

The Role of Aspirations and Goals in the Management of Smallholder Agriculture in Crop Production in Kwa-Nobuhle in the Eastern Cape

Sibongile Funde¹ and Akeem Adewale Oyelana^{2*}

¹Department of Agricultural Economics and Extension, School of Agriculture and Agribusiness, Faculty of Agricultural Science, University of Fort Hare, P. Bag, X1314, Alice 5700, South Africa

²Department of Public Administration, Faculty of Commerce and Management, University of Fort Hare, P. Bag, X1314, Alice 5700, South Africa E-mail: \(^1\cdot 200909165\)@ufh.ac.za\(^2\cdot 201100592\)@ufh.ac.za\(^1\cdot 201100592\)

KEYWORDS Agricultural Productivity. Aspirations. Goals. Government. Smallholder Farmers

ABSTRACT The study investigates aspirations and goals impact on agricultural production due to the current state of smallholder low-agricultural productivity growth trends that raises concerns on what other fundamental development strategies to implement. A cross sectional research design was used to collect data quantitatively. Data were collected from seventy (70) respondents using questionnaire. Quantitative data were analysed using descriptive statistics and t-test was used as inferential statistical tool. Results of the study show that farmers had multiple aspirations and goals that help them exploit farm resources more efficiently leading to increase in productivity. The overall impact of these on crop production of selected enterprises shows to be statistically significant at p=0.035. This implies that aspirations and goals contribute positively to the rising alarming concerns of agricultural productivity growth. Hence, government and other prospective stakeholders should take serious note of smallholder farmer's aspirations and goals as a strategy to understand, plan, develop and implement development programs that would lead essentially to achievement of farmer's aspirations and goals.

INTRODUCTION

International Food Policy Research Institute (IFPRI) (2013) emphasise that agriculture worldwide will be enforced to go through major transformation in the upcoming years to meet the increasing demand of food in both developing and developed societies in the future. Smallholders in the developing countries play a key role worldwide in this food security equation (IFPRI 2013). They supply a large share of global agricultural output and are among the poorest and most food insecure people in the world. However, IFPRI also emphasise that smallholders are not a homogeneous group but rather a diverse set of households with varying farm and household's characteristics.

The relative debate on smallholder farms versus large-scale farms is the domination of smallholder farming systems in the developing world. Worldwide about half a billion farms are smaller than 2 hectares, and these farms are getting smaller in many countries (Hezell et al. 2007).

The continuing decline is due to factors such as growing rural population, urban growth that is not labour intensive, formal and informal barriers to rural-urban migration, and distortionary land policies. Small farms are estimated to produce four-fifths of the developing world's food (Food and Agriculture Organisation (FAO) 2011). Smallholders farmers are prospective drivers of agricultural improvement, and economies in under developed countries yet although their potential is often not brought forward (Machethe 2004). "A number of studies, drawing on evidence from small farms across the world, have shown that small multi-crop farms are more efficient than large mono-crop farms. Under good conditions, small farmers can produce between two and ten times more per unit of land than large estates" (African Smallholder Farmers Group (ASFG) 2013). Arguably, "smallholder agriculture is simply too important to employment, human welfare and political stability in Sub-Saharan Africa to be either ignored or treated as just another small adjusting sector of a market economy" (Delgado 1999).

Similarly, Ncube (2012) concurs that most of the country smallholder farmers play a key role in rural food security and hence smallholder farmers are normally described as resource poor. South Africa has a large proportion of its population residing in rural areas and are, in one way or the other, involved in some agricultural related activity. Agriculture, forestry and fisheries are major food production and security sectors consisted of 66 billion industry with 2.7 percent of the country's Gross Domestic Product (GDP) in 2009 (Statistics South Africa 2013). Agriculture employs 4.75 million people, of whom 4 million are engaged in agriculture for own consumption purposes. Given that the non-agricultural sector jointly employed 8 million employees, it means that those who grow their own food, that is, the smallholders employ or have the potential to employ approximately thirty-three percent of total labour force in the country. Contrarily, South Africa smallholder agriculture is not fulfilling the vital role it should be playing (Mudhara 2010). Various factors affect negatively the production of smallholder's famers in rural areas such as infrastructural shortages, gender differences, soil quality, water scarcity, political instability, and majority of small-scale over large-scale production, shortage of inputs, climate variability, unfavourable agricultural policies, and international trade barriers that favour the developed over the developing world (Ncube 2012).

Problem Statement

According to Mudhara (2010), smallholder farmers are most important group necessitating attention in agricultural and rural development as they play a major role in reducing poverty and unemployment. To enhance their role, the government in her own capacity has implement various ideas to improve smallholder agriculture in order to increase productivity, improved service delivery, reduce poverty, and unemployment, this included placing extension officers in the wards to implement government programs, land reform programs, and formed new water rights legislation. Cary and Holmes (1982) state that farmer's aspirations and goals have always been known but not often understood, it is important for farmers to set goals and aspirations because they determine the farmer's success or failure.

