives are cane growers who supply five of the seven sugar mills that are situated on



the North Coast of KwaZulu-Natal. These mills are Maidstone, Darnall, Gledhow, Amatikulu and Felixton.

A probability sampling approach was followed and entailed drawing representative samples from the five sugar mills. A total of 254 respondents were reached and out of this figure 193 respondents came from the small-scale grower (SSG) category and the 6 respondents came from the land reform grower (LRG) category. The majority of respondents were Black Africans. The study used both quantitative and qualitative research designs. Data was collected using a structured questionnaire and focus group discussions (FGDs) also took place.

Statistical analysis was performed using a statistical package (SPSS 2015, version 23). Respondents voluntarily participated in the study.

### 6.3.3 Youth preferences and attitudes towards farming

Understanding the preferences and attitudes of the youth whose parents are cane growers is one of the main objectives of this thesis. This is because it is more likely that the young people will be retained in farming if their perceptions thereof are positive.

Young people had been asked to state their likes or preferences for cane farming. Results are presented in Table 6.3.1 below.

**Table 6.3.1: Preferences for cane farming**

	I like cane farming as it generates income.		I like cane farming as a career.		I like cane farming as it creates jobs in our community.		I like cane farming because it is not a complicated enterprise.	
	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent	Frequency	Per cent
Disagree	11	4.4	26	10.4	2	.8	33	13.1
Not sure	26	10.4	20	8.0	3	1.2	36	14.3
Agree	212	85.1	205	81.7	245	98.0	182	72.5
<b>Total</b>	<b>249</b>	<b>100.0</b>	<b>251</b>	<b>100.0</b>	<b>250</b>	<b>100.0</b>	<b>251</b>	<b>100.0</b>

Table 6.3.1 basically reflects that the youth like cane farming because of the following reasons:

- Income generation (85.1 per cent of respondents)
- As a career (81.7 per cent of respondents)

- Contribution to job creation (98 per cent of the respondents)
- Not a complex enterprise (72.5 per cent of the respondents).

These positive results are comparable to those of a study on Malawian youth wherein 97.6 per cent of youth interviewed showed interest in agriculture (Kamchacha, 2012:11). “Among other reasons for their interest in agriculture, the youth indicated that with the current increasing trend of unemployment, they have no choice but to employ themselves in agriculture which, unlike other forms of business, has fewer barriers to entry for survival” (Kamchacha, 2012:12).

The results of FGDs confirm the above findings and elaborate on them. According to FGDs the income generation part was the main driver behind the positive preferences for agriculture. This is an important finding because if these financial expectations are not for various reasons such as the reduced viability of cane farming these young people will opt out of agriculture. These FGDs also reveal the importance of the status of owning a farm. Therefore the researcher argues that there is future for youth’s participation in agriculture as long as the image, status and sector incomes will, to a certain degree, meet the aspirations of the youth.

#### **6.3.4 Preferences against cane farming**

Respondents also had to state the things they do not like about cane farming. These preferences against farming are regarded as contributing factors that will discourage them from being involved in agriculture. Respondents had been given a few variables and had to state whether they agree with the statements or not and the results are displayed in Tables 6.3.2 and 6.3.3.

**Table 6.3.2: Preferences against cane farming**

	<b>I dislike cane farming because of its low socio-economic status (farm-life)</b>		<b>I dislike cane farming because of the type of work conducted is difficult.</b>		<b>I dislike cane farming because there is low income generated.</b>	
	Frequency	Valid Per cent	Frequency	Valid Per cent	Frequency	Valid Per cent
Disagree	196	78.7	178	71.2	180	72.3
Not sure	22	8.8	21	8.4	43	17.3
Agree	31	12.4	51	20.4	26	10.4
<b>Total</b>	<b>249</b>	<b>100.0</b>	<b>250</b>	<b>100.0</b>	<b>249</b>	<b>100.0</b>

According to Table 6.3.2 fewer than expected respondents expressed preferences against cane farming. The majority disagreed with the reasons normally put forward as the reasons why young people do not like farming. The summary of the results of Tables 6.3.2 are as follows:

- A majority (78.7 per cent) disagreed with the statement that they dislike cane farming because of its low socio-economic status. Only 12.4 per cent agreed that they dislike farming because of this reason.
- A minority comprising only 20.4 per cent of respondents expressed a dislike for cane farming because of the difficult work in this sector.
- Only 10.4 per cent stated that they did not like cane farming because of low income generation.

More preferences against cane farming are presented in Table 6.3.3.

**Table 6.3.3: More preferences against cane farming**

	<b>I dislike cane farming because it is of low status.</b>		<b>I dislike cane farming because it is too rural.</b>		<b>I dislike cane farming because it is dominated by the old generation.</b>	
	Frequency	Valid Percent	Frequency	Valid Percent	Frequency	Valid Percent
Disagree	204	81.3	207	82.8	187	74.5
Not sure	18	7.2	21	8.4	21	8.4
Agree	29	11.6	22	8.8	43	17.1
<b>Total</b>	<b>251</b>	<b>100.0</b>	<b>250</b>	<b>100.0</b>	<b>251</b>	<b>100.0</b>

Just like Table 6.3.2 the results of Table 6.3.3 above show that the majority disagreed with the reasons normally put forward as the reasons why young people exit agriculture. In a nutshell the situation is as follows:

- Most young people interviewed (81.3 per cent) did not agree with the statement that they dislike farming because of its low status. Only 11.6 per cent agreed with the statement.
- Only 8.8 per cent believe that cane farming is too rural and dislike it as a consequence.
- Only 17.1 per cent expressed a dislike for cane farming because its domination by the older generation.

In terms of the breakdown of responses according to the two categories there were more disagreements with the statements from the LRG category of respondents when compared to the SSG category. The findings show that the majority of respondents do not hold the general negative perceptions of agriculture and this bodes well for the sustainability of production in the sugar industry.

### 6.3.5 General attitude towards cane farming

Owing to the importance of attitudes in influencing career choices, a question was asked concerning the youth's general attitudes towards cane farming. The results are presented in Table 6.3.4 below.

**Table 6.3.4: Attitudes towards cane farming**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Negative	15	5.9
	Not sure/ ambivalent	34	13.4
	Positive	203	79.9
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

Regarding the important question of the respondents' attitudes towards cane farming the results of Table 6.3.4 have positive implications for the sustainability of cane production by emerging cane growers (ECGs). Results of the study show that most young people (almost 80 per cent) whose parents are ECGs have positive attitudes towards cane farming and these results bode well for the sustainability of cane production. In the LRG category the number of

those who have positive attitudes is higher (90.2 per cent) than the SSG category which has 77.5 per cent of positive responses. Once again it shows that the youth whose parents come from the LRG category of ECGs are more positive, and it can be concluded that the future of the LRG category is brighter than that of the SSG category. The findings confirm these positive attitudes.

### 6.3.6 Perceptions regarding profitability of cane farming

Respondents were also asked of their perceptions of profitability of cane farming, and the results appear in Table 6.3.5.

**Table 6.3.5: Perception of cane farming as a profitable business**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	5	2.0
	Disagree	11	4.3
	Not sure	30	11.8
	Agree	152	59.8
	Strongly agree	54	21.3
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

Results of Table 6.3.5 show that the perceptions of the youth whose parents are ECGs are positive and that the majority respondents (81.1 per cent) believe that cane farming is a profitable business. This important finding contradicts other views in literature such as the one by Arokoyo (1992) and Ekong (2003) in Chikezie et al. (2012:224) that the youth who have the energy to take up agricultural production do not believe or have the knowledge that agricultural production can really be a profitable venture. Therefore the researcher argues that the perceptions need to be contextualized depending on the country and these perceptions and attitudes will continue to change. Some of these perceptions and attitudes will change for the better of agriculture but some might have negative implications for agriculture.

### 6.3.7 Perceived generation of income to sustain a good living

The result of Table 6.3.5 corresponds with the result of Table 6.3.6 below whereby the respondents were asked of their perceptions as to whether farming generates enough revenue to sustain a good living.

**Table 6.3.6: Perceived generation of income to sustain a good living**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	18	7.1
	Disagree	30	11.8
	Not sure	39	15.4
	Agree	113	44.5
	Strongly agree	51	20.1
	Total	251	98.8
Missing	System	3	1.2
	<b>Total</b>	<b>254</b>	<b>100.0</b>

Results of Table 6.3.6 show the youth’s perceptions are positive in the sense that 64.6 per cent of respondents either agree or strongly agree with the statement that farming generates enough income to sustain a good living. This augurs well for sustainability because this will increase the likelihood of the youth taking up farming. However, it should be borne in mind that this reflects just the perceptions and not necessarily the reality of economics of farming.

Since the perceived income generation of agriculture is positive there is a need to capitalize on this. Omoti (2012:52) states that in order to make agriculture attractive to the youth there is a need to demystify the negative myths about agriculture, present agriculture as a profitable venture with practical examples of success stories from other citizens including some of the young people (role modelling agriculture) and promote agri-business through availing special agriculture funding for young people engaged in agriculture.

### 6.3.8 Comparisons of returns between cane farming and non-farming activities

A statement was made to the respondents regarding “low returns from agriculture when compared to non-farming activities in the urban areas”. Results are displayed in Table 6.3.7.

**Table 6.3.7: Comparison of farming returns between cane farming and non-farming activities**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	26	10.2
	Disagree	88	34.6
	Not sure	61	24.0
	Agree	62	24.4
	Strongly agree	15	5.9
	<b>Total</b>	<b>252</b>	<b>99.2</b>
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

According to Table 6.3.7 at least 44.8 per cent of the total responses disagreed or strongly disagreed with this statement with 24 per cent not being sure. In terms of the SSG category of responses this figure is 48.1 per cent whereas it is 42.6 per cent in the LRG category of responses. Although a large percentage disagrees with the statement there is still a significant number (30.6 per cent) who agree or strongly agree with this statement and this cannot be taken lightly as it can influence their career choices. In support of the positive perceptions regarding economic returns from agriculture Leavy and Hossain (2014:34) argue that higher food prices could attract young people into agriculture if they had access to modern agricultural techniques and inputs. They further make reference to rural Ethiopia where there was a perception that investment in agriculture and support through technical expertise and technological advances could mean progress for young people.

Also in comparing agricultural returns to non-farming activities Aphunu and Atoma (2010:47) give insights about the migration of youth from agriculture into petroleum industry in Nigeria. Since petroleum was regarded as a foreign exchange earner the migration from agriculture into petroleum “ignited a chain reaction that led to the total neglect of agriculture at grassroots level (Aphunu and Atoma, 2010:47).

The researcher argues that young people will always compare returns of various sectors of the economy and in the context of the sugar industry it is up to the role players to make the industry attractive to the youth from both a status and economic returns perspective. Young people will be involved in agriculture as long as there are perceived and real economic returns. This view is echoed by Adekunle et al. (2009:102) who found that poor returns to agricultural investment are regarded as a constraint by the youth.

### 6.3.9 Ability of cane farming to improve livelihoods

A statement was made to respondents that cane farming has improved their lives and had to indicate whether they are in agreement with this statement or not. Results are reflected in Table 6.3.8 below.

**Table 6.3.8: Improvement of life by cane farming**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	3	1.2
	Disagree	21	8.3
	Not sure	22	8.7
	Agree	141	55.5
	Strongly agree	64	25.2
	<b>Total</b>	<b>251</b>	<b>98.8</b>
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

As shown in Table 6.3.8 a high number of respondents (80.7 per cent) agree or strongly agree that their lives have been improved by cane farming. Only 9.5 per cent of the youth whose parents are emerging cane growers (ECGs) disagree with the statement that their lives have been improved by cane farming. The results of those who agree or strongly agree that their lives have been improved were consistent in both categories of responses. Some young people mentioned during FGDs that they like the fact that they were raised by income from sugarcane farming. Their parents also confirmed this (more details in section 6.6). This finding is consistent with that of Muwi (2012:43) whereby the Zimbabwean youths mentioned that their current interest in farming was stimulated by the fact that they needed school fees, clothes and food which motivated them to help their parents/ guardians.

### 6.3.10 Characteristics associated with youth's attitudes towards cane farming

In order to determine which characteristics were associated with offspring's attitudes towards cane farming, chi-square tests were conducted. Characteristics examined were: gender, training, succession discussions, information about farming as a career, and agricultural subjects at school. Since there were five characteristics examined, each with a separate chi-square, a Bonferonni adjustment for multiple comparisons had to be applied. Thus, instead of a significance value of less than 0.05 indicating statistical significance, a value of less than 0.01 (0.05/5) would be needed to achieve statistical significance. "The Bonferonni correction



is a multiple-comparison correction used when several dependent or independent statistical tests are being performed simultaneously (since while a given alpha value  $\alpha$  may be appropriate for each individual comparison, it is not for the set of *all* comparisons). In order to avoid a lot of spurious positives, the alpha value needs to be lowered to account for the number of comparisons being performed” (Weisstein, 2016).

### 3.10.1 Relationship between gender and participants' attitudes towards cane farming

Table 6.3.9 is a cross tabulation of attitude responses between male and female respondents.

**Table 6.3.9: Cross tabulation - Relationship between gender and participants' attitudes towards cane farming**

			Your attitude towards cane farming is generally:			Total
			Negative	Not sure/ ambivalent	Positive	
Gender	Male	Count	6	16	134	156
		Expected Count	9.3	21.0	125.7	156.0
		% within Gender	3.8%	10.3%	85.9%	100.0%
		% within Your attitude towards cane farming is generally:	40.0%	47.1%	66.0%	
		% of Total	2.4%	6.3%	53.2%	61.9%
	Female	Count	9	18	69	96
		Expected Count	5.7	13.0	77.3	96.0
		% within Gender	9.4%	18.8%	71.9%	100.0%
		% within Your attitude towards cane farming is generally:	60.0%	52.9%	34.0%	
		% of Total	3.6%	7.1%	27.4%	38.1%
Total		Count	15	34	203	252
		Expected Count	15.0	34.0	203.0	252.0
		% within Gender	6.0%	13.5%	80.6%	100.0%
		% within Your attitude towards cane farming is generally:	100.0%	100.0%	100.0%	
		% of Total	6.0%	13.5%	80.6%	100.0%

As per Table 6.3.9 no evidence was found of an association between gender and attitudes in the study area. The reason could be that gender groups are exposed to the same environment

which either influences positively or discourages them. Based on the results of Table 6.3.9 a chi-square test for association (Table 6.3.10) was conducted between gender and participants' attitude towards cane farming.

**Table 6.3.10: Chi-square tests – Relationship between attitudes and gender**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.680 <sup>a</sup>	2	.021
Likelihood Ratio	7.482	2	.024
Linear-by-Linear Association	7.334	1	.007
N of Valid Cases	252		

*a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 5.71.*

In Table 6.3.10 all expected cell frequencies were greater than five. After adjusting for multiple comparisons, there was not a statistically significant association between gender and participants' attitude towards cane farming,  $\chi^2(2) = 7.680$ ,  $p = 0.021$ . Thus, attitudes towards cane farming did not differ between males and females.

### **6.3.11 Relationship between training in sugarcane agriculture and participants' attitudes towards cane farming**

Relationship between training in sugarcane agriculture and youth's attitudes towards cane farming is important because both variables can impact on youth's choices regarding agricultural careers. Table 6.3.11 is a cross tabulation of attitude responses between those who have been trained in sugarcane agriculture and those who have not undergone this type of training.

**Table 6.3.11: Cross tabulation - Relationship between training in sugarcane agriculture and youth’s attitude towards cane farming**

			Your attitude towards cane farming is generally:		Total	
			Negative/Not sure/Ambivalent	Positive		
Have you been trained in sugarcane agriculture?	I have not been trained	Count	27	64	91	
		Expected Count	17.8	73.2	91.0	
		% within Have you been trained in sugarcane agriculture?	29.7%	70.3%	100.0%	
		% within Your attitude towards cane farming is generally:	% of Total	55.1%	31.7%	
				10.8%	25.5%	36.3%
I have been trained		Count	22	138	160	
		Expected Count	31.2	128.8	160.0	
		% within Have you been trained in sugarcane agriculture?	13.8%	86.3%	100.0%	
		% within Your attitude towards cane farming is generally:	% of Total	44.9%	68.3%	
				8.8%	55.0%	63.7%
Total		Count	49	202	251	
		Expected Count	49.0	202.0	251.0	
		% within Have you been trained in sugarcane agriculture?	19.5%	80.5%	100.0%	
		% within Your attitude towards cane farming is generally:	100.0%	100.0%		
		% of Total	19.5%	80.5%	100.0%	

Table 6.3.11 shows that of those people who have been trained in sugarcane agriculture, 86.3 per cent had a positive attitude towards cane farming, whereas only 70.3 per cent of people who have not been trained in sugarcane agriculture had a positive attitude towards cane farming. The researcher argues that the reason for this might be the relation between training and involvement. Since agricultural training is practical and requires involvement the results

are therefore not surprising, because this study found the relationship between youth involvement and their attitudes as well as the potential to choose agriculture as a career.

Based on the results of Table 6.3.11 a chi-square test for association was conducted between training in sugarcane agriculture and participants' attitude towards cane farming (Table 6.3.12 below).

**Table 6.3.12: Chi-square test - Relationship between training in sugarcane agriculture and attitudes towards cane farming**

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.358 <sup>a</sup>	1	.002		
Continuity Correction <sup>b</sup>	8.372	1	.004		
Likelihood Ratio	9.047	1	.003		
Fisher's Exact Test				.003	.002
Linear-by-Linear Association	9.321	1	.002		
N of Valid Cases	251				

*a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 17.76.*

*b. Computed only for a 2x2 table*

In Table 6.3.12 all expected cell frequencies were greater than five. The results on these tables are a result of further post-hoc analysis that was conducted. It had been decided a-priori to only conduct one post-hoc test by collapsing the Negative and Not sure/Ambivalent categories of the attitude variable into one category. In this way, the percentage of people with a positive attitude could be compared between people who have received training, and those who have not. The post-hoc analysis in Table 6.3.12 revealed a significant association in the percentage of people with a positive attitude towards cane farming between people who have been trained in sugarcane agriculture, and those who have not ( $X^2(1) = 9.358, p=0.002$ ).

### **6.3.12 Likes and dislikes of people who have been trained or not trained in sugarcane agriculture**

To further explore this association, an analysis was conducted to compare the likes and dislikes of agriculture between two categories of respondents, namely those who have been trained and those who have not undergone training in sugarcane agriculture. Table 6.3.13 shows the relationship between training and the various reasons for liking cane farming.

**Table 6.3.13 - Reasons for liking cane farming (further analysis) - Stimulators**

		Have you been trained in sugarcane agriculture?			
		I have not been trained		I have been trained	
		Count	Column N %	Count	Column N %
I like cane farming as it generates income.	Disagree	2	2.2%	9	5.7%
	Not sure	17	18.9%	9	5.7%
	Agree	71	78.9%	140	88.6%
I like cane farming as a career.	Disagree	18	19.8%	8	5.0%
	Not sure	9	9.9%	11	6.9%
	Agree	64	70.3%	140	88.1%
I like cane farming as it creates jobs in our community.	Disagree	2	2.2%	0	0.0%
	Not sure	2	2.2%	1	.6%
	Agree	87	95.6%	157	99.4%
I like cane farming because it is not a complicated enterprise.	Disagree	8	8.8%	25	15.7%
	Not sure	22	24.2%	14	8.8%
	Agree	61	67.0%	120	75.5%

In all variables analysed in Table 6.3.13 there is an association between training and the liking of cane farming. An example is that the percentage of those who like cane farming because of its income generation is higher amongst those who have been trained in sugarcane agriculture (88.6 per cent) than the percentage of those who have not been trained (78.9 per cent). The respondents who have been trained and like farming as a career accounted for a higher percentage (88.1 per cent) than those who like farming as a career but have not been trained (70.3 per cent). Regarding the association between training and liking of cane farming because of job creation the percentage of those who have been trained is higher (99.4 per cent) when compared to those who have not been trained (95.6 per cent). Those who have been trained and like cane farming because it is not complicated were more (at 75.5 per cent) than those who have not been trained (at 67 per cent). However, the results do not show the cause and effect relationship between each reason for liking agriculture and the respondents' training in sugarcane agriculture or lack thereof. In other words it was not clear which came first, the liking of agriculture or the training in sugarcane agriculture. This association

between youth training in agriculture and their liking of cane farming has positive implications for the future youth participation.

### 6.3.13 Relationship between disliking cane farming and training in sugarcane agriculture

Table 6.3.14 shows the relationship between disliking cane farming and training in sugarcane agriculture.

