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### **ABSTRACT**

*Cane farming makes an important contribution to the socio-economic development of the rural areas where it takes place. These cane growing areas are characterised by high levels of poverty and youth unemployment. The current crop of cane growers is ageing and there is a need to prepare to handover 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 researcher's 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 these 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 also increases their willingness to take over farming from their parents. The results show positive inputs in terms of encouraging sustainability in the future of cane farming.*

**Keywords:** Small scale, cane grower, youth, involvement, attitude, sustainability, extension implications.

## **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 authors argue 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 called 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

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as we have had ourselves” (Dumanski 1997:15). Therefore any meaningful discussion about sustainability should take into cognizance 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 further 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 worse.

The main problem facing cane farming is that there is minimal involvement by 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 is in existence and operate 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 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 which are the ageing farmer population and a lack of youth interest in agriculture. Akpan (2010) 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 the country alone but the rest of the world.

According to Leavy & 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.

## **2. PROCEDURE AND METHODS**

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.

According to Thi (2008:55) the advantages of quantitative research are 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. Thi (2008:55) argues that objectivity is a significant indicator in establishing validity of information and doing so, investigators become neutral observers and analysts.

The study focused on the youth (age 14 - 35 years) whose parents or close relatives are small scale growers 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 & Felixton.

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

A probability sampling approach was adopted in this study which meant that each element of the survey population had a known and equal chance of being selected. 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% 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 were undertaken.

According to Steyn (2005) there are various data gathering methods, which are observation, face to face interviews, self-administered methods, focus groups and personal interviews.

The data gathering methods/ techniques that were applied were predominantly face-to-face interviews. In terms of the data gathering instruments a structured questionnaire was utilized since this is 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. Regarding ethical consideration the respondents were guaranteed that confidentiality would be guaranteed and that they were not forced to participate in the study.

### **3. FINDINGS AND DISCUSSION**

#### **3.1 Demographic details of respondents**

The study revealed that the percentage of male respondents were 57% as opposed to 43% 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 over 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. Bezu & Holden (2014:264) found that only 3% of all landholders in Ethiopia are young women and because of tradition most young women can only have access to land through marriage to a young man who has access to land.

Regarding the age brackets at least 63.2% of the respondents were between the ages 19-30 which is the age where most career decisions are made. The 31 - 35 age category comprised 24.4% 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%) of those who completed Matric (57%) and those who have attained tertiary qualification (14%). It was also encouraging to note that almost 40% 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 percent of respondents had never been to school.

Results also revealed that at least 62% of respondents have undergone some formal or informal training in sugar cane 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.

### 3.2 Youth involvement in farming activities

The involvement of the youth is indicated in Table 1.

**Table 1:** Respondents' current involvement in farming operations

Youth involvement in farming operations	Frequency	Percent
Not involved at all	44	22.8
To a certain level - Few days a week	86	44.6
Fully involved - Every working day	61	31.6
Total	191	99.0
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100</b>

Table 1 show that the respondents whose parents are cane growers are involved in farming. This table further shows that only 22.8% of offspring of cane growers are not involved at all in farming operations. This high level of involvement which is almost 76.2% involvement, whether fully or a few days a week, is good for the sustainability of cane farming.

**Table 2:** Involvement of Respondents' siblings in farming operations

Involvement of respondents' siblings	Frequency	Percent
No	77	39.9
Yes	114	59.1
<b>Total</b>	<b>191</b>	<b>99.0</b>
Missing from system	2	1.0
Total	193	100.0

Table 2 shows that the siblings of respondents are also involved in farming activities. The majority (59.1%) are playing a role and this will undoubtedly impact positively on the future of cane farming.

**Table 3:** Involvement in farming activities of other young people in the area

<b>Involvement</b>	<b>Frequency</b>	<b>Percent</b>
No	14	7.3
Don't know	19	9.8
Yes	158	81.9
<b>Total</b>	<b>191</b>	<b>99.0</b>
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100</b>

Table 3 ascertains whether 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 and the number of those involved was found to be 81.9%

### 3.3 Duration of youth involvement in farming activities

Table 4 shows the respondents' duration of involvement in the farming operations.