However, according to Department of Agriculture, Forestry and Fisheries (DAFF) (2012), "the current reality of agriculture in the former homelands of South Africa is a depressing situation characterised by widespread abandonment of land and low productivity. Therefore, the smallholder agriculture is not fulfilling the pivotal role it should be playing in developing rural areas and the country at large." Mudhara (2010) further points out that the programs that government has implemented has turned out to be a government transfer program rather than cultivating productivity, because these programs are not accompanied by the supporting measure that ensure sustainability. Availability of physical assets like land and water without proper management, organisation and co-ordination has shown to be non-productive. Therefore, there is a need to set aspirations and goals in order to utilise and manage such assets more optimally and efficiently (Kibirige 2014). Additionally, there is the need to understand acknowledge aspirations and goals of farmers even before development programs set to support farmers are implemented.

In South Africa, literature on smallholder agriculture has identified the following challenges as those that affected their livelihood strategies: markets and technologies, lack of human capital, lack of access to social infrastructure. In fact, several studies related to the social study of farming has been almost completely neglected and there has been poor awareness of social establishment and formation of the farming community. This therefore presents a serious issue that needs to be address since it is the decision of the farmer either individually or in groups, which help shape patterns of agricultural production.

Hence, the study sought to identify the aspirations and goals of smallholder agriculture farmers for the purpose of getting a clear perceptive of their future endeavours, motivations, decision-making behaviour and needs in the sector towards enhancing their agricultural production.

Research Objectives

- To identify aspirations and goals of smallholder farmers.
- (2) To determine the impact of aspirations and goals on crops produced.

Research Questions

(1) What are the aspirations and goals that motivate smallholder farmer's production? (2) Do aspirations and goals influence the level of crops produced?

Null Hypothesis

Ho: Smallholder farmers of Kwa-Nobuhle area are not driven by any aspirations and/or goals in their farm production.

Ho: Aspirations and goals does not influence the level of crops produced.

Literature Review

Smallholder Diversity in South Africa

Amid the decade following the democratization of South Africa in 1994, rural approach has expected to make another certain rural economy, in which both huge and little homestead enterprises contend agreeably on local and worldwide produce markets (Department of Agriculture 2001; Van Averbeke and Mohamed 2006). A critical concern has been the advancement of a dark business smallholder area (Vink and Kirsten 2003). There are a huge and differing forms of meeting of Smallholders in South Africa (Van Averbeke and Mohamed (2006). Groenewald and Nieuwoudt (2003); Van Averbeke and Mohamed (2006) evaluated that there were around 2.1 million dark little scale ranchers in South Africa in 1999.

The transition from apartheid to a new democratically elected government in 1994 brought about various policy changes (such as the deregulation of the marketing system, abolition of certain tax concessions, reductions in expenditure from the national budget, land reform, trade reform and new labour legislation) to transform the agricultural sector and open economy (Groenewald and Nieuwoudt 2003).

Defining Smallholder Farmers in South African Context

There are different general definitions for smallholder famers in South Africa and the terminology used to refer to them has been inconsistent. Various authors have used descriptive words to classify smallholders and these terms have been used interchangeably (Ortmann and Machethe 2003). The terminology used has often also been linked to the specific number of farmers in a specific group, which makes classi-

fication difficult. The term "small-scale" is often used in South Africa to refer to black smallholder farmers characterised by non-productive, backwards, non-commercial and subsistence agriculture (Kirstein and Van Zyl 1998). It is often used as the broader term to refer to the total number of farmers or households involved in agricultural production on a relatively small scale. Personally connected to the view that variety among smallholders signifies to the diverse phases of a direction from subsistence to business cultivating is the concept of what constitutes achievement in smallholder cultivating (Van Averbeke and Mohamed 2006). The arguments of a few contemporary rural financial specialists portrays an effective smallholder as an exceedingly profitable rancher who effectively takes part in business sectors and procures adequate wage, basically from horticulture, to appreciate a way of life that is free of neediness ((Van Averbeke and Mohamed 2006; Pienaar 2013). On account of flooded agribusiness, (Backeberg 2005; Van Averbeke and Mohamed 2006) emphasised that fruitful smallholders can contribute monetarily to the operation and upkeep of framework and the utilization of water. Realistically, (Department of Agriculture 2001; Van Averbeke and Mohamed 2006) state that in post-politically-sanctioned racial segregation South Africa, smallholders are frequently groups into three, these include: 'subsistence ranchers', who make up the substantial larger part, 'business ranchers', a little minority, and 'emerging agriculturists'. Makhura and Mokoena (2003); Van Averbeke and Mohamed (2006) accentuate that the three classifications of smallholders are viewed as signifying transformative strides on a direct advancement direction from subsistence agriculturist by means of emerging rancher to business agriculturist.