**Table 6.3.14 - Reasons for disliking cane farming (further analysis) – Inhibitors**

		Have you been trained in sugarcane agriculture?			
		I have not been trained		I have been trained	
		Count	Column N %	Count	Column N %
I dislike cane farming because of its low socio-economic status (farm-life)	Disagree	69	77.5%	126	79.2%
	Not sure	6	6.7%	16	10.1%
	Agree	14	15.7%	17	10.7%
I dislike cane farming because of the type of work conducted is difficult.	Disagree	58	64.4%	120	75.5%
	Not sure	11	12.2%	10	6.3%
	Agree	21	23.3%	29	18.2%
I dislike cane farming because there is low income generated.	Disagree	61	69.3%	119	74.4%
	Not sure	20	22.7%	23	14.4%
	Agree	7	8.0%	18	11.3%
I dislike cane farming because it is of low status.	Disagree	69	76.7%	134	83.8%
	Not sure	10	11.1%	8	5.0%
	Agree	11	12.2%	18	11.3%
I dislike cane farming because it is too rural.	Disagree	74	83.1%	133	83.1%
	Not sure	6	6.7%	14	8.8%
	Agree	9	10.1%	13	8.1%
I dislike cane farming because it is dominated by the old generation.	Disagree	72	80.0%	114	71.3%
	Not sure	4	4.4%	17	10.6%
	Agree	14	15.6%	29	18.1%

Results of Table 6.3.14 show that more people who have undergone training in sugarcane agriculture will disagree with the following statements (although differences are not high and the “not sure” category also distorting the results):

- Disliking cane farming because of its low socio-economic status nature (79.2 per cent of those trained against the 77.5 per cent of those who have not been trained).
- Disliking cane farming because of its difficult work (75.5 per cent of those trained against 64.4 per cent of those who have not been trained).
- Disliking cane farming because of its low income generation (74.4 per cent of those trained against 69.3 per cent of those who have not been trained).
- Disliking cane farming because of its low status (83.8 per cent of those trained against 76.7 per cent of those who have not been trained).

However, with regard to disliking cane farming because “it is too rural” the responses did not differ between those who have been trained and those who have undergone training in sugarcane agriculture. Interestingly, concerning the dislike for cane farming because of perceived domination by the old generation there were fewer respondents (at 71.3 per cent) from the group of those who have been trained who disagreed compared to the higher percentage (80 per cent) of those who have not been trained.

#### **6.3.14 Relationship between having enough information about farming as a career and attitudes towards cane farming**

It is important for any individual to make an informed decision regarding career choices. Therefore, possession of information about is critical to achieve this and this also applies in this context. Attitudes for or against something are, to a certain extent, shaped by the information that individuals possess.

Table 3.15 assesses the relationship between having enough information about agriculture and youth’s attitudes towards agriculture. Although the researcher generalises about agriculture the main focus is on cane farming.

**Table 6.3.15: Cross tabulation: Relationship between having enough information about farming as a career and attitudes towards cane farming**

			Your attitude towards cane farming is generally:		Total
			Negative/Not sure/Ambivalent	Positive	
Do you have enough information about farming as a career?	No/Not sure	Count	43	109	152
		Expected Count	29.7	122.3	152.0
		% within Do you have enough information about farming as a career?	28.3%	71.7%	100.0%
		% within Your attitude towards cane farming is generally:	87.8%	54.0%	
		% of Total	17.1%	43.4%	60.6%
	Yes	Count	6	93	99
		Expected Count	19.3	79.7	99.0
		% within Do you have enough information about farming as a career?	6.1%	93.9%	100.0%
% within Your attitude towards cane farming is generally:		12.2%	46.0%		
	% of Total	2.4%	37.1%	39.4%	
Total	Count	49	202	251	
	Expected Count	49.0	202.0	251.0	
	% within Do you have enough information about farming as a career?	19.5%	80.5%	100.0%	
	% within Your attitude towards cane farming is generally:	100.0%	100.0%		
	% of Total	19.5%	80.5%	100.0%	



According to Table 6.3.15, of the people who do have enough information about agriculture as a career, 93.9 per cent had a positive attitude towards cane farming, whereas only 71.7 per cent of people who do not have enough information had a positive attitude towards cane farming.

The researcher argues that education and awareness campaigns play a critical role in the dissemination of positive information about agriculture. Unless these young people get positive information about agriculture their perceptions and attitudes will remain negative with dire consequences for agricultural production in future. Adekunle et al. (2009:107) emphasise the changing of people’s negative perceptions toward farming through proper orientation and public education.

Using information from Table 6.3.15 a chi-square test for association was conducted between having enough information about agriculture as a career and participants' attitude towards cane farming. All expected cell frequencies were greater than five. When this post-hoc analysis was conducted it was decided a-priori to only conduct one post-hoc test by collapsing the Negative and Not sure/Ambivalent categories of the attitude variable into one category. In this way, as reflected in Table 6.3.15 the percentage of people with a positive attitude could be compared between people who have enough information, and those who do not. Results are displayed in Table 6.3.16.

**Table 6.3.16: Chi-square test - Relationship between having farming career information and attitude**

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	18.856 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	17.467	1	.000		
Likelihood Ratio	21.487	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	18.780	1	.000		
N of Valid Cases	251				

*a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 19.33.*

*b. Computed only for a 2x2 table*

The analysis in Table 6.3.16 revealed a significant relationship in the percentage of people with a positive attitude towards cane farming between people who indicated that they do have

enough information about agriculture as a career, and those who do not. This significant relationship is reflected in Table 6.3.16 as ( $X^2(1) = 18.856, p=0.000$ ).

### 6.3.15 Likes and dislikes of agriculture between those with and without information about agriculture as a career

To further explore this association, an analysis was conducted to compare the likes and dislikes of agriculture between people with and without enough information about agriculture as a career.

Table 6.3.17 explores the relationship between the reasons for liking cane farming and having enough or not having enough information about farming as a career.

**Table 6.3.17: Reasons for liking cane farming (Stimulators)**

		Do you have enough information about farming as a career?					
		No		Not sure		Yes	
		Count	Column N %	Count	Column N %	Count	Column N %
I like cane farming as it generates income.	Disagree	3	3.3%	3	5.0%	5	5.1%
	Not sure	14	15.6%	6	10.0%	6	6.1%
	Agree	73	81.1%	51	85.0%	88	88.9%
I like cane farming as a career.	Disagree	21	22.8%	4	6.7%	1	1.0%
	Not sure	12	13.0%	4	6.7%	4	4.0%
	Agree	59	64.1%	52	86.7%	94	94.9%
I like cane farming as it creates jobs in our community.	Disagree	2	2.2%	0	0.0%	0	0.0%
	Not sure	3	3.3%	0	0.0%	0	0.0%
	Agree	87	94.6%	59	100.0%	99	100.0%
I like cane farming because it is not a complicated enterprise.	Disagree	13	14.1%	3	5.0%	17	17.2%
	Not sure	20	21.7%	11	18.3%	5	5.1%
	Agree	59	64.1%	46	76.7%	77	77.8%

Results Table 6.3.17 suggest a relationship between the liking of cane farming and possession of enough information about farming as a career. More young people who possess information about agriculture tend to like cane farming for various reasons as reflected in Table 6.3.17. What is not clear though is whether the liking of cane farming leads to the

respondents seeking to acquire information about farming careers or *vice versa*. Since the cause and effect relationship could not be established it means it was not clear which came first, the liking of cane farming or the possession of enough information about farming as a career option. Findings from FGDs that elaborate on this matter are reflected in section 6.6.

### 6.3.16 Reasons for disliking cane farming and their relationship with information possession

Table 6.3.18 explores the relationship between the reasons for disliking cane farming and having enough or not having enough information about farming as a career.

**Table 6.3.18: Reasons for disliking cane farming (Inhibitors/Barriers)**

		Do you have enough information about farming as a career?					
		No		Not sure		Yes	
		Count	Column N %	Count	Column N %	Count	Column N %
1. I dislike cane farming because of its low socio-economic status (farm-life)	Disagree	65	71.4%	48	80.0%	82	84.5%
	Not sure	9	9.9%	5	8.3%	8	8.2%
	Agree	17	18.7%	7	11.7%	7	7.2%
2. I dislike cane farming because of the type of work conducted is difficult.	Disagree	56	60.9%	43	71.7%	78	80.4%
	Not sure	8	8.7%	7	11.7%	6	6.2%
	Agree	28	30.4%	10	16.7%	13	13.4%
3. I dislike cane farming because there is low income generated.	Disagree	57	62.0%	40	67.8%	82	84.5%
	Not sure	21	22.8%	12	20.3%	10	10.3%
	Agree	14	15.2%	7	11.9%	5	5.2%
4. I dislike cane farming because it is of low status.	Disagree	65	70.7%	52	86.7%	86	87.8%
	Not sure	10	10.9%	3	5.0%	5	5.1%
	Agree	17	18.5%	5	8.3%	7	7.1%
5. I dislike cane farming because it is too rural.	Disagree	66	72.5%	51	85.0%	89	90.8%
	Not sure	11	12.1%	6	10.0%	4	4.1%
	Agree	14	15.4%	3	5.0%	5	5.1%
6. I dislike cane farming because it is dominated by the old generation.	Disagree	65	70.7%	48	80.0%	73	74.5%
	Not sure	7	7.6%	4	6.7%	10	10.2%
	Agree	20	21.7%	8	13.3%	15	15.3%

Results of Table 6.3.18 suggest that as young people whose parents are emerging cane growers (ECGs) acquire more information about farming as a career option their level of

disagreements with the following statements (assumed to be reasons for young people to dislike farming) increases:

- Disliking cane farming because of its low socio-economic status nature (71.4 per cent of those who did not have enough information against the 84.5 per cent who stated that they possess enough information about agriculture as a career).
- Disliking cane farming because of its difficult work (60.9 per cent of those who did not have enough information against the 80.4 per cent who stated that they possess enough information about agriculture as a career).
- Disliking cane farming because of its low income generation (62 per cent of those who did not have enough information against the 84.5 per cent who stated that they possess enough information about agriculture as a career).
- Disliking cane farming because of its low status (70.7 per cent of those who did not have enough information against the 87.8 per cent who stated that they possess enough information about agriculture as a career).
- Disliking cane farming because it is too rural (72.5 per cent of those who did not have enough information against the 90.8 per cent who stated that they possess enough information about agriculture as a career).
- Disliking cane farming because it is dominated by the old generation (70.7 per cent of those who did not have enough information against the 74.5 per cent who stated that they possess enough information about agriculture as a career).

### **6.3.17 Relationship between having had agricultural subjects at school and attitudes towards cane farming**

This section investigates the relationship between doing agricultural subjects at school and respondents' attitudes towards agriculture.

Findings revealed that of the 157 respondents who had not done agricultural subjects at school 75.8 per cent were found to have a positive attitude towards cane farming. Of the 91 respondents who had done agricultural subjects at school 87.9 per cent were found to have a positive attitude towards cane farming. A follow up Chi-Square test for association was conducted between whether participants had agricultural subjects at school and their attitude towards cane farming. After adjusting for multiple comparisons, there was not a statistically significant association between agricultural subjects at school and participants' attitude towards cane farming,  $\chi^2(2) = 6.107$ ,  $p = 0.047$ . Thus, attitudes towards cane farming did

not differ between people who have had agricultural subjects at school and those who have not. One of the reasons for this is that very few schools offer agricultural subjects. Therefore, the greatest influence on youth attitudes towards agriculture will come mainly from their homes and neighbourhoods and this is part of the socialisation process. However, the influence of schools in shaping youth perceptions and attitudes towards agriculture cannot be underestimated.

### **6.3.18 Conclusion and recommendations**

This study looked at the perceptions and attitudes of the youth towards agriculture in general and cane farming in particular. Unlike popular views in literature that youth do not like agriculture, the results found that the youth whose parents are emerging cane growers (ECGs) have positive perceptions of agriculture and their attitudes are also positive. Statements such as agriculture (cane farming in this particular case) having low economic status and generating low incomes were disputed by the respondents. It was also shown that young people like cane farming because they believe that it generates income, contributes to job creation and further believe that it is not a complicated enterprise to operate.

Respondents also believe that cane farming is profitable and that returns from cane farming are not necessarily lower than economic returns outside of agriculture. There were also strong views from the youth that their lives have improved because of cane farming.

The study found an association between training in sugarcane agriculture and participants' attitudes towards cane farming. Furthermore, another association was established between having information about cane farming and their attitudes. However, the attitudes did not differ between young people who have had agricultural subjects at school and those who have not and this may be the result of fewer schools offering agricultural subjects. The results regarding positive perceptions and attitudes augur well for the sustainability of agriculture in general and cane farming in particular. The results were positive for both categories of emerging cane growers (ECGs) which are land reform growers (LRGs) and small-scale growers (SSGs).

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## 6.4 WILLINGNESS OF HEIRS OF EMERGING CANE GROWERS TO SUCCEED THEIR PARENTS

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### Abstract

*This article investigated the preparedness of heirs of emerging cane growers to succeed their parents. The study was conducted in the sugar industry in Uthungulu and Ilembe district municipalities amongst 224 young people whose parents are cane growers. Variables such as youth current involvement, training and experience in sugarcane agriculture, renewed hope regarding the legacy to be left by emerging cane growers. The study revealed that these young people are ready to succeed parents and become full-time farmers. From a sustainability perspective the results were positive and contradicted the general views in literature that young people are exiting agriculture. It was found that succession discussions are not taking place on a wide scale because of cultural influence and other family dynamics.*

**Key words:** Emerging cane grower, sustainability, youth, involvement, experience, training, succession, cane farmer, preparedness, willingness.

### 6.4.1 Introduction and problem definition

Agriculture plays a significant role in terms of both economic development and food security. Leavy and Hossain (2014:10) state that agriculture is the main source of livelihood of one billion poor people living in rural areas on less than US \$1.25 a day and they go on to argue that over the next four decades, the need for a large and growing urban population will create

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more demands on the agricultural sector. “Agriculture is core to every nation’s development especially in this 21<sup>st</sup> century; hence, the investment on it by both developed and the developing countries.

As the demand for agriculture increases there will be a need to rejuvenate the agricultural workforce to prepare for this increased demand. New technologies and agribusiness ideas will be required. The youth who are educated, skilled and energetic are in a best position to deliver on this mandate. However, evidence suggests that there is a withdrawal of youth from agriculture. This youth withdrawal is not just confined to Africa but is a worldwide phenomenon. Leavy and Hossain (2014:12) quote studies from India that suggest a trend towards young people exiting agriculture and furthermore state that this is prevalent across all sizes of landholdings, but with different motivations. According to Naamwintome and Bagson (2013:63) there is insufficient youth participation in the agricultural sector, although this class of people is the most productive of any society as it contains people in the prime of their lives physically and mentally. Muwi (2012:4) states that young and women in Zimbabwe are continuously moving from the rural areas to settle in the cities and this has been attributed to the attraction of high incomes in the urban areas and the lucrative life and high standards of living. Muwi (2012:4) further states that once in the cities these young people do not find employment because currently the world’s underdeveloped countries are still experiencing the highest levels of underemployment and unemployment.

White (2012:11) laments deskilling and the assault on rural culture by stating that various studies have noted how education as currently practiced (particularly secondary education) contributes to a process of ‘deskilling’ of rural youth in which farming skills are neglected and farming itself downgraded as an occupation.

The problem of youth exiting agriculture is compounded when the challenge of the ageing farmer population is taken into cognisance. Youth withdrawal and the ageing farmer population can be regarded as twin challenges facing agriculture today. Aphunu and Atoma (2010:47) make references to the Nigerian situation whereby they state that the Nigerian farmer is ageing with an average of 50 years. Another dimension that complicates the matters is the lack of succession planning by farmers. According to Mtembu (2010:2) succession planning remains a critical issue across all growers in the industry and further explains that the average age of a grower in the small-scale sector of the sugar industry is 53 years old.

This paper looks at various factors that reflect the willingness (or lack thereof) of youth whose parents are emerging cane growers (ECGs) to succeed their parents as farmers. These factors include youth current involvement in farming operations, their skills, training levels and experience. This paper also explores the issue of succession planning and the impact on the sustainability of cane production going forward. The discussion of these variables will also consider the implications for sustainability of agricultural production.

#### **6.4.2 Methodology**

This study was conducted in the sugar industry which is one of the most important industries in the agricultural sector in South Africa. The respondents were the young people between the ages 14 to 35 years whose parents and close relatives are ECGs. ECGs, in the context of this study, refer to two groups of cane growers, namely land reform growers (LRGs) and small-scale growers (SSGs). These two groups did not enjoy the same farming benefits and opportunities enjoyed by the White commercial farmers prior to the new political dispensation that started in 1994, hence the term “emerging cane growers”. It should be noted that this term is not widely used in the SA sugar industry.

The study area was the North Coast and Zululand Region of KwaZulu-Natal and focused on cane growing families supplying five out of the seven sugar mills that exist in this area. A total of 254 respondents were reached and in addition to this there were focus group discussions (FGDs) of the youth and other discussions also held with ECGs as study informants. The study area is located in the Uthungulu and Ilembe district municipalities. A probability sampling approach was adopted whereby the five sugar mills were divided into five strata with a representative sample taken from each stratum.

Personal interviews were held to collect data using structured questionnaires. Data analysis was performed using SPSS software (2015, version 23). Participants voluntarily participated in the study and were assured of confidentiality and anonymity.

#### **6.4.3 Youth involvement on farms other than parents' farms**

The degrees of current involvement in farm operations, training and experience show commitment by young person to a future in agriculture, hence the importance of the questions asked relating to these factors.

Table 6.4.1 below shows the cane farming experience by respondents on farms other than those owned by the parents.

**Table 6.4.1: Cane farming experience on farms other than on parent's farm**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	No	144	56.7
	Yes	108	42.5
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

Besides involvement in their parents' farms Table 6.4.1 shows that 42.5 per cent of respondents were involved in farming operations on farms other than their parents' farms. From a sustainability perspective it is encouraging to note the fact that the youth have had exposure beyond their parents' farms. This could be interpreted as a sign of youth commitment and interest in cane farming. This is a reliable indicator in the sense that it will be difficult for the parents who are cane growers to have forced these young people to work on other farms other their homes. It is against this background that this can be seen as positive for the sustainability of cane growing.

#### **6.4.4 Involvement of the youth in farming activities on their parents' farms**

Table 6.4.2 shows the current involvement by the respondents in farming activities. This question dealt with the current involvement of the respondents on parents' farm. This is a very important question from a cane production sustainability point of view.

**Table 6.4.2: Current involvement in farming activities**

	<b>Level of involvement</b>	<b>Frequency</b>	<b>Per cent</b>
Valid	Not involved at all	52	20.5
	To a certain level - Few days a week	106	41.7
	Fully involved - Every working day	94	37.0
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

From Table 6.4.2 it is encouraging to note that, except for the 20.5 per cent of respondents who are not involved at all, all are involved to a certain degree. The majority (41.7 per cent)

are involved a few days a week while the 37 per cent are involved every working day of the week. In the LRG category the frequency of a certain level involvement by the youth who are respondents stands at 86.9 per cent whereas in the SSG category this figure is lower at 77 per cent. This will undoubtedly impact positively on the future sustainability of cane farming. These results in Table 6.4.2 disagree with the assumptions that there is a lack of interest on the part of the youth. Based on these results it can be argued that they were not going to get involved if they were not interested, especially such a high percentage of involvement. The positive findings regarding youth involvement in cane growing are similar to those of Aphunu and Atoma (2012:50) who found that the youths in Delta Central Agricultural Zone of Nigeria were highly involved in arable crop production (69.3 per cent), farm labour (64.7 per cent) and crop processing (61.3 per cent). Aphunu and Atoma (2012:53) further found that youth's attitude towards agriculture correlated positively and significantly with involvement in agricultural production activities.

#### **6.4.5 Duration of involvement in the farming activities**

Respondents were also asked of the duration of their involvement in farming operations and the findings are displayed in Table 6.4.3.

**Table 6.4.3: Duration of involvement in farming activities**

<b>Duration of involvement</b>	<b>Frequency</b>	<b>Per cent</b>
Up to 12 months	51	25.5
Over 1 year and up to 5 years	67	33.5
Over 5 years and up to 10 years	34	17.0
More than 10 years	47	23.5
Missing	1	0.5
<b>Total</b>	<b>200</b>	<b>100.0</b>

Table 6.4.3 shows that, of the 200 young people that are involved, 33.5 per cent have been involved for more than a year but less than 5 years while 17 per cent have been involved in farm operations for more than 5 years and up to 10 years. The most encouraging one is the 23.5 per cent that have been involved for more than 10 years in farming activities. These results confirm that there is future in cane farming because of the youth involvement. However, during the FGDs some young people expressed concerns regarding lack of remuneration for services rendered in parents' farms.

#### 6.4.6 Involvement of siblings in farming activities

Respondents were also asked whether their siblings are also involved in any farming activities. The aim was to look at the broader youth interest in cane farming. Results are captured in Table 6.4.4.

**Table 6.4.4: Involvement of siblings in farming operations**

Sibling involvement		Frequency	Percent
	No	101	39.6
	Yes	151	59.4
	Total	252	99.0
Missing	System	2	1.0
<b>Total</b>		<b>254</b>	<b>100.0</b>

Results in Table 6.4.4 show that at least 59.4 per cent of the respondents' siblings are also involved in farming activities. From a sustainability point of view it shows that the legacy of cane farming is in safe hands as more young people are involved.

Results revealing youth involvement are consistent with suggestions by Adenkule et al. (2009) that several studies reviewed found that about 80 per cent of youth residing in rural areas are engaged in agricultural activities. The researcher's view is that youth involvement will remain constant or increase as long as the push factors that drive youth away from agriculture are addressed. In the FGDs of this study the youth complained about lack of remuneration when they are involved in farming activities and these concerns were confirmed when some of the cane growers who participated in FGDs stated that they are not obliged to pay wages to their offspring who are working in family farms.

#### 6.4.7 Involvement of other young people in the area in cane farming

Table 6.4.5 answers the question relating to whether, besides the respondents' siblings, there are other young people in the area who are involved in farming operations.