**Table 4:** Respondents' duration of involvement in farming operations

<b>Youth involvement in farming operations</b>	<b>Frequency</b>	<b>Percent</b>
Up to 12 months	38	25.9
Over 1 year and up to 5 years	40	27.2
Over 5 years and up to 10 years	26	17.7
More than 10 years	42	28.6
Missing	1	0.7
<b>Total</b>	<b>147</b>	<b>100.0</b>

According to both Tables 1 and 2 it was inspiring to discover that a large number of young people whose parents or relatives are cane growers are currently involved in farming activities. Table 4 reflects the duration of involvement of the youth and the interesting observation is that out of those who are already involved it was found that more than 46.3% have been involved in cane farming activities for more than five years. This reflects interest in farming which bodes well for the long term sustainability of cane farming.

### 3.4 Preparedness to take over farming activities

The respondents were asked to indicate whether there is somebody in the family who is prepared to take over farming activities and their results are indicated in Table 5.

**Table 5:** Is somebody in the family willing to take over farming?

<b>Availability of somebody</b>	<b>Frequency</b>	<b>Percent</b>
No	22	11.1
Don't know	66	34.2
Yes	102	52.8
<b>Total</b>	<b>190</b>	<b>98.4</b>
Missing System	3	1.6
<b>Total</b>	<b>193</b>	<b>100</b>

In Table 5 respondents had been asked whether there is somebody in the family who is willing to succeed their parents and become a cane farmer. At least 52.8% of families have somebody, other than the respondent, who is willing to take over farming. Only 11.4% indicated that there is nobody willing to take over. The high percentage of those who do not know which is 34.2% could be attributed to reluctance to openly discuss succession and inheritance related matters in black cultures. Focus group discussions that were held with small scale growers revealed reluctance to discuss succession matters.

The perceptions of the respondents whether they were willing to take over from parents are indicated in Table 6.

**Table 6:** Respondents’ indications of whether they are prepared to take over from parents

Respondents’ preparedness	Frequency	Percent
No	18	9.3
Don’t know	29	15.0
Yes	144	74.6
Total	191	99.0
Missing System	2	1.0
<b>Total</b>	<b>193</b>	<b>100.0</b>

In Table 6, unlike in Table 5, 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% of respondents are willing to run the farms left over by parents. However, on further probing during focus group discussions 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. Respondents’ responses on whether they are involved in farming as well as their preparedness to take over from their parents were cross tabulated and the responses are reflected in Table 7.

**Table 7:** 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%	23.2%
		% 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%	76.8%
		% 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%	100.0%
		% of Total	24.7%	75.3%	100.0%

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". From the shaded rows in the Cross tabulation in Table 7 it can be seen that in the group of participants who indicated that they are not involved in farming activities, only 29.5% said that they are willing to take over the farm. In contrast, in the group of participants who are involved in farming activities, 89% 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 8:** Chi Square Test

	<b>Not sure / Not prepared to take over</b>	<b>Prepared to take over</b>	<i>Marginal Totals</i>	<i>Row</i>
<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	
<i>Marginal Column Totals</i>	47	143	190 (Grand Total)	

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

The contingency table (Table 8) 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 8 there was a statistically significant association between involvement and willingness to take over the farm,  $\chi^2(1) = 64.283$ ,  $p = 0.000$ .

#### 4. IMPLICATIONS FOR EXTENSION

Despite the belief that young people are exiting agriculture and the farmers are ageing, it is encouraging to note that in the context of the sugar industry young people are involved in farming activities. The results have positive implications for extension services. Transfer of new knowledge and technology can be facilitated much easier to younger people. This is because the emerging younger farmer is likely to be more educated and more receptive to new ideas and technologies.

In the context of this study there is an association between current involvement and likelihood to take over farming from parents. Therefore, extension officials should encourage young people to get involved in agricultural operations at a very early age. Farmers must be encouraged to expose these young people to agricultural operations. The issue of youth involvement ought to be high on the priority list of extension programmes and engagements. These young people can assist extension officers to transfer new farming methods and technologies to a wider group of farmers. Furthermore, through peer influence, the young people already involved in farming can facilitate the entry of other young people to agriculture.

Whenever, capacity building programmes for farmers take place these farmers must also be encouraged to bring along the youth with the aim of motivating them and ensuring that they are exposed to agricultural operations. Extension services have a critical role to play in preparing for succession in agricultural businesses by ensuring that young people remain involved, motivated, exposed and trained accordingly. Extension officers have to take into cognisance the changing face of a farmer in rural areas and should capitalise on this positive trend.

## 5. SUMMARY AND RECOMMENDATIONS

The assumption was that there is minimal involvement or total lack of youth involvement in farming activities. It was worthy 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 & 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 farm 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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