**Table 6.4.5: Other young people in the area involved in cane farming**

Other youth involvement		Frequency	Per cent
	No	24	9.4
	Don't know	23	9.1
	Yes	204	80.3
	Total	251	98.8
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

Table 6.4.5 confirms that 80.3 per cent of young people who participated in this study know other young people in the neighbourhood who are involved in cane farming. This is a positive indication in terms of sustainability of cane production going forward because it shows that there are more young people who are involved in cane farming. In terms of the SSG category of responses 82.7 per cent know other young people who are involved whereas this figure is 76.7 per cent amongst the LRG respondents. The explanation for this could be that in the SSG category farmers are in densely populated farming areas and are farming many smaller cane fields whereas in the LRG category the farmers farm larger plots and are in sparsely populated farming areas.

#### 6.4.8 Youth difficulty in adapting to rural life

A statement was made to respondents that the “youth are trendy and socially active and find it difficult to adapt to the dull pattern of rural areas”. Respondents were asked to state whether they agree with this statement or not and the results are reflected in Table 6.4.6.

**Table 6.4.6: Difficulty of youth to adapt to rural life**

	<b>Responses</b>	<b>Frequency</b>	<b>Per cent</b>
	Strongly disagree	31	12.2
	Disagree	59	23.2
	Not sure	18	7.1
	Agree	109	42.9
	Strongly agree	33	13.0
	<b>Total</b>	<b>250</b>	<b>98.4</b>
Missing	System	4	1.6
<b>Total</b>		<b>254</b>	<b>100.0</b>

According to findings in Table 6.4.6 at least 55.9 per cent of young people who participated in this study agree or strongly agree with this statement although another 35.4 per cent either disagreed or strongly agreed with the statement. Once again the results of those who agreed that youth find it difficult to adapt to rural life were comparable in both the SSG and LRG categories.

Answers in Table 6.4.6 are strange because it could be expected that because they come from these rural areas it should not be difficult for them to adapt to the rural life pattern. However, some of the respondents were referring to the youth in general, not necessarily in the area where they come from. The high percentage of those who agreed that the youth find it

difficult to adapt to the dull and rural pattern of rural areas might also be seen against the comparisons of urban and rural lifestyles and the youth seeing the urban lifestyles as more attractive especially when high poverty levels of rural areas are considered. Perhaps HSRC (2005:138) confirms frustrations of the rural youth when stating that of the 18 million people classified as poor or ultra-poor, nearly 13 million are based in rural areas.

#### 6.4.9 Taking agriculture as a subject at school

The respondents were also asked whether they had done agricultural subjects at school. Table 6.4.7 expresses the results to this question.

**Table 6.4.7: Youth who have done agricultural subjects at school**

Responses		Frequency	Per cent
	No	158	62.2%
	Yes	92	36.2%
	Total	250	98.4%
Missing	System	4	1.6%
<b>Total</b>		<b>254</b>	<b>100.0%</b>

Table 6.4.7 shows that only 36.2 per cent had done agricultural subjects. Although less than 50 percent answered positively this is still a good reflection, considering the predominantly negative youth perceptions of agriculture. It should also be taken into account the fact that some schools do not offer agricultural subjects and the 62.2 per cent of those who have not done agricultural subjects cannot be taken as a rejection of either this subject or agriculture in general. In the context of this study the low number of those who have done agricultural subjects cannot be taken as a confirmation of the finding by Terblanché (2006:132) who found that the attitude of fellow learners towards learners taking agricultural science was negative. It is the view of the researcher that the findings by Terblanché generally remain valid although not in the sugar industry as demonstrated by the findings of this study. In fact White (2012:12) agrees with Terblanché when he states that it is probably no exaggeration to say that in most countries, formal schooling as currently practiced teaches young people not to want to be farmers.

#### 6.4.10 Relationship between doing agriculture in school and choosing agriculture as a career

After obtaining the results of Table 6.4.7 regarding doing agricultural subjects at school an exploration of the relationship between having done agricultural subjects at school and

choosing agriculture as a career was done. Table 6.4.8 is a cross tabulation that looked at this relationship in terms of numbers and this should be read in conjunction with the chi-square in Table 6.4.9.

**Table 6.4.8: Cross tabulation – Relationship between doing agricultural subjects at school and the choice of an agricultural career path**

			If you were to choose between agricultural career path and other careers, which one would you choose?		Total
			Other career/Not sure	Agriculture	
Have you done any agricultural subject at school?	No	Count	45	111	156
		Expected Count	30.9	125.1	156.0
		% within Have you done any agricultural subject at school?	28.8%	71.2%	100.0%
		% within If you were to choose between agricultural career path and other careers, which one would you choose?	91.8%	56.1%	
		% of Total	18.2%	44.9%	63.2%
Have you done any agricultural subject at school?	Yes	Count	4	87	91
		Expected Count	18.1	72.9	91.0
		% within Have you done any agricultural subject at school?	4.4%	95.6%	100.0%
		% within If you were to choose between agricultural career path and other careers, which one would you choose?	8.2%	43.9%	
		% of Total	1.6%	35.2%	36.8%
Total		Count	49	198	247
		Expected Count	49.0	198.0	247.0
		% within Have you done any agricultural subject at school?	19.8%	80.2%	100.0%
		% within If you were to choose between agricultural career path and other careers, which one would you choose?	100.0%	100.0%	
		% of Total	19.8%	80.2%	100.0%

Table 6.4.8 shows that, of people who had agricultural subjects at school, 95.6 per cent indicated that they would choose agriculture as a career, whereas only 71.2 per cent of people who did not do agricultural subjects at school indicated that they would choose agriculture as a career.



Using results from the cross tabulation in Table 6.4.8 a Chi-Square test for association (Table 6.4.9) was conducted between having had agricultural subjects at school, and choosing farming as a career.

**Table 6.4.9: Chi-square test - Relationship between having had agricultural subjects at school, and choosing agriculture as a career**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	21.606 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	20.096	1	.000		
Likelihood Ratio	25.828	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	21.519	1	.000		
N of Valid Cases	247				

*a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 18.05.*

*b. Computed only for a 2x2 table*

As reflected from Table 6.4.9 there was a statistically significant association between having had agricultural subjects at school and choosing farming as a career,  $\chi^2(1) = 21.606$ ,  $p = 0.000$ . This finding agrees with the researcher's view that in cases where there were fewer respondents who had done agricultural subject at school this cannot be regarded as a rejection of agriculture but rather the manifestation of limited opportunities to study agriculture at a school level.

#### **6.4.11 Training in sugarcane agriculture**

Due to the importance of training in sugarcane agriculture and its ability to increase youth commitment in agriculture youth were also asked whether they had undergone any training in sugarcane agriculture and the results are presented in Table 6.4.10.

**Table 6.4.10 Youth training in sugarcane agriculture**

	<b>Training</b>	<b>Frequency</b>	<b>Percent</b>
	No training	91	35.8
	Formally trained	31	12.2
	Informally trained	93	36.6
	Both formally and informally trained	36	14.2
	Total	251	98.8
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

Results in Table 6.4.10 reflect a high percentage of training. Only 35.8 per cent have not been trained at all in sugarcane agriculture. Although the sugar industry encourages youth training in agriculture there is no specific policy on youth training in the industry. However, the industry has invested heavily in terms of training infrastructure because there is a dedicated training centre aimed at increasing the skill levels in the industry. Cane growers have been sending their workers and children to this training centre. Furthermore, informal training is provided at local level by role players, particularly South African Cane Growers' Association (SACGA) and South African Sugar Research Institute (SASRI) extension staff. Sugar millers also have dedicated extension officers that provide informal training to the cane growers.

The FGDs also confirmed that these youth were knowledgeable of cane farming especially when judging by the sugarcane agriculture jargon they used during the discussions. The findings also augur well for the sustainability of cane farming considering that it would have been impossible to force such a high number of young people to undergo training they did not want to attend. These findings are also consistent with the high involvement of youth in cane growing. Training and involvement go hand in hand especially in the case of a practical subject such as agriculture. Adekunle et al. (2009:102) had expressed the lack of basic farming knowledge as a constraint to youth involvement. Therefore, this positive finding about the high number of youth being trained in sugarcane agriculture could be seen as having also contributed to high youth involvement.

An attempt was made to explore the relationship between current involvement in farming activities and choosing agriculture as a career. The findings revealed that of people who are currently involved in farming activities, 86.9 per cent indicated that they would choose

agriculture as a career, whereas only 52.9 per cent of people who are not currently involved in sugarcane agriculture indicated that they would choose agriculture as a career.

These results are consistent with the results from a study by Aphunu and Atoma (2010) in the Delta Agricultural Zone of Nigeria. Aphunu and Atoma (2010:53) stated that their results show that youth's attitude towards agriculture correlated positively and significantly with involvement in agricultural production activities. A Chi-Square test for association was conducted between current involvement in sugarcane agriculture and choosing agriculture as a career. All expected cell frequencies were greater than five. There was a statistically significant relationship between current involvement in sugarcane agriculture and choosing agriculture as a career,  $\chi^2(1) = 29.319$ ,  $p = 0.000$ .

The study also examined the relationship between the duration of involvement in farming activities and choosing agriculture as a career. As part of the analysis a Chi-Square test for association was conducted between duration of involvement in farming activities, and choosing agriculture as a career. All expected cell frequencies were greater than five and after adjustment for multiple comparisons, there was not a statistically significant association between duration of involvement in farming activities and choosing agriculture as a career,  $\chi^2(1) = 5.572$ ,  $p = 0.018$ .

#### 6.4.12 Youth willingness to succeed parents as farmers

Respondents whose parents are emerging cane growers (ECGs) were asked whether they are personally willing to succeed their parents as farmers. This is an important question if cane farming is going to be sustained beyond the current generation of cane farmers. Table 6.4.11 presents the results of youth willingness to succeed parents as farmers.

**Table 6.4.11: Respondents' willingness to succeed parents**

Response		Frequency	Per cent
Valid	No	20	7.9
	Don't know	35	13.8
	Yes	197	77.6
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

As reflected in Table 6.4.11 at least 77.6 per cent expressed willingness to succeed parents in farming. However, a breakdown of results per grower category shows that 75.4 per cent of the 193 respondents in the SSG category expressed willingness with 15.2 per cent not being sure. On the other hand the in the LRG category an overwhelming 86.9 per cent of the 61 respondents expressed a desire to succeed parents in farming. According to the findings of the FGDs, although young people are prepared to succeed their parents as cane growers they prefer to run their own farms instead of inheriting their parents' farms. This finding shows that young people are willing to succeed their parents as farmers and contradicts the general belief in literature that young people are not prepared to become farmers.

In the *Synthesis report on current and emerging youth policies and initiatives with links to agriculture*, Omoti (2012:X) decries lack of information, inadequate enabling environment as some of the factors affecting youth perception about agriculture, particularly its potential and opportunities. However, Omoti (2012:X) further states that there are also youth who perceive a future in agricultural activities, with particular emphasis on the technological aspects such as information and communications technology. Results of Table 6.4.15 agree with this assertion by Omoti. Therefore, the researcher argues that some of these young people might not necessarily be involved in actual farming activities in the future but may still choose careers in agriculture and also be involved in agricultural value chain activities, amongst other things.

The researcher is of the view that this is an important and positive finding that bodes well for the sustainability of cane farming. The fact that these young people are willing to become farmers is important. The preference to run own farms instead of just inheriting their parents' farms is understandable and logical. The ECG may have many offspring and the size and the finances of the farm cannot be able to cater for the financial needs of all offspring.

#### **6.4.13 Willingness of another family member to take over the farm from parent**

Succession in the traditional African family is complex and there is no open discussion about these matters. This makes it difficult for young aspirant farmers to wait to inherit a family farm. Besides the respondents' willingness to succeed parents as farmers they were also asked whether there is somebody within the family who is prepared to take over the farm. Table 6.4.12 tries to ascertain whether there is somebody, other than the respondent, within the family who is interested in taking over farm operations from the parents.

**Table 6.4.12: Willingness of someone within the family to take over**

Response		Frequency	Per cent
Valid	No	29	11.4
	Don't know	77	30.3
	Yes	145	57.1
	Total	251	98.8
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

Results of Table 6.4.12 show that at least 57.1 per cent indicated that there is somebody who is willing to take over a family farm. In the case of the LRG category of the respondents 70.5 per cent of the 61 respondents stated that there is somebody who is willing to take over from parents whereas only 53.7 per cent of the 193 respondents in the SSG category agreed that there is somebody.

Results show that the LRG category seems to be more sustainable when taking into account the results that show a higher percentage of involvement by the youth, higher percentage of succession discussions that have taken place as well as higher percentage of those willing to succeed their parents as farmers.

#### **6.4.14 Multiple successors**

Although the results are positive in the sense that youth are prepared to take over from parents the researcher anticipates problems in cases of multiple successors especially in cases where landholdings are small. Infighting amongst siblings might ensue with negative consequences for agricultural production. The succession plans by the family, the farm size and the farm management arrangements post the involvement of the current owner will greatly influence farm production in future. There are examples in the sugar industry of cane growers who divided the farm for all their children to each inherit a portion thus reducing the farm size of each successor. Bezu and Holden (2014:263) also found this problem of many small farms with many inheritors in their study in Ethiopia. The overall implication, if this is not managed well, is that the small farm size will discourage the inheritors leading to reduced cane production. One of the suitable arrangements will be not to divide the farm but instead operate it as a business entity run by professional management with each inheritor having a share on the farm business.

#### 6.4.15 Succession planning in the family

When taking into cognisance the fact that cane growers are an ageing population it is important that the issue of succession be addressed. Table 6.4.13 ascertains whether there has been any discussion within this family.

**Table 6.4.13: Succession discussion in the household**

	<b>Response</b>	<b>Frequency</b>	<b>Per cent</b>
	No	130	51.2
	Yes	120	47.2
	Total	250	98.4
Missing	System	4	1.6
<b>Total</b>		<b>254</b>	<b>100.0</b>

According to Table 6.4.13, at least 47.2 per cent of respondents indicated that the discussions on succession have taken place in their families. However, these figures are distorted in the sense that in the SSG category 60.3 per cent of the 189 respondents indicated that the issue of succession has never been raised in the family. On the other hand, in the LRG category of respondents 73.8 per cent of the 61 respondents indicated that the issue of succession has been discussed. FGD results revealed that there is reluctance on the part of parents to raise this discussion because of complex family dynamics such as culture and the fact that there is more than one possible heir in each family and they would like to prevent conflict amongst their children. The low number of cane growers who have had the succession discussion is a concern when taking into cognisance the ageing farmer problem. Mtembu (2010:2) found that the average age of a cane grower is 53 years, while Naamwintome and Bagson (2013:63) found that the average age of a farmer in Ghana is 55 years old.

It was even interesting that in some cases there is a need to protect family wealth if one's daughter is getting married and these matters cannot be openly discussed. The researcher's view is that unless the succession issue is addressed and growers educated about the importance thereof young people will lose patience and leave the agricultural sector. It cannot be reasonably expected that young people will put their careers in limbo while waiting for their parents to make decisions.

#### **6.4.15.1 Relationship between succession discussion and participants' attitudes towards cane farming**

Because of the importance of succession discussions as well as attitudes towards farming it is important to explore the association between these two variables. Findings revealed that, of the youth who have had succession discussions, 88.3 per cent had a positive attitude towards cane farming, whereas only 73.1 per cent of the youth that have not had a succession discussion had a positive attitude towards cane farming.

As part of follow up analysis a Chi-Square test for association was conducted between whether the issue of succession planning was discussed in the family and participants' attitude towards cane farming. It was decided a-priori to only conduct one post-hoc test by collapsing the Negative and Not sure/Ambivalent categories of the attitude variable into one category. In this way, the percentage of people with a positive attitude could be compared between people who have had succession discussions, and those who have not. The post-hoc analysis revealed a significant association in the percentage of people with a positive attitude towards cane farming between people who have had succession discussions, and those who have not ( $X^2(1) = 9.217, p=0.002$ ). These results confirm the importance of succession planning in shaping the attitudes of young people towards agriculture. Therefore, if handled well, succession planning and implementation thereof will retain youth in sugarcane agriculture with positive implications for the sustainability of cane production going forward.

The general lack of succession planning in farming is not only a third world phenomenon. Hicks et al. (2012:95) state that in general, systematic research and discussion on the succession and estate planning in Australia is very limited, especially in the farming sector.

#### **6.4.15.2 Likes and dislikes of people who have had succession discussions and those who have not had these discussions**

An analysis was conducted to compare the likes and dislikes of agriculture between people who have and have not had succession discussions. Table 6.4.14 explores the relationship between having or not having succession discussions and the respondents' reasons for liking cane farming.

**Table 6.4.14: Reasons for liking cane farming (Stimulators)**

		Has the issue of succession planning been discussed in the family?			
		No		Yes	
		Count	Column N %	Count	Column N %
I like cane farming as it generates income.	Disagree	5	3.9%	6	5.0%
	Not sure	21	16.4%	5	4.2%
	Agree	102	79.7%	108	90.8%
I like cane farming as a career.	Disagree	22	17.1%	4	3.3%
	Not sure	12	9.3%	8	6.7%
	Agree	95	73.6%	108	90.0%
I like cane farming as it creates jobs in our community.	Disagree	2	1.6%	0	0.0%
	Not sure	2	1.6%	1	.8%
	Agree	124	96.9%	119	99.2%

Results of Table 6.4.14 show that there is a relationship between the two variables. In cases where succession discussions have taken place the percentages of those who agree that they like cane farming for various reasons (it generates income, like it as a career and like the fact that it creates jobs) tends to be higher when compared to cases where these discussions have not taken place. However, in terms of the actual head count the number of those who like cane farming because job creation is lower at 119 in the cases where succession discussion has taken place when compared to the 124 of those cases where there has been no succession discussion. However, the results do not show whether there is a cause and effect relationship between each reason for liking agriculture and the succession discussion or lack thereof. The results merely reflect an association between the two variables.

Table 6.4.15 shows the relationship between disliking cane farming and succession discussion within the family.



**Table 6.4.15: Reasons for disliking cane farming (Inhibitors / Barriers)**

		Has the issue of succession planning been discussed in the family?			
		No		Yes	
		Count	Column N %	Count	Column N %
I dislike cane farming because of its low socio-economic status (farm-life)	Disagree	94	73.4%	101	84.9%
	Not sure	12	9.4%	9	7.6%
	Agree	22	17.2%	9	7.6%
I dislike cane farming because of the type of work conducted is difficult.	Disagree	87	67.4%	89	74.8%
	Not sure	9	7.0%	12	10.1%
	Agree	33	25.6%	18	15.1%
I dislike cane farming because there is low income generated.	Disagree	84	65.1%	94	79.7%
	Not sure	30	23.3%	13	11.0%
	Agree	15	11.6%	11	9.3%
I dislike cane farming because it is of low status.	Disagree	100	77.5%	102	85.0%
	Not sure	11	8.5%	7	5.8%
	Agree	18	14.0%	11	9.2%
I dislike cane farming because it is too rural.	Disagree	97	75.2%	108	90.8%
	Not sure	14	10.9%	7	5.9%
	Agree	18	14.0%	4	3.4%

Results of Table 6.4.15 show that the more families discuss the matter of succession, the more the offspring of emerging cane growers (ECGs) will disagree with the following statements:

- Disliking cane farming because of its low socio-economic status nature (84.9 per cent of those who had a succession discussion against the 73.4 per cent of those who have not had this discussion).
- Disliking cane farming because of its difficult work (74.8 per cent of those who said “yes” against 67.4 per cent of those who said “no” – although when taking the actual headcount instead of percentages the difference between the two categories is only two respondents).
- Disliking cane farming because of its low income generation (79.7 per cent of those who said “yes” to a succession discussion against 65.1 per cent of those who said “no”).

- Disliking cane farming because of its low status (85 per cent of those who have had a succession discussion against 77.5 per cent of those who have not had this discussion).
- Disliking cane farming because it is too rural (90.8 per cent of those who have had a succession discussion against 75.2 per cent of those who have not had this discussion).

Taking the relationship between the youth dislikes and whether there has been a succession discussion or not, the researcher argues that raising the issue of succession is more likely to increase the chances of young people liking agriculture in general and cane farming in particular. Alternatively the succession discussion increases the number of those who disagree with many assumptions made about youth disliking agriculture.

#### 6.4.16 Possibility of becoming a fulltime farmer

To inherit a family farm does not necessarily mean that the person inheriting it will be involved on a full-time basis in farming. In fact in some cases where this has happened a decline in production has been observed. There are various contributing factors including the lack of farming skills by the inheritor as well as the possibility that the successor might not have the same passion for farming that the previous owner had. In Table 6.4.16 respondents had been asked whether they see themselves as future full-time farmers.

**Table 6.4.16: Possibility of becoming a full-time farmer**

		Frequency	Per cent
Valid	No	29	11.4
	Don't know	28	11.0
	Yes	195	76.8
	Total	252	99.2
Missing	System	2	.8
<b>Total</b>		<b>254</b>	<b>100.0</b>

Table 6.4.16 shows that the majority (76.8 per cent) agreed that they would like to become full-time farmers. In terms of the breakdown the percentage of those who see themselves as full-time farmers is 83.6 per cent of the 61 respondents in the LRG category whereas this figure is 75.4 per cent of the 193 respondents in the SSG category. The results of FGDs in

section 6.6 confirmed this finding. However, the perception from ECGs who participated in FGDs is that their offspring are reluctant to become farmers. This shows a serious lack of communication between parents and their children, hence the different perceptions and views.

Hicks et al. (2012:103) found that the amount of land represented by the farm was a significant predictor of likely succession and they state that on larger farms, one was more likely to observe a successor taking over. Hicks et al. (2012:103) argue that the probability of the successor taking over fell significantly as the income on the farm fell. It is against this background that the researcher believes that young people whose parents have larger landholdings are more likely to succeed parents and even become full-time farmers. In the case of this study the LRG category of ECGs is likely to have more young people who will succeed parents as farmers and remain in the sector for a longer period because farm sizes are larger and so are the income levels.

#### 6.4.17 Recommending farming as a career to friends

Respondents were asked whether they would recommend farming as a career to friends. The results are presented in Table 6.4.17.

**Table 6.4.17: Possibility of recommending farming as a career to friends**

<b>Recommendation of farming</b>		<b>Frequency</b>	<b>Per cent</b>
	No	14	5.5
	Not sure	19	7.5
	Yes	217	85.4
	Total	250	98.4
Missing	System	4	1.6
<b>Total</b>		<b>254</b>	<b>100.0</b>

The encouraging results of Table 6.4.17 show that 85.4 per cent of the respondents will definitely recommend farming as a career option and this will have positive implications for the sustainability of cane farming. The breakdown per grower category shows that in the SSG category the percentage of those who would recommend agriculture is 86.8 per cent of the 189 valid respondents in this category while the same percentage of 86.9 per cent of 61 respondents was achieved in the LRG category.

#### 6.4.18 Having adequate information on farming as a career

In order to make good career choices and decide whether they will remain in agriculture, it is important that youth make informed decisions. In Table 6.4.18 respondents were asked whether they believed they had enough information regarding farming as a career.

**Table 6.4.18: Possession of enough information about farming as a career**

<b>Possession of enough information</b>		<b>Frequency</b>	<b>Per cent</b>
Valid	No	92	36.2
	Not sure	60	23.6
	Yes	99	39.0
	Total	251	98.8
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

The results of Table 6.4.18 were not encouraging from a sustainability of cane farming point of view because only 39 per cent responded positively with another 36.2 per cent stating clearly that they do not have the information. The high number of those who are not sure also proves that there is still a lot of work to be done in terms of empowering young people to make informed decisions about careers in agriculture. Information is the first step in this process of promoting agriculture to the youth. Regarding the comparisons of responses between SSG respondents and LRG respondents the “no” responses were 41.6 per cent and 21.3 per cent respectively. A larger percentage of LRG respondents stated that they have information about farming careers.

On the issue of perceptions on sources of information on agriculture used by the youth Mathivha (2012:23) states that knowledge is an increasingly significant factor of production. All actors in the agricultural sector are part of the evolving agricultural system; yet the majority of youth are seldom involved in the policy making and planning processes. Mathivha (2012:23) also mentions that the 2008 Agricultural Youth Summit emphasized, among others, that Information, Communication and Technology (ICT) covers a wide range of tools and technologies that can be used to foster development and change negative youth perception about Agriculture. Regarding lack of information dissemination a Mauritian study is a classic example. “When it comes to incentives that are provided to youths in the Agricultural

sector, most of the respondents (38.4 per cent) were neutral, implying that they have no idea about the incentives provided in Mauritius” (Hosenally, 2012:37).

#### 6.4.19 Preference to work in rural or urban

Agriculture predominantly takes place in rural areas. Since literature is abound with stories of youth migration to the cities it was important to ascertain the preferences regarding place of work and settlement of youth whose parents are ECGs. Table 6.4.19 presents the preferences of the youth in terms the areas where they prefer to work and settle.

**Table 6.4.19: Where youth prefer to work and settle**

Preferred settlement area		Frequency	Per cent
	In the rural area	176	69.3
	Not sure	26	10.2
	Urban area	48	18.9
	Total	250	98.4
Missing	System	4	1.6
<b>Total</b>		<b>254</b>	<b>100.0</b>

According to Table 6.4.19 at least 69.3 per cent of the youth whose parents are ECGs prefer to work and settle in the rural areas instead of the urban areas. This result shows a commitment by young people to careers in rural areas and this augurs well for the sustainability of cane farming in particular and agriculture in general. Regarding the breakdown of responses according to grower categories, 71.1 per cent of the SSG category will settle in rural areas compared to the 68.3 per cent of the 61 young people under LRG category who will settle in a rural area. The finding that most young people interviewed prefer to settle in rural areas is not surprising because they grew up in these areas and are still operating in these areas. In fact, although it is generally expected that young people will be lured by attractive careers in urban areas, it will not be unreasonable to expect those who are either content with their familiar setting in rural areas or fear the need to make serious lifestyle adjustments in urban areas.

#### 6.4.20 Choice of agriculture or other careers

To further explore the interests of youth regarding future participation in agriculture, respondents were asked to state their choices between agriculture related careers and other careers. Table 6.4.20 below addresses this question.

**Table 6.4.20: Choice between agriculture career path and other careers**

	<b>Career choice</b>	<b>Frequency</b>	<b>Per cent</b>
	Other careers	33	13.0
	Not sure	17	6.7
	Agriculture	201	79.1
	Total	251	98.8
Missing	System	3	1.2
<b>Total</b>		<b>254</b>	<b>100.0</b>

The results in Table 6.4.20 correspond with the results of Table 6.4.19. In a nutshell Table 6.4.20 shows that the majority (79.1 per cent) will choose agricultural careers and will settle in rural areas as reflected in Table 6.4.19. In terms of the breakdown the number of those who will choose agriculture is comparable in both categories of respondents (LRGs and SSGs).

#### **6.4.21 Conclusion and recommendations**

The conclusion is that the youth whose parents are emerging cane growers (ECGs) do not despise their inheritance. This is because results show that most of them are currently involved in farming operations, will choose agricultural careers and are prepared to settle in rural areas. It was also encouraging to find that they will even recommend agriculture to their friends and that there are other young people in the study area who are also involved, including the siblings of respondents. The results do not agree with the general views in literature that young people are exiting agriculture because of lack of interest. Overall the results showed that succession has not been widely discussed in the families of cane growers and this is a worrying finding considering that growers are ageing. FGDs shed more light on the issue of succession and revealed that there is an influence of African culture as well as other family dynamics such as multiple inheritors, hence the reluctance to discuss this matter. The recommendation is that communication be improved between growers and their children and also discuss succession matters in the context of culture. This will encourage greater involvement in farming by the youth.

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## 6.5 FACTORS RELATED TO YOUTH WILLINGNESS TO SUCCEED PARENTS AS FARMERS

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### Abstract

*This paper is focused on the statistical analyses of the results of a study conducted in the sugar industry in the Province of KwaZulu-Natal, South Africa. There were 254 respondents and the focus was on the sustainability of cane growing through youth involvement. This paper concentrates on the variable that can be regarded as predictors of youth willingness to succeed parents and become farmers. The variables which were found to be predictors were involvement in farming operations, size of parents' farm, choosing between agriculture and other careers, choosing agriculture as a career if there is money to be made in agriculture, and attitude towards cane farming in general. The paper's conclusion is that the chances of taking the farm over from parents were most favourable to individuals who were fully involved in farming activities.*

**Key words:** Youth, predictor, involvement, farm size, agriculture, career, attitude, money.

### 6.5.1 Introduction

This article forms part of a series of articles produced as part of a PhD study on the sustainability of emerging cane growers (ECGs) through youth involvement. The focus of this article is on those factors that serve as predictors of the willingness of youth to succeed their parents as farmers. The study arose out of a concern that young people would rather migrate to the cities than to work in agriculture in the rural areas. According to Omoti

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(2012:43) in all case study countries, the youth perceptions with respect to participation in agriculture were found to be negative or poor as most of them were encouraged to take up formal employment or engage in other businesses other than agriculture. The case studies Omoti (2012) is referring to are Malawi, South Africa, Mauritius, Tanzania, Swaziland and Zimbabwe. The prevalent youth negative perceptions towards agriculture are not good for the future of agriculture. It will have dire consequences in the sense that there will be no ready successors for the current ageing farmers which will result in the reduction of agricultural output.

The researcher's hypothesis is that unless youth are willing to get involved and participate in farming with a view to succeeding their parents the future of agriculture looks bleak. The focus of this study is on ECGs which comprise small-scale growers (SSGs) and land reform growers (LRGs). These growers have unique needs which are different from those of White commercial cane growers. They are all Blacks in terms of the *Broad Based Black Economic Empowerment Amendment Act of 2013* (Act No. 46 of 2013) and they come from the African, Indian and Coloured race groups.

In the South African context there is emphasis on the provision of various forms of support to these categories of farmers with a view to advancing both land redistribution and redistribution. The question is whether this support will be money well spent if these farms cannot be sustained beyond the current generation of farmers. It is against this background that this study was undertaken to understand whether the offspring of these growers are willing to succeed their parents and become farmers. The main reason why the children of the current ECGs were respondents instead of youth in general is because these farms are likely to be passed onto these young people when their parents retire or pass away. Therefore the focus of this paper is on those factors that can predict the willingness of the heirs of ECGs to succeed their parents.

The study was conducted in the sugar industry, which according to SASA (2015:17) has approximately 22,500 growers and generates approximately R12 billion annual revenue SASA (2015:17) also mentions that this industry employs 79,000 people directly and has 350,000 indirect jobs.

### **6.5.2 Methodology**

Interviews of ECGs' offspring who are between the ages 14 to 35 were undertaken as part of the study. Regarding the study area, respondents came from mainly Ilembe District Municipality as well as Uthungulu District Municipality. The focus was on the cane growers supplying five of the seven sugar mills that are situated in these two district municipalities. As part of the stratified probability sampling approach a total of 254 respondents were selected as part of samples that were representative of the number of growers in each of the five strata. In addition to data collection which had been done via personal interviews using structured questionnaires, focus group discussions (FGDs) also took place. However, the focus of this paper is on the analysis of data produced during field work without due consideration to FGDs.

### **6.5.3 Findings and discussion**

This section looks at the findings from the collected data which had been analysed using statistical software.

#### **6.5.3.1 Decision tree analysis on willingness to take over the farm**

A decision tree (Table 6.5.1) was created in order to analyse which characteristics served as predictors of offspring's willingness to take over the farming from their parents. The characteristics entered as possible predictors were all characteristics in the dataset which directly related to the offspring analysed. These can be seen in the cells highlighted in the "Model Summary" table 6.5.1 below.

**Table 6.5.1: Model summary on the willingness of young persons to succeed parents**

Specifications	Growing Method	CHAID	
	Dependent Variable	Are you prepared to take over the running of the farm from your parents?	
	Independent Variables	Type of Farmers, Gender, What is your age?, What is your racial group?, What is your marital status?, Do you have dependents?, Which of your parents are involved in farming?, What is your highest level of education?, Have you done any agricultural subject at school?, What is your current occupation?, Do you have any cane farming experience on farms other than on your parents' farm?, Are you currently involved in the farming operations on your parents' farm or other farms in the area?, Has the issue of succession planning been discussed in the family?, Have you been trained in sugarcane agriculture?, Do you have enough information about farming as a career?, What is the size of your parents' land reform commercial farm?, If it can be proven that there is money to be made in cane farming, will you take it as your career?, Your attitude towards cane farming is generally:, Cane farming is a profitable business., Where do you prefer to work and settle?, Your life has been improved by Land reform commercial sugarcane farming., If you were to choose between agricultural career path and other careers, which one would you choose?	
	Validation	None	
	Maximum Tree Depth	3	
	Minimum Cases in Parent Node	25	
	Minimum Cases in Child Node	1	
	Results	Independent Variables Included	Are you currently involved in the farming operations on your parents' farm or other farms in the area?, What is the size of your parents' land reform commercial farm?, If you were to choose between agricultural career path and other careers, which one would you choose?, If it can be proven that there is money to be made in cane farming, will you take it as your career?, Your attitude towards cane farming is generally:
		Number of Nodes	15
		Number of Terminal Nodes	9
Depth		3	

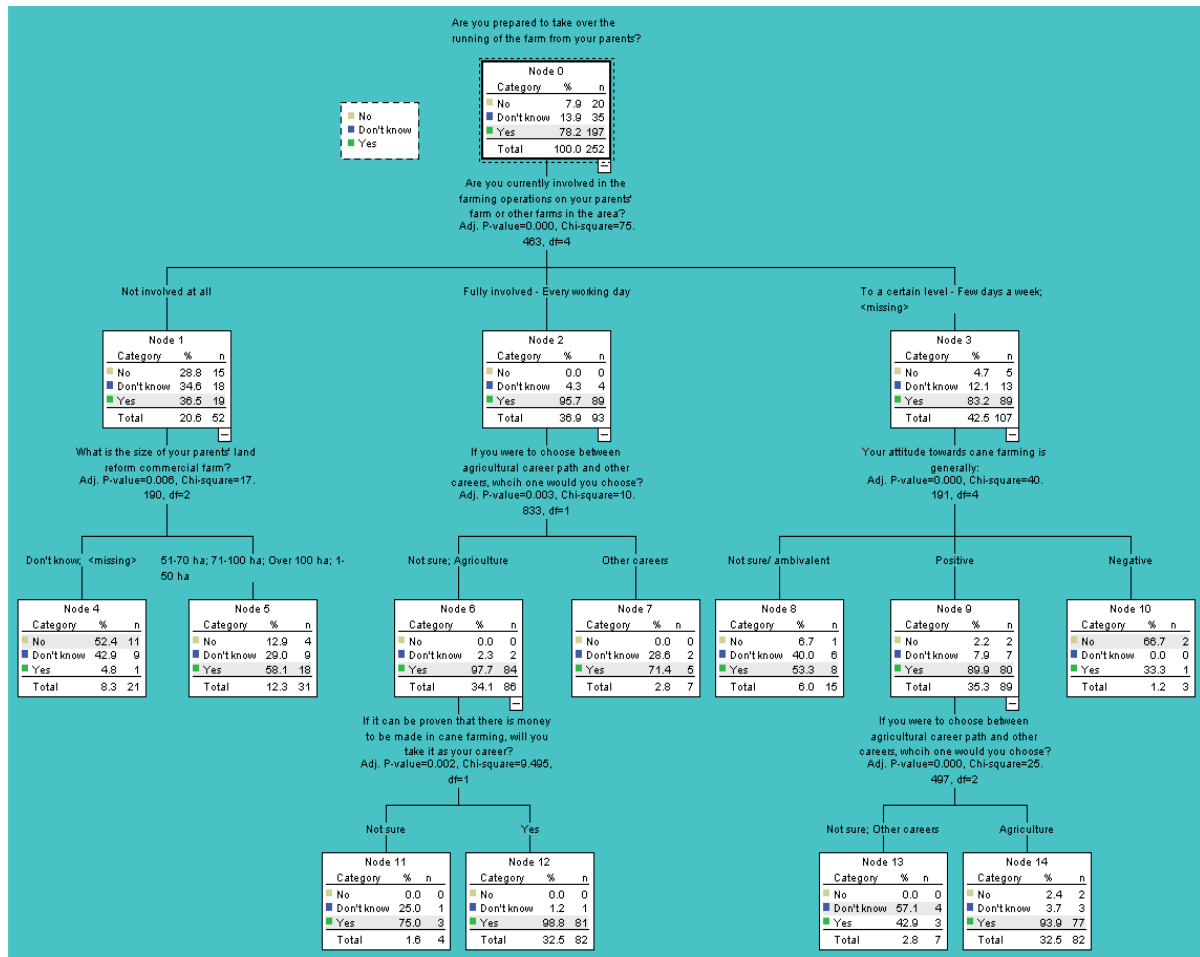
The dependent variable was the willingness of the young person whose parent is a cane grower to take over from the parent. Various independent variables formed part of the model. From the model summary table 6.5.1 above it can be seen that out of all the independent variables specified, the following were included in the model:

- Involvement in farming operations
- Size of parents' farm
- Choosing between agriculture and other careers
- Choosing agriculture as a career if there is money to be made in agriculture

- Attitude towards cane farming in general.

The other independent variables did not make a significant contribution to the model, and were consequently dropped from the model.

Emanating from the data in the model summary a decision tree (Figure 6.5.1) was created.



**Figure 6.5.1: Decision tree on the willingness to succeed parents as farmers**

### 6.5.3.2 Explanation of the decision tree

From the decision tree in Figure 6.5.1 it can be seen that, using the CHAID (chi-square automatic interaction detection) method, "Involvement in farming operations on parents' farm or other farms in the area" is the best factor related to the willingness to take over the farm ( $X^2(4)=75.463$ ,  $p=0.000$ ), with 95.7 per cent of those fully involved indicating they are willing to take over, and 83.2 per cent of those involved only a few days a week willing to take over. In contrast, only 36.5 per cent of those who were not involved at all were willing to take over farming from their parents.

For those not involved at all in farming operations, the next best factor was the size of their parents' farm ( $X^2(2)=17.190$ ;  $p=0.006$ ). Of those who did not know the size, only 4.8 per cent indicated that they were willing to take over the farm, compared to 58.1 per cent of those who indicated a size for the farm.

For those fully involved in farming operations, the next best factor was "If you were to choose between agriculture and other career paths, which one would you choose?" ( $X^2(1)=10.833$ ;  $p=0.003$ ). Of those who indicated that they would choose agriculture as a career, or that they were not sure, 97.7 per cent were willing to take over the farm. Of those who indicated that they would choose other careers, 71.4 per cent indicated that they were willing to take over the farm.

For individuals who indicated that they were fully involved in farming activities, and would choose agriculture as a career or were not sure, one further factor associated with willingness to take over the farm was "If it can be proven that there is money to be made in cane farming, will you take it as your career?" ( $X^2(1)=9.495$ ,  $p=0.002$ ). Of the individuals who indicated that they are not sure whether they would choose agriculture as a career if there were money to be made, 75 per cent indicated that they would be willing to take over the farm. In contrast, of the individuals who said yes, they will take farming as a career if there is money to be made, 98.8 per cent indicated that they would be willing to take over the farm.

For individuals who said they are involved in the farming a few days a week, the next best factor related to whether they would be willing to take over the farming was their "Attitude towards cane farming in general" ( $X^2(4) =40.191$ ,  $p=0.000$ ). Of those who indicated that they were not sure/ ambivalent about their attitude towards cane farming, 53.3 per cent indicated that they were willing to take over the farm. Of those who indicated that they had a positive attitude, 89.9 per cent indicated that they were willing to take over. In contrast, only 33.3 per cent of individuals who had a negative attitude towards cane farming were willing to take over the farm.

For those individuals who were involved in cane farming a few days a week, and who had a positive attitude towards cane farming, the next best factor related to willingness to take over the farm was "If you were to choose between an agricultural career path and another career path, which one would you choose" ( $X^2(2)=25.497$ ,  $p=0.000$ ). Of those who indicated that

they were not sure, or would not choose agriculture as a career, 42.9 per cent said they were willing to take over the farm. In contrast, 93.9 per cent of those who said they would choose agriculture as a career were willing to take over the farm.

Using data from Table 6.5.1 a deeper analysis was conducted and Table 6.5.2 below was developed to reflect terminal nodes. Terminal nodes are those nodes that do not have any other nodes following after them.

**Table 6.5.2: Gains for nodes**

Node	Node		Gain		Response	Index
	N	Per cent	N	Per cent		
12	82	32.5%	81	41.1%	98.8%	126.4%
14	82	32.5%	77	39.1%	93.9%	120.1%
11	4	1.6%	3	1.5%	75.0%	95.9%
7	7	2.8%	5	2.5%	71.4%	91.4%
5	31	12.3%	18	9.1%	58.1%	74.3%
8	15	6.0%	8	4.1%	53.3%	68.2%
13	7	2.8%	3	1.5%	42.9%	54.8%
10	3	1.2%	1	.5%	33.3%	42.6%
4	21	8.3%	1	.5%	4.8%	6.1%

*Growing Method: CHAID*

*Dependent Variable: Are you prepared to take over the running of the farm from your parents?*

Table 6.5.2 above only contains values for the terminal nodes in the tree. The two terminal nodes of most interest in Table 6.5.2 are Node 12 and Node 14. Node 12 represented people who were fully involved in cane farming activities, would either choose agriculture as a career or were not sure, and said that yes, they would take cane farming as a career if there were money to be made. From the "Response" in the shaded column in the table above it can be seen that 98.8 per cent of these individuals indicated that yes, they were prepared to take over the running of the farm from their parents.

Node 14 was representative of people who were involved in cane farming a few days a week, had a positive attitude towards cane farming, and would choose agriculture as a career path. From the "Response" column can be seen that 93.9 per cent of these individuals were willing to take over the running of the farm from their parents. The Index column indicates the ratio of the percentage of people who said "Yes, they are willing to take over the farming" in every node compared to the overall percentage of people who indicated they are willing to take over the farming. Thus, it can be seen from the shaded cells that the ratio was most favourable for people in Node 12. 98.8 per cent of them said they are willing to take over the farm, compared to 78.2 per cent in the entire sample. For Node 14, the index ratio was also over 100 per cent, with 93.9 per cent of them saying they were willing to take over the farm, again compared to only 78.2 per cent in the entire sample. For all the other terminal nodes (11, 7, 5, 8, 13, 10, and 4), the percentage of people in that node who were willing to take over the farm was smaller than the percentage in the entire sample willing to take over the farm.

#### **6.5.4 Conclusion and recommendations**

From the analysis of the data using various methods it can be concluded that the chances of taking over the farm from parents were most favourable for individuals who were fully involved, would choose agriculture as a career or were unsure, and would take cane farming as a career if there were money to be made; followed by individuals who were involved a few days a week, had a positive attitude towards cane farming, and would choose agriculture as a career. The recommendation will be that parents expose their children to farming operations at an early age in order to ensure their involvement. It is also important to improve the economic viability of farming because money is a great influencer in youth career choices. In order to maintain youth positive attitudes towards agriculture it is necessary to strive to change the perceptions of agriculture from being seen as of low status requiring manual work to that of a modern sector which competes with other sectors of the economy in terms of socio-economic status and ability to generate and maintain youth interest.



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## 6.6 A QUALITATIVE STUDY ON THE SUSTAINABILITY OF EMERGING CANE GROWERS THROUGH YOUTH INVOLVEMENT

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### Abstract

*This qualitative study complements a quantitative study on the sustainability of emerging cane growers (ECGs) through youth involvement. Both youth and their parents who are cane growers participated in the focus group discussions (FGDs). There is a general concern in literature about the failure of agriculture to stimulate youth interest in the sector, and generally perceptions and attitudes are found to be negative. However, this study found that youth were interested in cane growing and were also involved in farming activities. The interesting finding is that their parents thought that the youth were negative towards agriculture. The paper found that there is a general lack of openness and discussion on the issue of succession, and cultural and family dynamics were found to be contributing factors. Succession was complicated by the fact that some parents have multiple potential inheritors. Youth expressed that the information they have is limited and that they would like to get more information to enable them to make informed decision. The findings confirmed the findings of the quantitative study and to a certain extent elaborated on matters that were not clear during the quantitative study.*

**Key words:** Sustainability, youth involvement, perceptions, attitudes, emerging cane growers, succession.

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### **6.6.1 Introduction**

There are many references to literature that suggest that young people are not interested in farming and would prefer to follow careers outside of agriculture. It is of a great concern that a sector that plays a critical role in the reduction of poverty, particularly in rural areas, seems to be lacking youth appeal. This study, which focused on the sustainability of cane production through youth involvement, sought to understand and confirm this in the context of the sugar industry. The focus group discussions (FGDs) explored issues that have implications for sustainability of agriculture beyond the current generation of cane farmers. Generally it has been observed that youth have negative perceptions and attitudes towards cane farming in particular and agriculture in general. Leavy and Hossain (2014:38) conclude that farming is not a favoured option for the younger generation in rural areas of developing countries, even those in which agriculture remains the mainstay of livelihoods and the rural economy. These negative issues are exacerbated by the reluctance of current farmers to prepare the next generation of farmers. It is in this context that issues of succession are also investigated with their possible implications for the future of farming. The researcher starts from the premise that unless youth have positive perceptions of agriculture and succession planning has been done it will be difficult, if not impossible, to sustain agricultural production in the future. In order to prepare youth to succeed parents their current involvement in farming activities is critical. Finally the paper looks at whether youth have access to information about agriculture which will assist them to make informed decisions about whether they are choosing agriculture as a career option.

### **6.6.2 Methodology**

Although the main respondents of this study were the youth whose parents are emerging cane growers (ECGs), some FGDs involving their parents took place. A total of 22 ECGs participated in FGDs. Furthermore, a total of 39 offspring of ECGs were involved in FGDs. There were separate discussions for both groups. In total there were four FGDs comprising two from the youth and another two from their parents. Participants had been randomly drawn to participate in these discussions. The number of participants was not necessarily a representative figure but gives insights into issues pertaining to sustainability of cane farming through youth involvement. The study area was on the ECGs that supply 5 sugar mills which are situated in the North Coast of KwaZulu-Natal, South Africa. These cane growers are situated in Ilembe and Uthungulu district municipalities.

### **6.6.3 Perceptions and attitudes of youth towards agriculture**

The ECGs' main perception of youth in cane farming is that young people are not interested in farming. They had strong views that their children do not have to face the difficulties they faced as farmers. Furthermore there is belief from ECGs that "lack of agricultural work at school contributed to youth's lack of interest. Agriculture was seen as slavery. We used agriculture as punishment for children". According to Omoti (2012:ix) the majority of youth seem to have a lacklustre attitude towards agriculture. As one youth put it, "If you look at the conditions of farmers, there is no way you can be attracted to be a farmer" (2012:ix).

The views expressed by parents and some youth in FGDs in the current study are consistent with Omoti's observation regarding the lacklustre perceptions and attitudes of youth in the Zimbabwean study. The predominant views of ECGs about the perception of agriculture by their children were negative, with statements such as, "My child does not come near a farm – no interest", "Youth are not interested and see cane farming as a dirty job", "It is not that the youth is not interested but the question is whether they can fulfil their dreams in this struggling environment called farming" and "young people don't see cane farming as a rewarding career". The views of parents seem to confirm the findings of Terblanché (2006:151) when he states that throughout the developing and other countries there are a tendency to get the youth involved in agriculture but it became clear that the youth do not really see agriculture as a viable proposition to further their career. However, some ECGs believe that their youth like farming but there is not enough income from cane.

It was interesting to discover that the youth's views were very different from those of their parents. Generally the youth who participated expressed that they are positive towards cane farming. They stated that they believed that cane farming is important. They even stated that they believed that they can make money. However, they conceded that when they were younger they were negative towards cane farming. Factors that were highlighted by the youth as contributing to their positive attitudes towards agriculture were work opportunities, income received, access to market for their cane, reference to the sugar industry as "tried and tested", parents' influence which helped to generate youth interest in farming and the flexibility of farming in terms of flexible working hours. One young person remarked that "farming is not an 8h00 to 17h00 job" and this gives them space to do other things. It is the researcher's view

that these perceptions and attitudes will continue to improve for the benefit of agriculture. This is because perceptions and attitudes are, to a certain extent, dynamic.

Also highlighted were negative factors which were raised by the youth and these include the lack of knowledge, adverse weather conditions, the labour intensive nature of farming, being teased at school because of their involvement in cane farming, and the lack of rewards and payments from parents. There were very strong views regarding the failure of parents to remunerate the youth when working in family farms. Young people do not like it when farming is used as a “punishing stick”. They were not happy that in some cases farming is regarded as a career for those who have failed at school. They further argued that sometimes the “attitudes of parents” is regarded as a problem. Young people participating in FGDs also highlighted that they would like to run farms as proper modernized businesses but their parents are refusing this and they also complained that parents do not want to implement the new technologies that have been learnt by the youth.

Some of the factors that have influenced the youth’s positive attitudes include training in sugarcane agriculture. As a result of this training some are now fully involved in farming. They mentioned that their attitudes are more positive now. All participants stated that they are involved in farm operations. Even the jargon used during discussions confirmed a high level of understanding, training and involvement in farming by the participants. They all nodded their heads in agreement with the statement that their current level of involvement has led to their positive attitudes. Furthermore, they all agreed that the training in sugarcane agriculture has changed their positives for the better. However, they admitted that in the beginning they were initially “pushed” into farming but now they like it.

As part of the process to comprehend youth perceptions and attitudes towards farming, they were asked to specify their likes and dislikes about agriculture. Most young people stated that they like the flexibility of farming, income they receive when farming, pursuing a “business with a legacy and that will never be out of fashion”, higher status of farming, the knowledge they receive from being involved in farming and are also excited about the fact that they “were raised through income from cane farming”.

The dislikes raised by youth participants include small sizes of their family farms, receiving income in only a few months of the year e.g. 6-8 months, adverse weather conditions, income levels from cane farming may sometimes be lower than in other commodities, cattle grazing

on farms, cane theft and cane fires that force them to harvest immature cane and thereby impact negatively on their income. As part of dislikes they raised concerns about the uncertainty caused by land claims since some of the family farms have been negatively affected by the restitution process. They also expressed a feeling of being undermined and not taken seriously because they believe that they have been trained for too long and now want opportunities to prove themselves. Interestingly, some stated that they do not like the part when they have to pay workers on their farms. The issue of access to land was strong in the FGDs and the importance and the realities of land are best captured by Leavy and Hossain (2014:26), who argue that the freedom of farming is a choice only for those who can access the land and inputs needed to go for it.

#### **6.6.4 Succession matters**

Regarding succession issues most participating ECGs were reluctant to directly answer the question as to what will happen to their farms in case they get old or sick. There was an atmosphere of uncertainty among participants when this question was posed by the researcher. Some of the remarks of ECGs regarding successions were “I talk to my children. They might sell the farm”, “they will sell the farm and divide the money”, “my children can run the cane farm and succeed if we also include other crops in the mix. They understand the importance of land”; “we might not be here in the next 20 years. Out of my 7 children only 2 are involved in the farm”, “I will lease out my farm to somebody”, “our land is small and therefore will not produce enough money for the youth. If I have 4 hectares and 4 children I still need to give them land for their houses. It is clear that only a few fields will still be productive once we are gone”. Leavy and Hossain (2014:28) state that, for some parents, the thought of their children taking up farming was an anathema to them and even made reference to an Indonesian widow and mother of six who did not want any of her children to become farmers. This widow’s stance was attributed to her experiences in the farms.

Although some ECGs stated that they have raised the matter of succession with their offspring it was obvious that this matter is not openly discussed in the families. Some of the frustrations expressed by the participants regarding succession discussions are as follows:

- Fear that this will cause conflict between children.
- Where they discuss succession cane growers state that their children express reluctance in inheriting the farms.

- The youth also compare farm incomes with other income sources when parents raise the issue of them continuing with the family tradition of farming.

However, all ECG participants stated that they feel that succession is an important subject they need to attend to. Some even expressed that this discussion has opened their eyes and that they need to plan for succession while they are still alive.

There were mixed views regarding whether cultural influence has an impact on the succession issue. Some of the interesting remarks regarding culture and succession planning were: “How will my daughter who is married to an unemployed man inherit my farm?”, “our culture does not allow us to discuss this with the children”, “in some cultures the eldest son inherits while in others it is the last born”, “culture does not prevent us from discussing these matters” and “but in most cases the one who is involved and diligent will inherit the farm”. The issue of gender was sensitive in the FGDs and this is echoed by Muwi (2012:2), who found that gender also brings up the question of gaining access to land, and is thus at the foundation of the viability of establishing a rural and agrarian livelihood for young people. It is further argued by Muwi (2012:2) that men have first preference when it comes to inheritance of land, whereas most women gain access to land only after marriage.

Once again the views of youth regarding succession differed from those of parents. Although youth expressed that in some cases this issue of succession has been raised by their parents there were more young people who expressed that there has been no discussion than those who said this matter has been raised by parents. Some of the frustrating expressions by the youth were that “sometimes parents raise succession matters while on their deathbeds. Perhaps they don’t want to cause conflict in the family”; “we understand why parents don’t raise this. They want to maintain peace” and “parents are cowards. They should make it known as to who would succeed. And this should normally be a person who has been helping in the farm”

For those youth who answered in the affirmative that succession has been discussed they argued that this has made life easier for them. They argued that if they know that they are going to inherit the farm they will work harder. On the other hand, the lack of succession discussion forces them to be negative.

When asked which one they prefer between inheriting a parent’s farm and having their own farm they all agreed that it is better to get your own land and work for your own. They

believe that “having your own land is better than an inheritance; you can make your own plans and there are no arguments”. Furthermore, young people are of the view that they can run their own farms and complained that “There is not enough income if given a small plot by a parent” and “it is complicated to run a family farm. We do have interest but there are family dynamics”. Young people also lamented the small sizes of farms which they perceive to be impossible to yield sufficient income to cater for more family members.

Regarding the factors that will influence them to succeed parents as farmers the following were mentioned:

- The youth will have the opportunity to improve their lives and can run these farms.
- Sugarcane is a long term and tolerant crop if properly maintained.
- They can plan their things properly as there are no set times in farming.
- They can be in charge of their own destiny and run their own things.
- Cane farming will always be here as there is a demand for sugar.

Some even remarked strongly that “we will choose agriculture regardless of parents and family dynamics”. When young people were probed further and asked whether their decisions will be influenced if they know that there is money to be made in sugarcane agriculture, they stated that money will definitely influence them, but it is not always about money. Instead they would like to start new things (careers) and would also like to leave a legacy, because some of their grandparents were also involved in farming. The most important finding regarding succession was the willingness of the young people whose parents are ECGs to succeed their parents as farmers. It is clear that succession is a sensitive matter and the problem of many inheritors and small farms highlighted by Bezu and Holden (2014:263) seems to be relevant in the sugar industry.

#### **6.6.5 Youth current involvement in farming activities**

Emerging cane grower (ECG) participants were asked regarding current involvement of the youth in farming. Some stated that the youth are involved although the other approximately half of respondents were of the view that young people are neither involved not interested. Some even stated that their children are working elsewhere. When the question of direct



involvement was asked there were more ECGs who agreed that the youth are involved in farming. They stated that their offspring are interested and involved and one even remarked positively about his daughter-in-law who was interested and involved in farm operations. However, the researcher's view is that the "interest" of the daughter-in-law should not be taken seriously because of cultural dynamics within African societies which may, to a certain degree, compel daughters-in-law to follow in-laws' family traditions regardless of whether they like it or not. It was interesting that another participant remarked that his daughter in law would rather plant flowers instead of sugarcane. Generally, there was an acceptance by ECGs that young people do get involved and help in family farms.

The views were also mixed as to whether young people see farming in a positive light. Some even stated that some young people still love farming. When ECGs were probed as to the reasons why some young people are involved their responses were that "farming is good business", "if the farm does well we would succeed and children will be interested".

Regarding those who expressed the lack of youth' involvement they cited lack of youth exposure to farming, low returns that discourage their children, small farm sizes which yield low returns as well as the influence of parents.

The following contributing factors were cited by ECGs participating in FGDs as being responsible for discouraging young people from choosing agriculture:

- High costs of running farms.
- Lack of farm equipment and other inputs.
- Lack of resources which delays the growers from performing certain farm activities on time. They stated that timing is important in agriculture and if you delay, for instance to apply fertilizer or herbicides, you lose money.
- Lack of incentives and rewards.
- Failure to prove to the youth that it makes economic sense to choose agriculture.
- The failure of parents to reward young people who are involved and working on their parents' farms.

- Small landholdings and low income. One ECG stated that “when they are doing their financial calculations they realize that incomes are low”.

The above sentiments resonate with those of Leavy and Hossain (2014:39), who argue that agriculture is a viable choice only for those who can access land and inputs, and furthermore that for many young people, the lack of access to land, capital and other inputs prevents them from considering agriculture.

Concerning what can be done to cultivate youth interest in agriculture, the participating ECGs stated that young people should work on farms during school holidays, should attend workshops, and get involved in farm operations; parents need to give young people incentives and rewards when working on family farms; youth should be encouraged to study agriculture; it must be ensured that youth are involved as part of training; give young people land, financial support and equipment; increase land size given to youth; tighten the selection process for those receiving farms as part of land restitution and redistribution, and include young people in this process; provide agricultural extension support to these young people; do away with the term ‘small-scale growers’ because it is offensive and discourages young people; provide bursaries for the youth to study agriculture and maintain the dignity of farmers; communicate and provide support.

Some participating ECGs were still adamant that young people should not be paid for working in family farms and one even remarked, “If we pay them, whose food are they eating?”

On the other hand young people believe that their interest in farming can be generated and maintained if they are given own farms, are given the opportunity to engage government to enable them to acquire land reform farms, must be paid by parents for the work they do in family farms, would like to be treated well by their parents, be given reliable farm equipment and inputs to enable them to do their work properly, be given opportunities to engage on farming issues affecting them as young people, be given access to information, be close to farming and be involved, training is provided to young people and finally a way must be found to raise farm income levels.

A question was asked to the youth regarding some young people who are unemployed. The question asked was why they are not getting involved and helping their parents on the farms. Responses from the youth ranged from laziness on the part of the young people who are not

involved to status and looking down upon farming. Other contributing factors raised include the amount of time they have to wait before they receive income after providing their services, lack of knowledge and interest, failure by parents to remunerate young people working in farms and lack of love for farming.

Regarding the influence of the level of their farm involvement on their preparedness to follow in the footsteps of parents the youth stated high involvement led to exposure that positively influenced their decision to choose agriculture. Some stated that they did not like it in the beginning and were forced but they now like it. They expressed that involvement led to the liking of farming, not the other way round. In a nutshell they said that they did not know about farming. Involvement and exposure contributed to their liking of agriculture.

#### **6.6.6 Threats to the sustainability of cane production**

Various factors were highlighted by ECGs as threats to the sustainability of cane production. These included perceived lack of youth interest, low income from cane farming, land shortage, lack of financial and agricultural extension support, drought and other uncontrollable factors and the lack of proper training for parents which makes it difficult for them to pass on the knowledge to the youth. As a result of these threats ECGs are of the view that “they are not efficient and they lose money in the process”. Adenkule et al. (2009:103) confirm that the major constraints hindering youth participation in agriculture were identified as inadequate credit facility, poor returns to agricultural investment, lack of basic farming knowledge and lack of access to tractors and other inputs. It seems that issues relating to youth in agriculture are almost the same in different countries considering that the remarks by Adenkule et al. (2009) relate to a study in the Kwara State of Nigeria.

#### **6.6.7 Youth access to information about agriculture**

Most young people in FGDs answered in the affirmative when asked whether they have relevant information to make informed decisions about careers in agriculture. Some expressed that they received information from parents and grandparents and as a result are involved and have gained experience in cane farming. They also stated that attending training workshops has also helped them to access information and some have even gone to formally study agriculture and they now love it. Most of the respondents expressed the influence of parents of giving them information and channelling them towards agriculture. These young

people further admitted that they did not initially like it but now they love agriculture and are grateful to their parents. However, there were a few who complained that the information is given to parents who do not convey this to their offspring.

There was also a discussion regarding how doing agricultural subjects at school gave the youth information and influenced their decision to choose agriculture. Most participants stated that “doing agriculture at school contributed to our liking of cane farming”. In one of the FGDs seven participants had done agriculture at school and another six studied agriculture at a post matric level. They stated that they voluntarily chose agriculture. However, some raised concerns that at school they were laughed at because of their choice for agricultural subjects and careers. These remarks are in harmony with the findings by Terblanché (2006:141) where the attitude of fellow learners towards learners taking agricultural science was found to be negative. The researcher argues that the problem with many young people and even some adults in urban areas is that when they think of agriculture they visualize a person doing hard manual labour under a scorching sun. In the end there was a general agreement through the nodding of heads by all participants that they do have some information although there is still a need for more.

#### **6.6.8 Conclusion and recommendations**

The researcher argues that there is no proper communication between ECGs and their offspring. That is why they have different perceptions. There are also difficulties pertaining to succession planning and communication thereof. Generally, ECGs are not comfortable with this discussion and culture is also a barrier. Perception of the ECGs is that youth are more enlightened and farm incomes, in some cases especially in the SSG sector, cannot sustain the youth lifestyles.

Youth largely participate in farming up to Matric level and thereafter migrate to other sectors of the economy in search for better opportunities. There is a need to pay and incentivize their offspring who work on farms. This is taking place to a large extent and can be improved.

Generally, young people whose parents are cane growers are prepared to succeed parents as cane growers. However, they would prefer to have own farms instead of inheriting parents' farms. Most of these young people are already involved in farm operations. Initially most of them were pushed into farming and did not like it. However, they now profess to love

farming and prefer to remain in agriculture. It is also obvious that money is a great motivator for them. That is why they complained that in some cases they are not being rewarded by parents. Young people prefer a situation whereby their parents are more open about succession matters. However, they do understand the complications of family dynamics especially in cases where there are siblings. Getting own farms and other forms of support will increase their involvement and influence them to remain in agriculture on a permanent basis. Youth access to relevant information will also be critical to enable them to make informed decisions about their careers.

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## CHAPTER SEVEN

### 7. TOWARDS A MODEL FOR THE SUSTAINABILITY OF EMERGING CANE GROWERS THROUGH YOUTH INVOLVEMENT

#### 7.1 Introduction

This chapter is the culmination of the work that has been done in this thesis. It seeks to present the researcher's philosophy in a succinct manner. This philosophy is summarized in the form of a model or a framework that is aimed at sustaining agricultural production in general and cane production in particular through youth involvement. Since sustainability is about the long term and is never ending, the model developed is not aimed at narrow and short-term objectives but rather it is holistic and takes cognisance of the long-term sustainability of cane growing businesses. This model is not developed in isolation but takes into account both primary and secondary data discovered as part of this study and it is through this model, *inter alia*, that the researcher strives to make an original contribution to the body of knowledge.

#### 7.2 Generic model to sustain farm production through youth involvement

This section takes into cognisance the literature review as well as the research findings, and then strives to develop a model that will ensure long-term youth involvement and sustain agricultural production in the process. The proposed model (Figure 7.1) includes five pillars that form the basis for sustaining farming through youth involvement. These pillars are the following:

1. Promotion of agriculture to youth.
2. Basic education, training and involvement of youth in agriculture.
3. Youth access to information on agricultural careers.
4. Formal further education and training in an agricultural discipline.
5. Starting a formal career in agriculture. A formal career can either be full-time employment or full-time farming.

The first two pillars can take place simultaneously. Regarding choosing to be a full-time farmer, the sub pillars are the following:

1. Choosing a suitable and viable farm business model.

2. Unlocking funding.
3. Ensuring access to land.

The proposed model is one of the main contributions of this thesis to the body of knowledge. Naamwintome and Bagson (2013:64), when referring to the prospects and challenges of the youth in agriculture in Ghana, state that “according to *National Youth Policy* (2010), not much has been done and hence it is being emphatic on:

- Promotion of the participation of the youth in modern agriculture as a viable career opportunity for the youth and as an economic and business option.
- The provision of resources for the participation of the youth in modern agriculture”.

The South African context can relate to this Ghanaian situation and the proposed model seeks to address the same challenges.

Mathivha (2012:24) argues that young people’s interest in making farming an important element of their livelihood will likely be positively related to their ability to put together or gain access to the resources needed to farm on a “commercial” basis. Mathivha (2012:24) further mention these resources as the following:

- proper education and training on “hidden” exciting opportunities in value chains;
- basic infrastructure such as land and improved roads;
- Information and Communication Technologies and marketing infrastructure;
- access to credit; and
- access to labour.

Any model aimed at attracting youth to agriculture and retaining them with the objective of sustaining agricultural production must take cognisance of the need to support the youth and provide them with necessary opportunities and resources. The researcher’s proposed model (Figure 7.1) takes these factors into consideration.

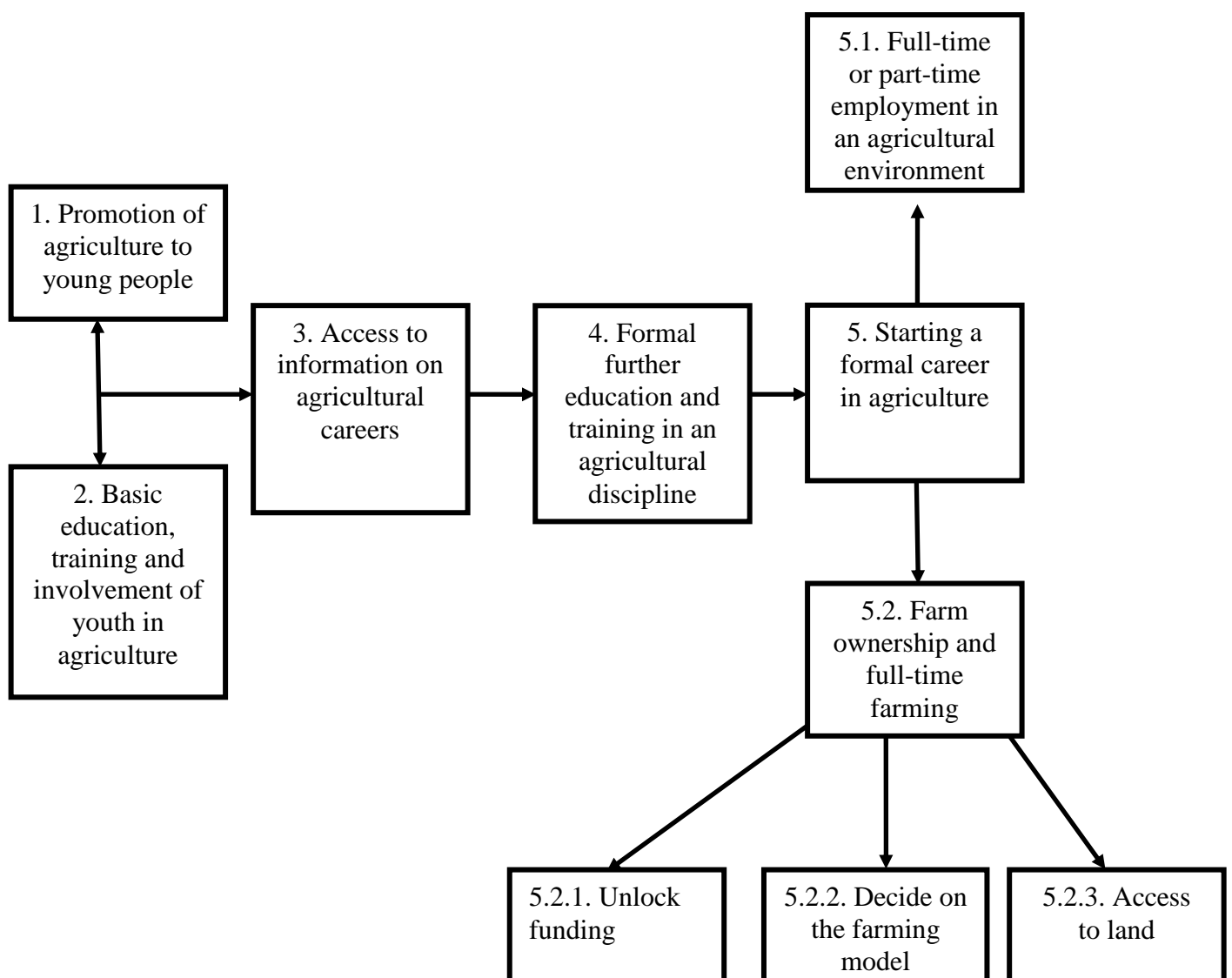
According to Akpan (2010:2-3) there are economic, social and environmental factors reducing rural youth involvement in agricultural production in Nigeria. These factors, which are also relevant to South Africa, are economic factors that include inadequate credit facilities, low farming profit margins, and a lack of agricultural insurance, initial capital and production inputs. Social factors include public perception about farming and parental



influence to move out of agriculture. Environmental issues include inadequate land, continuous poor harvests, and soil degradation.

A study on the constraints to youths' involvement in agricultural production in Kwara State, Nigeria by Adekunle et al. (2009:107) recommended the following policy implementations:

- Enhancement of youth's knowledge of basic farming.
- Provision of credit facilities for youths.
- Changing of people's negative perceptions toward farming through proper orientation and public education.



**Figure 7:1: Generic model to sustain agricultural production through youth involvement**

### **7.2.1 Promotion of agriculture to youth**

Efforts have been made to promote agriculture to young people, as shown in some sections of the literature review. Organizations such as Youth in Agriculture and Rural Development (YARD) have been formed with a specific aim of attracting youth to agriculture. In the context of the sugar industry the efforts are not at an advanced stage and there is a need for a youth desk to give boost to these efforts.

Some of the focus areas of the Agriculture Youth Desk:

- Lobby for youth access to land.
- Identify business and other opportunities for young people.
- Form linkages with other youth organisations that promote agriculture e.g. YARD.
- Ensure youth participation in grower structures.
- Facilitate youth training in agriculture and other related careers.
- Provide business plans with viable models that include guidelines for accessing funding.
- Look beyond actual farming to other opportunities in the value chain.
- Conduct agricultural careers exhibitions.
- Undertake school visits aimed at introducing agriculture to students.

Terblanché (2006:152) highlights “the need to accept the challenge to change the negative image of agriculture among the youth”. Furthermore, Terblanché (2006:152) explains the role that agricultural extension can play by initiating agricultural programmes for the youth, and by creating and establishing coordination and collaboration structures and linkages between all role players in youth development (education and training in agriculture) programmes.

The promotion of agriculture to young people should take place at various levels and among different stakeholders:

- At home the parents and relatives who are involved in agriculture can play a meaningful role in evoking youth interest. Results of this study already show that young people whose parents are cane farmers are more likely to take up farming and succeed their parents in the following cases:
  - Where they have been involved in farming activities;
  - Where a succession discussion has taken place at home; and
  - Where young people have been exposed to some training in sugarcane agriculture.

- Schools play a very important role in terms of socialization. There is a need for major drive to promote agriculture as a career option. This includes making adjustments to the school curriculum and extends the offering of agriculture as a school subject to schools where this is not happening.
- Business can also play a big role, especially those business organizations that operate in the agriculture and agro processing space. Already some business organizations in the sugar industry are offering bursaries to agricultural colleges and also sponsor attendance of training in sugarcane agriculture.
- Government at various levels (local municipality to the central government) has an even bigger role to play in terms of the following:
  - Resource allocation to youth interested in agriculture
  - Mobilizing other stakeholders to support youth in agriculture. Some forms of public-private partnerships might contribute positively to this campaign.
  - Ensuring youth access to land
  - Adjusting some policies, such as access to land and resource allocation, to some ensure bias towards young people who are interested in agriculture.

In agreeing with the above proposed interventions, Muwi (2012:11-12) elaborates on the socialization process as taking place at home, school and among peer groups.

Properly trained and resourced extension workers employed by both the public and private sectors have a meaningful role to play in promoting agriculture and exposing young people to farming. At the end of the day the holistic promotion of agriculture to young people is aimed at changing their negative perception and ensuring that they eventually embrace the legacy of their cane growing parents and other farmers in other industries of the agricultural sector. Nyoni (2012:27) introduces the concept called “brand agriculture” and quotes a 28 year old Malawian consultant named Calvin Kamchacha as saying that, “there is a misconception in African society that agriculture is an activity that should be done after retirement from a white-collar career. In order to get young people into agriculture, the sector needs to be re-branded and seen in its totality.” Nyoni (2012:27) further makes assertions that the perception that farming is an activity for poor people must be challenged and that youth must be made to understand that there are unlimited number of areas of engagement throughout the agricultural value chain where young people can thrive and get involved; these include marketing, equipment supply, transportation, processing and export.

### **7.2.2 Basic education, training and involvement of youth**

At school there is a need for the promotion of agriculture as a career. In the past the impression was created that agriculture is not an important career. There is evidence of some schools who did not even regard it as a science subject which should be combined with mathematics and other natural sciences at school.

The researcher has already highlighted the importance of offering agriculture as a school subject. This will assist in terms of changing the perceptions of young people in order for them to view agriculture in a positive light. The bottom line is that the general negative perceptions of agriculture must be changed and this is where schools and tertiary institutions can play a meaningful role. These institutions of learning should be able to promote agriculture as a meaningful career that can compete with others on an equal footing. At the moment there are concerns about the roles that the school system should play and White (2012:11) mentions that various studies have noted how education as currently practiced (particularly secondary education) contributes to a process of “deskilling” of rural youth in which farming skills are neglected and farming itself downgraded as an occupation. The researcher argues that it is against the background that the mindset in the school system regarding agriculture should also be changed.

Wiley, Rose and Halpin (2009:5) argue that the exposure to and involvement of youth in basic farming activities, both at home and school, will evoke youth interest and also give them additional practical information. This will enable them to make informed decisions about careers in agriculture. Through emphasis on small-scale agricultural production as a cornerstone of the nation’s economy, they pass on the awareness of the subject hoping to generate greater interest among kids in schools for America to develop a more sustainable future.

Wiley, Rose and Halpin (2009:5) further state that “In addition to education and training-based programs, the USDA [United States Department of Agriculture] website includes a link for kids with activities on the subject of farming. One section asks children to submit a drawing based on the prompt: ‘If I had my own farm’” (Wiley, Rose and Halpin, 2009:5).

Wiley, Rose and Halpin (2009:2) when referring to a comparative study of Venezuela and the United States of America, state that although these two nations generally face vastly different social, economic and political issues, they share the same need for sustainable agricultural solutions. In order to re-orient the societal focus in this direction, governmental agencies and

grass-roots organizations in both countries have implemented educational programs in agriculture with the goal of targeting American and Venezuelan youth. The thought is that with agricultural programs in place, the youth that are exposed to such opportunities will develop an interest in sustainable movements.

Terblanché (2006:152) recommends that there is a need to make sure that agricultural education and training programs are implemented and available from primary school level upwards. Furthermore he recommends the development and making agricultural education and training programmes available at agricultural college level for agricultural teachers.

The researcher reminds the reader that this study found a significant association between youth involvement and choosing agriculture as a career.

### **7.2.3 Access to information and decision to choose agriculture as a career**

The previous two steps in the model will facilitate access to information to enable the youth to make informed decisions. It is important to note that promotion of agriculture to young people as well as their education and training can take place simultaneously and young people will not be adequately empowered to make decisions about careers in agriculture if these activities have not been done well. Mathivha (2012:22) supports this approach when he argues that generally the South African youth, rural or urban, appreciate less of the opportunities provided by the food and fibre chain due to lack of information. The researcher argues that it is also important to understand the aspirations of young people so that programmes and information can be tailored to address their ambitions.

### **7.2.4 Formal further education and training in an agricultural discipline**

Based on the information they received in the previous steps of the model those who choose agricultural careers may decide to undertake formal studies at institutions of higher learning. In the case of the sugar industry there are also formal and specific courses in sugarcane agriculture that are offered to those involved in cane farming.

It is important to highlight that not all those interested will necessarily undertake further education and training at institutions of higher learning. Depending on personal circumstances, some may skip this step and go directly into full-time farming.

In order to retain youth interest bursaries and other study opportunities must be available particularly for students wanting to pursue careers in agriculture. In the case of the sugar industry the Sugar Industry Trust Fund for Education (SITFE) of the South African Sugar

Association (SASA) offers bursaries in the sugar industry. In addition to this some sugar millers do offer bursaries to agricultural students. Other commodity organizations can take a leaf out of SASA.

On the job training after studying agriculture will also be required. Mentorship programmes, some sponsored by the Agricultural Sector and Training Authority (Agri Seta) and sugar millers are already taking place in the sugar industry and other industries in the agricultural sector. These initiatives must be encouraged as part of the holistic programme aimed at retaining youth in agriculture. Industry specific training is also important to support and retain youth in agriculture. The United States is one of the countries working hard to increase youth participation in agriculture. Wiley, Rose and Halpin (2009:4) state that government backed programs along with grassroots organisations in the United States have worked to increase interest in agriculture by establishing hands on programs in education and business for youth and such programs have proven themselves necessary. It is the researcher's view that such approach can work in South Africa.

### **7.2.5 Starting a formal career in agriculture**

Basically there are two options for those choosing a career in agriculture, namely:

- Full-time employment in agriculture. In a case where this is chosen as an option the interested young person will follow the usual channels of seeking employment. The challenge is that in most cases they will struggle due to lack of experience and this is where mentorship and learnership programmes can bridge the gap.
- Running one's own farm, which can be acquired through inheritance, purchase or lease.

Regarding those who are interested in farming full time, the model suggests that the following three factors necessary for successful establishment of the farm business, must be taken into consideration:

- Generation of a suitable and viable farming model;
- Unlocking funding; and
- Ensuring access to land.

Omoti (2012:xi) recommends the introduction of mentorship programmes to guide youths on ways of making a living from agriculture. In support of this recommendation, Nyoni

(2012:27) states that training, education, information dissemination of relevant information regarding opportunities along the value chain are therefore a paramount factor of youth engagement in agriculture.

Wiley, Rose and Halpin (2009:8) are of the view that giving power and support to new people entering the field of agriculture has been a clever tactic of the government, non-profit organizations, and the educational sector in the United States. With this approach, agricultural programs are also emerging in Universities throughout the country. For example, an undergraduate and graduate program at the University of Vermont that trains students in all aspects of sustainable agricultural business has yielded great success. The same approach can be adopted in the South African context, particularly in the sugar industry.

There are other lessons that can be learned from other African countries regarding the retention of youth in agriculture. Mahama (2012:2) elaborated on Ghana's Youth in Agriculture Programme and stated that the core functions of the Youth in Agriculture Programme amongst others include:

- The provision of employment for the youth through the provision of subsidized agricultural inputs and services;
- Making the youth accept farming as a commercial business venture;
- Ensuring a regular income for the youth;
- Improvement in the standard of living through improved incomes;
- Production of enough food crops, meat and fish using modern methods to meet food security target.
- Introducing the youth to market opportunities that exist in Ghana and the sub-region.

#### **7.2.5.1 Generation of a suitable and viable business model**

Farming is a business and should be treated as such, hence the necessity to develop a viable business model for the farm business. For the youth to remain interested and excited, it is necessary to look beyond traditional farming. There is a need to look at youth participation in the whole agricultural value chain from farm to agro processing. In the context of cane farming the investigation should start from the farm itself and then move to haulage.

Agriculture is not just about actual farming. There is more to it than just farming. Some of the considerations in terms of generating a suitable and viable farming model are the following:

- The type of a business venture that the young person will embark on must be considered. Will the young person farm as an individual or as part of a group scheme such as cooperative or other forms of business ownership run by groups like a partnership or a company. At the moment, it is easier to access funding and land for group scheme as government agencies tend to be more biased towards group schemes.
- Size of the farm must be viable. The challenge in communal areas is that plots allocated to and farmed by individuals are not huge and as a result cannot be able to capitalize on the economies of scale. Although, according to the results of this study youth perceptions of youth in question are positive, in reality over the long term it is still questionable that they will remain in farming in small-scale agriculture once they get exposed to the real income levels. However, the situation from the commercial land reform farming point of view is more promising financially. It is an acceptable standard in the sugar industry that the size of the farm matters if the farmer is going to have adequate returns. Unless youth access to land deals with the size of the farm the actual returns will be disappointing for the young full-time farmer who will then be tempted to seek alternatives which may not necessarily be in farming. These alternatives, will undoubtedly, impact negatively on farm production.

Most of these factors will be considered as part of the process to develop a farm business plan which will be required for funding purposes. However, they needed more attention here.

#### **7.2.5.2 Youth access to land**

A study by Bezu and Holden (2014:259) about rural youth in Ethiopia abandoning agriculture examined current land access and livelihood choices of rural youth in Southern Ethiopia. The study found that youth in rural Southern Ethiopia had limited access to agricultural land because of land scarcity and land market restrictions. Bezu and Holden (2014:259) had hypothesized that this forces the youth to abandon agriculture in search of other livelihoods. The study showed that only 9 per cent of the rural youth planned to pursue agriculture as their livelihood. It also found a sharp increase in youth outmigration in the past six years and more importantly their econometric analyses confirmed that lack of land access is forcing the youth away from an agricultural livelihood.



In cases where the youth want to become full-time farmers there is a need to support them to have access to land. In traditional areas some land must be allocated to young people. Size will be a key factor. What happens if the family has a few children interested in agriculture? Then, to whom should the land be allocated? These are some of the questions that farmers need to grapple with.

Land can be accessed by young people through inheritance, purchasing and leasing. The ability to purchase depends on the ability to raise funding from financial institutions and other sources. Youth in communal areas are in a disadvantageous position because land is normally allocated to the family and the parent will have permission to occupy this land through traditional tenure. If the parent is still active in farming it is difficult for him (in most cases it is the male parent who is allocated this land) to allocate land to his children. What happens if the parent has a few children interested in farming? What if some of these children who are interested are women? In most cases women are overlooked when it comes to land allocation in rural areas. These are just some of the challenges that must be overcome to ensure youth access to land with the objective of farming.

In addition to conscientising traditional leaders to allocate land to the youth it will also be important for government schemes aimed at land redistribution such as the Proactive Land Acquisition Strategy (PLAS) to be deliberate in terms of allocating farms to the youth.

Government policies should be able to give preference to youth access to land. Commercial banks should also be encouraged to fund young people to buy land with the objective of farming.

Organisations established with the aim of developing young people i.e. the National Youth Development Agency (NYDA) as well as Youth in Agriculture and Rural Development (YARD) should support young people in this regard.

White (2012:16) states that the issue of intergenerational transfer of land rights – or, when that does not happen, intergenerational dispossession, when one generation's land, which ought to have been passed on to the next, is sold off – deserves our attention. If we are interested in small farm based alternatives to industrial capitalist agriculture, there needs to be a generation of rural men and women interested in taking up the challenge. This argument by White is more relevant in the context of communally owned areas where most small-scale

growers (SSGs) who are part of emerging cane growers (ECGs) operate their farms. It will be difficult for young people to succeed their parents in farming if this is not addressed.

Lack of access to land is a challenge prevalent in many African countries. Bezu and Holden (2014:263) mention that the majority of youth in Ethiopia live in rural areas but the majority of these young people do not have their own farmland despite their constitutional right to access land in the community in which they live. One of the solutions is mentioned by White (2012:14) where he quotes Reynolds (1991) as mentioning that sixty years ago, among Tonga in Zimbabwe, it was found that many children had their own fields. Reynolds (1991) is further cited by White (2012:14) as suggesting that unmarried boys or girls might be given a portion of a field belonging to parents before obtaining their own fallowed land, and after harvest they might have their own bins in which to store grains from these plots.

The researcher argues that in the context of SA cane farming young people might be allocated a portion of the field that they can look after and farm on their own with the guidance of parents. By so doing they learn the tricks of the trade and develop love for farming. This will also facilitate smooth succession from parents to children. Although strongly recommended by the researcher, in the context of South Africa this approach should be implemented with caution because of sensitivities regarding child labour. This concern is best captured by White (2012:12) where he argues that the alienation of young people from agricultural knowledge and rural life skills is made worse by the misguided political correctness of minty anti ‘child labour’ campaigners, who insist on the right of children to complete their entire childhoods without any experience of the world of work.

### **7.2.5.3 Funding for a farming enterprise**

It is a norm that a business plan is required before any funding is granted. This business plan will no doubt take into account the following:

- The suitable and viable business model as elaborated upon in the section dealing with this subject
- Access to markets for their produce
- Young person’s education and experience. Additional support s/he may get such as mentorship is normally looked at favourably.

The researcher is of the view that the three most serious challenges facing the young person who seeks to be a full-time farmer include lack of access to funding, challenges with regard to accessing land and the lack of access to markets for the farm produce.

The business plan needs to be able to effectively deal with these challenges for any success to be achieved. Access to capital as a major constraint has been highlighted, even outside of SA, by Nyoni (2012:22) about Zimbabwe and Adenkule (2009:102) in the case of Nigeria.

Regarding access to funding the following institutions play a big role:

- Commercial banks.
- Government aligned agencies such as the National Youth Development Agency (NYDA), Small Enterprise Development Agency (SEDA) and Small Enterprise Finance Agency (SEFA). There are other more provincial or regional government aligned funding agencies such as Ithala in KwaZulu-Natal.
- Public-private partnerships involving youth.
- Government funding by departments focusing on economic development as well as trade and development. These departments sometimes call for proposals for the funding of business initiatives and the appeal is that more funds should be channelled to youth in agriculture if agricultural production is to be sustained.
- Limited funding by non-governmental organizations can also be provided.

Public-private partnerships must be established between government and private businesses with the aim of providing funding and other forms of support to young people interested in agriculture.

Regarding Ghana's Youth in Agriculture Programme, Mahama (2012:3) argued that the whole concept of the youth in agriculture programme is based on "public-private partnership". The government of Ghana mobilizes the youth; provides funds for inputs; facilitate whole process of production; and support young farmers in marketing of their produce. The private sector provides tractor services for land preparation; quality seed; fertilizer and agrochemicals; transport and storage space. The young farmers are the core actors of the programme and are the direct users of inputs towards the production of food

Mathivha (2012:33) stated that in 2008 the NYDA, an institution established according to an Act of Parliament (54 of 2008), was formed with a mandate of, among others, developing an

integrated Youth Development Strategy, a paradigm shift from un-coordinated approach of the past 16 years of democratic dispensation. The Agency, an institution formed out of a merger of the National Youth Commission and Umsobomvu Youth Fund (UYF), has a broad mandate of eventually ensuring that spheres of government and sectors of society prioritise youth development, agricultural sector and its value chain included.

The researcher shares the sentiments of Leavy and Hossain (2014:40) whose research found that agriculture could be made more appealing to young people, with the right kinds of measures and support. The author believes that these measures include the creation of a policy environment that will enable youth participation, focused funding for youth agribusinesses, specific land redistribution targets that will be focused on youth access to land, the dissemination of relevant information and the development and implementation of agriculture related training and mentorship programmes.

Major lessons can be drawn from the Tanzanian experience whereby they advocated the Kilimo Kwanza (Agriculture First) strategy. According to Omoti (2012:36-37) this strategy proposes six points, namely the introduction of agricultural loans; providing land to agricultural graduates; providing full scholarships or loans to agricultural undergraduates; developing incentives to attract and retain youth in agriculture; mainstreaming of gender issues; and strengthening the position of women in agriculture.

### **7.3 Conclusion and recommendations**

This chapter outlined the researcher's philosophy which culminated in the development of a generic model to sustain emerging cane growers (ECGs) through youth involvement. The model was encapsulated in the form of 5 pillars which were the promotion of agriculture to the youth, provision of basic education, training and involvement of youth in agriculture, ensuring youth access to information on agricultural careers, undergoing of formal further education and training in agricultural disciplines and starting a formal career in agriculture. Those choosing formal careers in agriculture can either be employed full time or be involved in full-time farming on their own. For those young people seeking careers as full-time farmers they need to decide on the type of business venture to be involved in, meaning that they have to develop a suitable and viable farming model. Thereafter, they need to unlock funding and ensure that they have access to land. It is anticipated that many role players, such

as the public sector, private sector and civil society will be involved in ensuring the involvement of youth in agriculture.

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## CHAPTER EIGHT

### 8. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 8.1 Summary and conclusions

This study looked at the sustainability of emerging cane growers (ECGs) through youth involvement. There are two categories of ECGs and these are small-scale growers (SSGs) and commercial land reform grower (LRGs). The study emanated from the need to sustain cane production beyond the current generation of cane growers.

The study targeted respondents aged 14 to 35 whose parents are ECGs (SSGs and commercial LRGs). The study sought to understand whether the heirs of ECGs are prepared to succeed their parents as farmers and to identify the factors that either inhibit or encourage them. Some of the factors looked at include the following:

- Are the young people currently involved in farming activities?
- Have they had any background training in sugarcane agriculture?
- Has succession discussion taken place within their families?
- Have they done agricultural subjects at school?
- What are their perceptions and attitudes towards cane farming – positive or negative?
- If there is money to be made in farming, will they take up farming?

The hypothesis was that the youth whose parents fall under the SSG category of cane growers are reluctant to take up farming and succeed their parents. On the other hand, the researcher hypothesized that the youth whose parents are LRGs are more likely to choose agriculture and succeed their parents as farmers.

##### 8.1.1 Findings pertaining to youth in agriculture

These findings were mainly based on literature review. The literature abounds with accounts of young people lacking interest in agriculture and having negative attitudes towards agriculture. This has led to migration from rural areas to urban areas in search of alternatives to agriculture. A general literature review reveals the negative perceptions of youth regarding agriculture, where agriculture is seen as low-class work. However, there are a few cases in literature where positive youth attitudes were found with positive implications for agriculture.



### **8.1.2 Findings pertaining to heirs of emerging cane growers**

These empirical findings emanate from survey results as well as the results of focus group discussions (FGDs). Out of the total of 254 respondents, 76 per cent were from the SSG category while the other 24 per cent were from the LRG category. Most of the respondents (62.2 per cent) were male and the majority (56.1 per cent) were in the age category 25 to 35 years. In terms of race classification most of the respondents (92.9 per cent) were Black Africans and the rest were Indians. The majority were not married (91.7 per cent). At least 44.9 per cent of respondents already had dependents.

In terms of which parents are involved in cane farming, the results showed that males still dominate farming, although the number of women was not far behind. There was a significant percentage (18.9 per cent) of families where both parents are involved. In some cases those involved in cane farming were relatives of respondents such as grandparents, uncles, aunts and siblings.

In terms of the age of mothers involved in farming, the majority (55 per cent) were from the age category 51 years and above. In terms of the fathers of respondents in the same age category, the results showed that there were slightly more male cane growers in this category, with a figure of 58.8 per cent. These findings confirm the general assumptions in literature that farmers are an ageing population and the findings in the sugar industry are consistent with these assumptions.

It was interesting to note that more than 57 per cent of respondents had completed matric and 16.5 per cent had tertiary qualifications.

Most of the respondents (57.6 per cent) stated that the sizes of their parents' farms were up to 100 hectares each. During the FGDs the size of the farm became a sensitive matter because of the belief from both ECGs and the youth that there is a need for larger farms in order to accommodate both the parents and their offspring. In the case of the sugar industry the size matters; the larger the farm size the greater the ability to capitalize on the economies of scale.

A significant percentage (22.1 per cent) of respondents are studying full time while the other 29.2 per cent are unemployed. Others are in full-time employment, running their small businesses and some studying part time. Some families from which young people involved in the study came from have other sources of income which ranged from old age pensions,

rentals, other farming enterprises (besides cane farming), financial support from family members and other employment.

Regarding cane farming experience on farms other than their parents' farm it was encouraging, from a sustainability perspective, to find that a significant percentage (42.9 per cent) have been exposed to farms beyond their parents' farm. This might be interpreted as a commitment to and interest in cane farming. However, this involvement in other farms is higher among the LRG category of respondents than in the case of SSG respondents.

One of the most encouraging findings from a sustainability point of view was the high level of current involvement by the youth in farming activities on their parents' farms. Only 20.6 per cent of respondents were not involved at all and the rest, which is the significant majority, have been involved in farms for some time. Some have expressed being involved for more than a year to more than 10 years. These results augur well for the future of farming in the context of the sugar industry and contradict the assertions that young people are not interested in farming. In the case of young people whose parents are cane growers, this high level of involvement by their offspring shows a serious commitment on the part of the youth. The chief negative finding was the complaint by the youth during FGDs that they are hardly being remunerated by their parents. During the FGDs of ECGs this was confirmed by some parents.

It was also interesting that the respondents have had some exposure to training in sugarcane agriculture. It was confirmed during FGDs that there had been some training and the participants were highly familiar with the technical jargon used in sugarcane farming.

The most sensitive aspect of the research was the one pertaining to succession planning. Results showed that there is reluctance to discuss this matter in the cane farming families and only 48 per cent of the families had discussed succession. However, from the LRG category of respondents, this discussion has been raised more times than in the case of SSGs. The FGDs also confirmed this lack of serious discussions. Reasons for the aforementioned that were cited by the ECGs who participated in the FGDs include cultural influence as well as the necessity to prevent conflict amongst their offspring. From a sustainability of sugarcane production point of view this remains a concern.

The positive findings showed that there is someone from the cane growing family who is willing to take over from parents. Furthermore, the significant majority (78.2 per cent) of respondents expressed willingness to succeed parents and become cane growers. However,

on further probing during the FGDs, participants expressed a desire to have their own farms instead of inheriting their parents' farms. Their motivations behind this desire for their own land included being able to prove themselves as farmers, and also avoiding family complications associated with inheritance, especially in cases where there are siblings.

When disaggregating the results, the findings show that the LRG category seems to be more sustainable than the SSG category. The results show that in the LRG category there is a higher percentage of involvement by the youth, higher percentage of succession discussions that have taken place, as well as a higher percentage of youth willing to succeed their parents and become farmers.

The findings furthermore confirmed that a significantly larger percentage of LRG offspring / heirs would like to become full-time farmers and would also recommend farming as a career to their friends. This augurs well for the future of cane farming, especially when read in conjunction with the findings that showed that most young people in the study group are prepared to work and settle in rural areas and also believe that cane farming generates enough income to sustain a good living. However, a slightly higher percentage of youth from the SSG category will settle in a rural area when compared to the LRG category. It was also positive to find that these young people will choose agriculture over other careers.

Concerning attitudes towards agriculture, the youth whose parents are ECGs were more positive and stated that they like cane farming for various reasons such as income generation, job creation, belief that cane farming is not a complex enterprise, flexibility of working hours, and the higher socio-economic status associated with it.

Regarding the things they do not like about farming the following were expressed:

- income is not as high as other commodities;
- when involved in farming activities they are not paid by their parents;
- adverse weather conditions that negatively affect their produce and ultimately their income;
- lack of knowledge; and
- where agriculture is used “as a punishing stick for those not doing well at school”.

Overall their general attitudes were positive and the results concerning attitudes towards farming were comparable and consistent between both categories of respondents (SSGs and LRGs).

Respondents' perceptions of cane farming were generally positive and the youth believe that cane farming is a profitable business, returns from agriculture are not necessarily lower than non-farming returns, and that their lives have been improved by cane farming. Some stated in the FGDs that they were raised through income from cane farming. This was also supported by adults who participated in the FGDs.

The perceptions regarding the profitability of cane growing were compared with the economic realities of cane growing. It was found that, in reality, small-scale growing is not as financially rewarding as commercial land reform cane growing. The main advantage of land reform cane growers is that they have larger landholding which is critical in the context of cane growing because of its ability to capitalize on the economies of scale. This finding makes land reform cane growing more economically sustainable when compared to small-scale cane growing. Therefore, the youth will be more attracted to become LRGs instead of being SSGs and the researcher concludes that the youth will only remain in small-scale farming until they get a better opportunity, which might be in land reform cane growing, outside of the sugar industry, or even completely outside of agriculture.

A negative perception that emerged was related to the belief that youth find it difficult to adapt to the pattern of rural areas, and also to the fact that cane farming requires manual labour.

Statistical analyses of results showed that the attitudes towards cane farming did not differ between males and females. Regarding the relationship between training in sugarcane agriculture and participants' attitudes towards cane farming, the findings showed significant relationship in attitudes between those who have been trained and those who have not been trained. Of the people who have been trained in sugarcane agriculture, 86.3 per cent had a positive attitude towards cane farming whereas only 70.3 per cent of people who have not been trained in sugarcane agriculture had a positive attitude towards cane farming. In terms of the relationship between succession discussions and participants' attitudes towards cane farming, the findings revealed that of the people who have had succession discussions, 88.3 per cent had a positive attitude towards cane farming, whereas only 73.1 per cent of people

who have not had a succession discussion had a positive attitude towards cane farming. In conclusion, the results show an association between attitudes and succession discussions.

Results also showed that most respondents are of the view that they do not possess enough information about cane farming as a career and this was not a good finding from the sustainability of cane production point of view. The statistical analysis showed an association between having enough information about farming as a career, and attitudes towards cane farming. Results showed that, of the people who had enough information, 93.9 per cent had a positive attitude towards cane farming compared to the lower percentage of 71.7 per cent of those who do not have enough information and had a positive attitude towards cane farming.

According to the findings the attitudes towards cane farming did not differ between people who had agricultural subjects at school and those who had not. However, there was a significant relationship between having had agricultural subjects at school and choosing agriculture as a career. The percentage of those who would choose agriculture as a career was higher among those who had done agricultural subjects at school when compared to the lower percentage of those who did not do agricultural subjects at school but would choose agriculture as a career.

There was a significant association between training in sugarcane agriculture and choosing agriculture as a career. More of the people trained in sugarcane agriculture indicated that they would choose agriculture as a career, as opposed to a lower percentage of people who have not been trained but indicated that they would choose agriculture as a career.

There was a statistically significant association between current involvement in farming activities and choosing agriculture as a career. The percentage of those young people who would choose agriculture as a career is higher among those currently involved in farming than those who are not currently involved in farming. This was a significant finding in terms of variables at play when choosing agriculture as a career. However, there was not a statistically significant association between duration of involvement in farming activities and choosing agriculture as a career. In terms of relationship between current involvement in farming activities and attitudes towards cane farming, the young people currently involved in farming had more positive attitudes than those who are not currently involved.

The findings showed that the involvement in farming operations on parents' farm or other farms was the best factor associated with willingness to take over farming from parents. For

those not involved in farming operations the next best factor was the size of their parents' farm. For individuals who indicated that they were fully involved in farming activities, and would choose agriculture as a career or were not sure, one further factor related to willingness to take over the farm was whether the offspring of cane growers would take farming as a career if it can be proven that there is money to be made. For those who were involved a few days of the week the next best factor relating to whether the offspring of cane growers will take over farming from their parents was their attitude towards cane farming in general. A greater number of those with positive attitudes indicated the willingness to take over farming.

The findings showed that the heirs of ECGs have positive perceptions of cane farming and their attitudes are generally positive. They are willing to take over from parents. These results confirm the hypothesis of the researcher that the offspring of the land reform category of the ECGs are positive towards cane farming and are more likely to follow in the footsteps of their parents. However, the hypothesis concerning the SSG category of respondents was that they are negative towards farming, and the results disproved this. The findings showed that although succession discussions take place to a certain degree, there are cultural barriers and family complications that contribute to the overall reluctance to have this discussion at home.

The conclusion is that the chances of taking over the farm from parents were most favourable for individuals who were fully involved in farming activities, who would choose agriculture as a career or were unsure if they would, and who would take cane farming as a career if there were money to be made. The next most likely to take over the farm from their parents were individuals who were involved a few days of the week, had a positive attitude towards cane farming, and would choose agriculture as a career. It emerged that the heirs of ECGs would prefer to run their own farms instead of relying on the inheritance from parents.

It could be concluded from the findings that, in the context of cane farming, the offspring of cane growers do not hold the predominant negative stereotypical views of agriculture. In a nutshell, youth in the study like being involved in agriculture but not necessarily the manual farm work. It is for this reason that they would rather be described as unemployed instead of becoming cane cutters, yet the same youth are involved in other farm activities such as coordinating harvesting and supervising farm workers. The conclusion is that the youth will seriously consider those careers in agriculture that appeal to them and will enable them to fulfil their social and economic aspirations.

### **8.1.3 Contribution of the study to the body of knowledge**

This was not just a study about youth's views concerning agriculture, but it was a study about the heirs of farmers. Researching farmer's heirs, instead of youth in general, is the main contribution to the body of knowledge.

Findings relate to and apply to cane growers' offspring only. These reside in rural areas. Although the findings may be replicated to the children of farmers in other commodities in the agricultural sector in rural areas, these findings cannot be replicated for urban youth.

The following contribution was made by this thesis to the body of knowledge:

- Development of a generic model for the sustainability of agricultural production through youth involvement.
- Findings that the offspring of emerging cane growers (ECGs) have positive perceptions and attitudes towards farming, which augurs well for the future of cane farming.
- Confirmation that cane growers are an ageing population.
- Evidence that succession discussion does take place to a limited extent. The study also found that culture is an influencing factor in this regard.
- Level of involvement in farming activities by young people is high and the chances of succeeding parents as farmers are high for those young people who are involved in farming activities.
- Those who have a positive attitude towards agriculture are likely to take over from parents.
- Finding the following relationships or associations:
  - Training in sugarcane agriculture and positive attitudes towards cane farming.
  - Training in sugarcane and the liking of cane farming.
  - Training in sugarcane agriculture and choosing agriculture as a career.
  - High level of involvement and choosing agriculture as a career. Duration of involvement was not associated with choosing agriculture as a career. High level of involvement was also associated with positive attitudes towards cane farming.
  - Succession discussions and positive attitudes towards cane farming.
  - Possessing enough information about agriculture as a career and positive attitudes towards cane farming.

- Having done agricultural subjects at school and choosing agriculture as a career.
- Positive relationship shown between succession planning by farmers and the preferred choice of agriculture as a career by their offspring.
- Contrary to popular opinion or anecdotal evidence, the youth whose parents are ECGs were found to have positive perceptions and attitudes towards farming.
- Positive correlation between current involvement in farming by young people and their positive attitudes towards agriculture.
- Training in sugarcane agriculture impacted positively on youth's choice of agriculture as career.
- Despite competition with other careers, the future of agriculture is not bleak. A new cohort of farmers will emerge from the current generation.
- Involvement of siblings increased the possibility of future careers in agriculture.

## **8.2 Recommendations**

The generic model for the sustainability of emerging cane growers (ECGs) through youth involvement is the main recommendation emanating from this study. The model recommends five main pillars that should be embraced and implemented if sugarcane farming can be sustained beyond the current generation of ECGs.

The first pillar recommends the promotion of agriculture to young people. ECGs should expose their offspring to all aspects of cane farming ranging from field operations to financial aspects of the business. Succession discussions should take place at home, albeit within the constraints of cultural factors prevailing within a particular home.

The sugar industry should explore the possibility of a Youth in Sugarcane Agriculture (YISA) desk within the sugar industry structures. Preferably this desk should be headed by a young farmer. This desk will be responsible for the promotion of agriculture to young people and also lobby for their access to both funding and land. The same approach of the youth desk can also be adopted by other industries or commodities in the agricultural sector.

A youth exchange programme between youth from ECGs and white commercial cane growers is also recommended, with a view to exposing young people to bigger farming operations undertaken by white commercial cane growers.



The role played by schools in the promotion of agriculture cannot be taken lightly. More schools should offer agricultural subjects as part of the curriculum. The department of agriculture, the sugar industry and the department of education should collaborate, with the objective of changing the negative perceptions and attitudes that some young people still hold towards agriculture.

The private sector, especially business organizations in the sugar industry, should continue to play a role in encouraging young people. The private sector can offer opportunities such as internships, bursaries and work opportunities to the young people interested in cane farming.

The second pillar that is recommended as a focus area is that of basic education, training and involvement of young people. Schools play a role in terms of socialization as well as the imparting of knowledge and skills pertaining to agriculture. The exposure and involvement of youth in farming will evoke interest and positively influence the youth to choose agriculture. In cases where these young people are mature enough to work on their parents' farms, parents should give incentives to these young people with the aim of generating and maintaining their interest. ECGs can also consider giving full access to their offspring involved in farming to a portion of the farm that a young person can run on their own. Regarding involvement at an early age, there are recorded cases of schools in the North Coast of KwaZulu-Natal that have their own small cane fields and these are attended to by the students. This practice helps to raise funds for the school and at the same time gives exposure to cane farming to these young people. However, any involvement of young people at an early age should guard against child labour.

The third pillar of recommendations is that of access to relevant information that will enable young people to make informed decisions about choosing agricultural careers. Serious efforts must be made to ensure that youth have access to relevant information about agriculture. It is anticipated that the implementation of the previously recommended two pillars will give these young people sufficient information.

The fourth pillar of recommendation pertains to further education and training in an agricultural discipline in general and sugarcane agriculture in particular. Every effort must be made by all stakeholders, from the sugar industry role players to government departments, to ensure that study opportunities are created for the youth interested in pursuing agriculture. Assistance in this regard may range from bursaries to mentorship and on-the-job training programmes.

The fifth recommendation revolves around the provision of additional support to those starting formal careers in agriculture. Those intending to work full time for various organizations need to receive the necessary support and exposure as recommended earlier. Regarding those intending to establish agricultural enterprises, it is recommended that they are supported with regard to the following:

- Funding to establish their agricultural business ventures. Funding support may range from farm purchases to the provision of inputs such as fertilizer and herbicides.
- Access to land is critical if young people are to be drawn into agriculture and retained over a long period. Already there is a preference for young people to have their own pieces of land which can either be leased or fully owned by the young person. It is recommended that specific targets be set for youth access to land. For instance in the government's Proactive Land Acquisition Strategy (PLAS) programme, targets can be set for the number of farms or hectares that can be dedicated to the youth. Government agencies dedicated to youth such as the National Youth Development Agency (NYDA) should continue with their generic support programmes, but at the same time have a specific focus on the plight of the youth in rural areas that are committed to staying in agriculture.

The *National Development Plan* (NDP) recommends the establishment of District Land Committees (DLCs). The DLC is responsible for identifying 20 per cent of the commercial agricultural land in each municipal district. The researcher's recommendation is that there should be active youth participation in the DLCs and targets for the transfer of land to the youth should also be set at a district level. This is in line with the opening remarks of the *Draft National Youth Policy 2014-2019*, which states: "Nothing for young people without young people" (2015:3).

If the above recommendations are to be effectively implemented, it is necessary for government policies to be geared towards the establishment of youth *agripreneurs*. Furthermore, public-private partnerships focusing on youth in agriculture should be fostered.

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**APPENDIX A**

**FACULTY OF NATURAL AND AGRICULTURAL SCIENCES (UFS)  
FAKULTEIT NATUUR- EN LANDBOUWETENSKAPPE (UV)**

**CENTRE FOR SUSTAINABLE AGRICULTURE  
SENTRUM VIR VOLHOUBARE LANDBOU**

<p><b>SAMPLE QUESTIONNAIRE</b></p>
------------------------------------

**INVESTIGATING YOUTH PARTICIPATION AND THE SUSTAINABILITY OF  
SMALL-SCALE CANE FARMERS IN THE NORTH COAST REGION OF  
KWAZULU-NATAL**

Researchers: Sithabisile Cleopatra Ngiba / Wellington Mfanafuthi Ntshangase

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Questionnaire No.

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**INVESTIGATING YOUTH PARTICIPATION AND THE SUSTAINABILITY OF SMALL-SCALE CANE FARMERS IN THE NORTH COAST REGION OF KWAZULU-NATAL**

**INSTRUCTIONS**

- Interview will be conducted in both English and IsiZulu according to respondent’s preferences.
- During the farm visits, the respondents will be well-versed about the study and briefed that they are randomly selected from the five sugar mills in small-scale database.
- **All questions must be answered**, i.e. there must be no question left or missing information.

Please note that the information that you provide will be treated with the highest degree of confidentiality.

**INTERVIEW DECLARATION**

I.....  
....., declare that I have asked this questionnaire as it is laid out. I declare that all the responses and answers recorded in this questionnaire are true responses of the respondent and the questionnaire been fully checked by myself.

Signature:.....

Date:.....

**Dear Participant**

I am conducting the study on Youth and Sustainability of small-scale growers in the North Coast region of KwaZulu-Natal. This is the requirement for completing this degree. You have been randomly selected to take part in this survey as the cane grower’s descendant. The research report will be submitted to the University Of The Free State. The purpose of this survey is to ascertain whether the youth raised by small-scale cane growers are willing to take over cane farming from their parents, when they are unable to farm. Please note that participation in this study is voluntary and your assistance in this study is highly appreciated. The research will be compiled in such a manner that the information can be traced back to whoever has participated. Confidentiality will be ensured.

## SECTION 1: GENERAL INFORMATION

**Instruction:** Mark the appropriate block with X.

**Farm name** : \_\_\_\_\_

**Physical Address** : \_\_\_\_\_

**Mill Area** : \_\_\_\_\_

**Grower Code** : \_\_\_\_\_

**Cell number** : \_\_\_\_\_

**For office use only**

			1-3
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### RESPONDENT'S PROFILE

**1. Gender**

(a)	Male	1
(b)	Female	2

4

**2. What is your Age?**

(a)	14 – 18 years	1
(b)	19 – 24 years	2
(c)	25 – 30 years	3
(d)	31 – 35 years	4

5

**3. What is your racial group?**

(a)	Black	1
(b)	Indian	2
(c)	Coloured	3

6

**4. What is your marital Status?**

(a)	Single	1
(b)	Married	2
(c)	Divorced	3
(d)	Widowed	4
(e)	Other: Specify _____	5

7

**5. Do you have dependents?**

(a)	No	1
(b)	Yes	2

8

**6. Which of your parents are involved in farming?**

(a)	Mother	1
(b)	Father	2
(c)	Both parents	3
(d)	Other: Specify _____	4

For office use only

9

**7. How old is She?**

(a)	less than 40 years old	1
(b)	41 – 50 years old	2
(c)	51 – 60 years old	3
(d)	Older than 60 years	4
(e)	Don't know	5
(f)	Not Applicable	6

10

**8. How old is He?**

(a)	less than 40 years old	1
(b)	41 – 50 years old	2
(c)	51 – 60 years old	3
(d)	Older than 60 years	4
(e)	Don't know	5
(f)	Not Applicable	6

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11

**9. What is your highest level of education?**

(a)	Never been to school	1
(b)	Completed primary (i.e. Grade 7)	2
(c)	Completed matric ( i.e. Grade 12)	3
(d)	Tertiary qualification ( any post – school qualification completed at university or university of technology)	4
(e)	Other: Specify _____	5

12

**10. What is your current occupation?**

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(a)	Studying – Full time	1
(b)	Studying – Part time	2
(c)	Employed – Full time	3
(d)	Employed – Part time	4
(e)	Employed full time & studying part time	5
(f)	Employed part time & studying full time	6
(g)	Running a business	7
(h)	Unemployed	8
(i)	Other: Specify _____	9

13

**SECTION 2**

For office use only

**11. Do you have any previous experience in cane farming?**

(a)	No	1
(b)	Yes	2

14

**12. Are you currently involved in the farming operations on your parent's farm or other farms in the area?**

(a)	Not involved at all	1
(b)	To a certain level – Few days a week	2
(c)	Fully involved – Every working day	3

15

**13. If involved, how long have you been involved in farming activities?**

(a)	up to 12 months	1
(b)	over 1 year and up to 5 years	2
(c)	over 5 years but up to 10 years	3
(d)	More than 10 years	4

16

**14. Besides you, are your siblings currently involved in cane farming in your parent's farm or other farms in the area?**

(a)	No	1
(b)	Yes	2

17

**15. Has the issue of succession planning been discussed in the family?**

(a) No	1
(b) Yes	2

**For office use only**

18

**16. Is there someone who is willing to take over farming within your family?**

(a) No	1
(b) Don't know	2
(c) Yes	3

19

**17. Are you prepared to take over the running of the farm from your parents?**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

**For office use only**

20

**18. Do you see yourself as a future full time farmer?**

(a) No	1
(b) Not sure	2
(c) Yes	3

21

**19. Have you been trained in sugarcane agriculture?**

(a) No	1
(b) Yes	2

22

**20. If yes, indicate the type of training?**

(a) Formally	1
(b) Informally	2
(c) Both formally and informally	3

23

**21. Would you recommend farming as a career to your friends**

(a) No	1
(b) Not sure	2
(c) Yes	3

24

**22. Do you have enough information about farming as a career?**

(a) No	1
(b) Not sure	2
(c) Yes	3

25

**23. What is the size of your parent's small-scale farm?**

(a) 1 – 5 ha	1
(b) 6 – 10 ha	2
(c) 11 – 20 ha	3
(d) Over 20 ha	4
(e) Don't know	5

26

**24. I like cane farming as it generates income.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

27

**25. I like cane farming as a career**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

28

**26. I like cane farming as it creates jobs in our community.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

29

**27. I like cane farming because it is not a complicated enterprise.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

30



**28. I dislike cane farming because of its low socio-economic status (farm- life)**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

For office use only

31

**29. I dislike cane farming because of the type of work conducted it is difficult.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

32

**30. I dislike cane farming because there is low income generated.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

33

**31. I dislike cane farming because it is of low status.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

For office use only

34

**32. I dislike cane farming because it is too rural.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

35

**33. I dislike cane farming because it is dominated by the old generation.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

36

**34. If it can be proven that there is money to be made in cane farming, will you take it as your career?**

(a) No	1
(b) Not sure	2
(c) Yes	3

37

**35. Your attitude towards cane farming, is generally?**

(a) Negative	1
(b) Not sure / ambivalent	2
(c) Positive	3

For office use only

38

**36. Small-scale cane farming generates enough income to sustain a good living?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) Agree	4
(e) Strongly agree	5

	39

**37. Cane farming is a profitable business?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) agree	4
(e) Strongly agree	5

**For office use only**

	40

**38. The returns from farming are low when compared to returns from non- farming activities in Urban areas?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) agree	4
(e) Strongly agree	5

	41

**39. Besides cane farming is there any other source of income for the family?**

(a) No	1
(b) Not sure	2
(c) Yes	3

	42

**40. If yes, indicate? (Can select more than 1 option)**

(a) old age pension	1
(b) Social grant	2
(c) Employed	3
(d) Support from family member(s)	4
(e) Involved in other farming enterprises	5
(f) Rentals	6
(g) Other: Specify _____	7

**For office use only**

	43

**41. Are there any young people in the area involved in cane farming?**

(a) No	1
(b) Don't know	2
(c) Yes	3

44

**42. Where do you prefer to work and settle?**

(a) In the rural area	1
(b) Not sure	2
(c) Urban area	3

For office use only

45

**43. Youth are trendy and socially active, they find it difficult to adapt to dull pattern of rural areas?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) Agree	4
(e) Strongly agree	5

46

**44. Your life has been improved by small-scale sugarcane farming?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) Agree	4
(e) Strongly agree	5

47

**45. If you were to choose between agricultural career path and other careers which one will you choose?**

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(a) Other careers	1
(b) Not sure	2
(c) Agriculture	3

48

**THANK YOU!!!!**

## **APPENDIX B**

**FACULTY OF NATURAL AND AGRICULTURAL SCIENCES (UFS)  
FAKULTEIT NATUUR- EN LANDBOUWETENSKAPPE (UV)**

**CENTRE FOR SUSTAINABLE AGRICULTURE  
SENTRUM VIR VOLHOUBARE LANDBOU**

<h3><b>SAMPLE QUESTIONNAIRE</b></h3>
--------------------------------------

**INVESTIGATING THE SUSTAINABILITY OF LAND REFORM CANE FARMERS  
THROUGH INVOLVEMENT OF THE YOUTH IN CANE FARMING IN THE  
NORTH COAST REGION OF KWAZULU-NATAL**

Researchers : Sifiso Mkhwanazi/ Wellington Ntshangase  
Tel (work) : 032 439 5800  
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E-mail : [Sifiso.mkhwanazi@tongaat.com](mailto:Sifiso.mkhwanazi@tongaat.com) / [wellington.ntshangase@tongaat.com](mailto:wellington.ntshangase@tongaat.com)

Questionnaire No:

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**INVESTIGATING THE SUSTAINABILITY OF LAND REFORM CANE FARMERS  
THROUGH INVOLVEMENT OF THE YOUTH IN CANE FARMING IN THE  
NORTH COAST REGION OF KWAZULU-NATAL**

**INSTRUCTIONS**

- Interview will be conducted in both English and IsiZulu according to respondent's preferences.
- During the farm visits, the respondents will be well-versed about the study and briefed that they are randomly selected from the five sugar mills in small scale database.
- **All questions must be answered**, i.e. there must be no question left or missing information.

Please note that the information that you provide will be treated with the highest degree of confidentiality.

**INTERVIEW DECLARATION**

I,.....  
..... declare that I have asked this questionnaire as it is laid out. I declare that all the responses and answers recorded in this questionnaire are true responses of the respondent and the questionnaire been fully checked by myself.

Signature:.....

Date:.....

**Dear Participant**

I am conducting the study on Youth and Sustainability of Land Reform commercial growers in the North Coast region of KwaZulu-Natal. This is the requirement for completing this degree. You have been randomly selected to take part in this survey as the cane grower's descendant. The research report will be submitted to the University Of The Free State. The purpose of this survey is to ascertain that the youth raised by small scale canegrowers are willing to take over cane farming from their parents, when they are unable to farm. Please note that participation in this study is voluntary and your assistance in this study is highly appreciated. The research will be compiled in such a manner that the information can be traced back to whoever has participated. Confidentiality will be ensured.

## SECTION 1: GENERAL INFORMATION

**Instruction:** Mark the appropriate block with **X**.

**Farm name:** \_\_\_\_\_

**Physical Address:** \_\_\_\_\_

**Mill Area :** \_\_\_\_\_

**Telephone number: Office:** \_\_\_\_\_

**Cell:** \_\_\_\_\_

**For office use only**

1-3

### RESPONDENT'S PROFILE

#### 1. Gender

(a)	Male	1
(b)	Female	2

4

#### 2. What is your Age?

(a)	14 – 18 years	1
(b)	19 – 24 years	2
(c)	25 – 30 years	3
(d)	31 – 35 years	4

5

#### 3. What is your racial group?

(a)	Black	1
(b)	Indian	2
(c)	Coloured	3

6

#### 4. What is your marital Status?

(a)	Single	1
(b)	Married	2
(c)	Divorced	3
(d)	Widowed	4
(e)	Other: Specify _____	5

7

**5. Do you have dependents?**

(a)		1
(b)	Yes	2

	8
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**6. Which of your parents is involved in farming?**

(a)	Mother	1
(b)	Father	2
(c)	Both parents	3
(d)	None	4
(e)	Other: Specify _____	5

**For office use only**

	9
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**7. How old is She?**

(a)	less than 40 years old	1
(b)	41 – 50 years old	2
(c)	51 – 60 years old	3
(d)	Older than 60 years	4
(e)	Don't know	5
(f)	Not Applicable	6

	10
--	----

**8. How old is He?**

(a)	less than 40 years old	1
(b)	41 – 50 years old	2
(c)	51 – 60 years old	3
(d)	Older than 60 years	4
(e)	Don't know	5
(f)	Not Applicable	6

**For office use only**

	11
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**9. What is your highest level of education?**

(a)	Never been to school	1
(b)	Completed primary (i.e. Grade 7)	2
(c)	Completed matric ( i.e. Grade 12)	3
(d)	Tertiary qualification ( any post – school qualification completed at university or university of technology)	4
(e)	Other: Specify _____	5

	12
--	----

**10. What is your current occupation?**

For office use on

(a)	Studying – Full time	1
(b)	Studying – Part time	2
(c)	Employed – Full time	3
(d)	Employed – Part time	4
(e)	Employed full time & studying part time	5
(f)	Employed part time & studying full time	6
(g)	Running a business	7
(h)	Unemployed	8
(i)	Other: Specify _____	9

13

**SECTION 2**

For office use on

**11. Do you have any previous experience in cane farming?**

(a)	No	1
(b)	Yes	2

14

**12. Are you currently involved in the farming operations on your parent's farm or other farms in the area?**

(a)	Not involved at all	1
(b)	To a certain level – Few days a week	2
(c)	Fully involved – Every working day	3

15

**13. If involved, how long have you been involved in farming activities?**

(a)	up to 12 months	1
(b)	over 1 year and up to 5 years	2
(c)	over 5 years but up to 10 years	3
(d)	More than 10 years	4

16

**14. Besides you, are your siblings currently involved in cane farming in your parent's farm or any other farm/s in the area?**

(a)	No	1
(b)	Yes	2

17



**17. Has the issue of succession planning been discussed in the family?**

(a) No	1
(b) Yes	2

For office use  
only

18

**18. Is there someone who is willing to take over farming within your family?**

(a) No	1
(b) Don't know	2
(c) Yes	3

19

**19. Are you prepared to take over the running of the farm from your parents?**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

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20

**20. Do you see yourself as a future full time farmer?**

(a) No	1
(b) Not sure	2
(c) Yes	3

21

**21. Have you been trained in sugarcane agriculture?**

(a) No	1
(b) Yes	2

22

**22. If yes, indicate the type of training?**

(a) Formally	1
(b) Informally	2
(c) Both formally and informally	3

23

**23. Would you recommend farming as a career to your friends**

(a) No	1
(b) Not sure	2
(c) Yes	3

24

**24. Do you have enough information about farming as a career?**

(a) No	1
(b) Not sure	2
(c) Yes	3

25

**25. What is the size of your parent's land reform commercial farm?**

(a) 1 – 50 ha	1
(b) 51 – 70 ha	2
(c) 71 – 100 ha	3
(d) Over 100 ha	4
(e) Don't know	5

26

**26. I like cane farming as it generates income.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

27

**27. I like cane farming as a career**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

28

**28. I like cane farming as it creates jobs in our community.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

29

**29. I like cane farming because it is not a complicated enterprise.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

30

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**30. I dislike cane farming because of its low socio economic status (farm- life)**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

31

**31. I dislike cane farming because the type of work conducted it is difficult.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

32

**32. I dislike cane farming because there is low income generated.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

33

**33. I dislike cane farming because it is of low status.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

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34

**34. I dislike cane farming because it is too rural.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

35

**35. I dislike cane farming because it is dominated by the old generation.**

(a) Disagree	1
(b) Not sure	2
(c) Agree	3

36

**36. If it can be proven that there is money to be made in cane farming, will you take it as your career?**

(a) No	1
(b) Not sure	2
(c) Yes	3

37

**37. Your attitude towards cane farming, is generally?**

(a) Negative	1
(b) Not sure / ambivalent	2
(c) Positive	3

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38

**38. Land Reform commercial farming generates enough income to sustain a good living?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) Agree	4
(e) Strongly agree	5

39

**39. Cane farming is a profitable business?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) agree	4
(e) Strongly agree	5

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40

**40. The returns from farming are low when compared to returns from non- farming activities in Urban areas?**

(a) Strongly disagree	1
(b) Disagree	2
(c) Not sure	3
(d) agree	4
(e) Strongly agree	5

41

**41. Besides cane farming is there any other source of income for the family?**

(a) No	1
(b) Not sure	2
(c) Yes	3

42

**42. If yes, indicate? ( Can select more than 1 option)**

(a)	old age pension	1
(b)	Social grant	2
(c)	Employed	3
(d)	Support from family member(s)	4
(e)	Involved in other farming enterprises	5
(f)	Rentals	6
(g)	Other: Specify _____	7

**43. Are there any young people in the area that are involved in cane farming?**

(a)	No	1
(b)	Don't know	2
(c)	Yes	3

**44. Where do you prefer to work and settle?**

(a)	In the rural area	1
(b)	Not sure	2
(c)	Urban area	3

**45. Youth are trendy and socially active, they find it difficult to adapt to dull pattern of rural areas?**

(a)	Strongly disagree	1
(b)	Disagree	2
(c)	Not sure	3
(d)	Agree	4
(e)	Strongly agree	5

**46. Your life has been improved by Land Reform commercial sugarcane farming?**

(a)	Strongly disagree	1
(b)	Disagree	2
(c)	Not sure	3
(d)	Agree	4
(e)	Strongly agree	5

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47. If you were to choose between agricultural career path and other careers which one will you choose?

(c) Other careers	1
(d) Not sure	2
(c) Agriculture	3

54

**THANK YOU!!!!**

**APPENDIX C**

**PhD Research: Sustainability of Emerging Cane Growers in the North Coast of KZN  
through Youth Involvement**

**Focus Group Guide and Note Taker Form**

**Focus Group Discussion for Offspring of Emerging Cane Growers**

Venue: \_\_\_\_\_ Moderator: \_\_\_\_\_

Number of participants: \_\_\_\_\_ Note Taker: \_\_\_\_\_

Date: \_\_\_\_\_ Transcriber: \_\_\_\_\_

Start: \_\_\_\_\_ End: \_\_\_\_\_

**Question 1: Information of about agriculture**

Have you got the relevant information to make an informed decision about careers in agriculture?

**Observations**

**Question 2: Attitudes towards agriculture**

a. In general, what is your attitude towards cane farming?

b. (If positive attitude) Can you identify any factors that led to you having a positive attitude towards cane farming?

**Observations**



c. (If negative attitude) Can you identify any factors that led to you having a negative attitude towards cane farming?

**Observations**

d. **Probe:** Do your socioeconomic conditions play a role in your attitude towards cane farming?

e. **Probe:** If you have received training in sugarcane agriculture, can you please explain how this influenced your attitude towards cane farming?

**Observations**

f. **Probe:** Can you please explain how your current level of involvement in cane farming activities influences your attitude towards cane farming?

**Question 3:** What is it that you like about farming?

**Observations**

**Question 4:** What is it that you do not like about farming? (Is it a status thing?)

**Observations**

**Question 5:** What can be done to generate and maintain your interest, as young people, in farming?

**Observations**

**Question 6:** Since there are young people who are unemployed (whose parents are cane growers) why are they not getting involved and help their parents in the farms?

**Observations**

**Question 7: Succession matters**

- a. **Succession:** Have you and your parents had any discussions about succession planning?

- b. (If yes) How did this influence your attitude towards cane farming?

**Observations**

- c. **Succession:** Do you prefer to inherit your parents' farm or you want to have your own? Can you wait that long?

**Observations**



**Question 8: Factors influencing succession**

What will make you choose agriculture and succeed your parents?

**Observations**

- a. **Probe:** If you know that there is money to be made in sugarcane agriculture, would this influence your decision?

**b. Probe:** In what way does your level of involvement in farming activities influence this decision?

**Observations**

**c. Probe:** If you have had agricultural subjects at school, can you please explain how this influenced you choosing agriculture as a career?

**APPENDIX D**

**PhD Research: Sustainability of Emerging Cane Growers in the North Coast of KZN  
through Youth Involvement**

**Focus Group Guide and Note Taker Form**

**Focus Group Discussion for Emerging Cane Growers**

Venue: \_\_\_\_\_ Moderator: \_\_\_\_\_

Number of participants: \_\_\_\_\_ Note Taker: \_\_\_\_\_

Date: \_\_\_\_\_ Transcriber: \_\_\_\_\_

Start: \_\_\_\_\_ End: \_\_\_\_\_

**Question 1:** What comes to mind when thinking about youth in cane farming?

**Observations**



c. How important is the need for succession planning?

**Observations**

d. Is there a cultural influence in terms of how you are handling this matter?

**Question 3: Youth Involvement and Perceptions**

a. Are your children interested and currently involved?

b. Do they view farming in a positive light?

**Observations**

c. In your opinion, what are the reasons for these views?

**Observations**

d. What are the possible reasons for the youth's involvement in farming?

**Question 4: Factors discouraging young people from choosing agriculture**

What, in your opinion, are the main factors that discourage young people from choosing cane farming as a career?

**Observations**



**Question 5: What can be done to cultivate youth interest in agriculture?**

What can be done to ensure that young people remain interested in farming?

**Observations**

**Question 6: Factors that threaten sustainability of cane production**

What, in your opinion, are factors that threaten the sustainability of cane production?  
(**Probe with:** Economic, social, environmental, risk protection and biological productivity)

Observations