Models of Farming Systems

In order to understand how small-scale farming can contribute to achieving a sustainable global food system, it is important to look at their specific features. Small-scale farmers are characterised into the following groups:

Subsistence Farmers

According to Wegner and Zwart (2011), "these are households, fisher folk, pastoralists, smallholders, as well as landless labourers and

households requiring social assistance, for which food security is the main concern. Small production units are almost totally focused on home consumption. These are among the most disadvantaged and vulnerable rural groups." This group includes what Oxfam has described as 'forgotten famers', many women and female headed households, who are among the poorest and most exposed in rural areas. These farmers have very little land (for instance, less than a hectare), lack most types of assets apart from unskilled labour, and at the same time operate in unfavourable conditions. Small-scale farmers face major obstacles and they are ill equipped to participate in cash crop production or marketing activities. Given the very limited endowment of agricultural assets, even significant long-term increments in agricultural productivity will usually have a very small impact on total household income. They are generally supported by NGO's and charitable organisations (Wegner and Zwart 2011).

Emerging Smallholder Cultivators

Emerging smallholder farmers "are rural-urban households and small agricultural firms engaged in farming as a business. Their production is based on family labour, although in the more entrepreneurial farms the owner and perhaps other family members are in charge primarily of management and supervision, while bulk of the labour input is provided by hired farm workers (including several permanent full time employees). They hold cultivated land for both commercial and subsistence agriculture and produce for the market. To cope with price and climatic shocks, they diversify production. They exhibit high production efficiency, but their assets are limited. Constraints of capacity, legal status, marketing, infrastructure, and capital hinder their growth and full participation in the market" (Wegner and Zwart 2011).

Large-scale Farmers

According to the Wegner and Zwart (2011), "these are medium to large firms engaged in high-value, export-oriented agriculture. They account for a very small percentage of rural players in developing countries. Management may be local or foreign. There is a permanent staff of full-time hired farm workers, who are to some degree

specialised. In addition to their land and other holdings, firms in this category have direct access to the finance, modern risk management instruments, information, and infrastructure necessary to remain competitive in their business operations. They can produce indirect effects on poverty reduction: high adoption rates result in rapid improvements in productivity, driving food prices down on a global scale, and they can create employment."

Aspirations and Goals of Farmers

The first thing a successful person needs to have in life is a goal. According to Patrick (1981), goals have been defined in various ways, commonly, goals and objectives are considered an individual wishes to achieve or a state in which an individual wishes to achieve. While Harper (2010) defines goals as ends, objectives or states that an individual farmer wishes to achieve or gaining more desired need. Thus, an aspiration is a goal or objective that a human being strongly desire to achieve. Goals sustain, empower, and give purpose to human's directions in life towards ultimate fulfilment and happiness.

According to Van Kooten et al. (1986), the assessment of farmer's aspirations and goals serve as a number of useful purposes. Firstly; understanding farmers aspirations and goals can be useful for predicting economic behaviour, secondly; multiple goals of farmers can be incorporated into farm simulation models to assist producers in making decisions, finally; knowledge of farmer's goals is desirable for the formulation of agricultural policy and in extension programs. Thus, Basarir (2002) argued that it is therefore important for any farmer especially smallholder farmers to be able to identify their goals, as they are a necessary step towards devising alternative ways of reaching them.

The word 'aspiration' on the other hand, means a desire or ambition to achieve something (Oxford English Dictionary 1989). According to Hallensleben (2012), the word signifies some goal or target and a desire to attain it, but also suggest the intention to exert effort towards realising the goal. At first thought, it would seem plausible that everybody has plans, hopes, goals or targets, regardless of their socio-economic background.

According to Bernard et al. (2014) in economics terms, aspirations may be defined as

bounds among individuals preferences, the limits of the choice sets which it is considered as relevant for farmers and motivate their actions. According to Simon (1979), aspirations in economics appear as 'Satisficing' approach meaning one could postulate that the decision maker had formed some aspiration as to how good an alternative he should find. As soon as the discovered alternative for choice meeting his level of aspiration, he would terminate the search and choose that alternative. In addition, Bernard et al. (2014) also emphasise that, literature in sociology, social psychology and economics on the nature, formation and significance of individual aspirations has a number of features in common. Firstly, aspirations express goals or goal orientations that are relevant to well-being, broadly defined. Secondly, aspirations evolve over time in response to life experience and circumstances. In addition, Haller and Miller (1963) emphasise that thirdly, as goals, aspirations are an important influence on behaviour (or actions) and thus attainment or outcomes. According to Denzau and North (1994), conceptually, aspirations are boundary-states, which are sought after in a relevant domain of choice. In other words, aspirations express a preference for a 'state of the world' where the relevant goal is achieved, instead of other states. Educational and Occupational aspirations are discernible examples" common to smallholder farmers, but smallholder farmers may hold aspirations in many domains.

Demographic and Socio-economic Factors that Influence Aspirations and Goals

Although aspirations and goals significantly predict achievement of certain outcome, regardless of socio-economic background, there are stronger predictors (socio-economic factors) that negatively influence achievement of aspirations and goals of individuals for example, those living in economic hardship and have less financial security and fewer material resources of their own for investing in themselves may be less inspired and goal-oriented. Characteristics such as age, gender, education, income have been shown to have an influence on aspirations and goals of an individual. The more the individual becomes mature and is aging the more likely they would see things from different perspective and form aspirations and goals for the future. However, this is not always the case as other individuals are aging they become less inspired and goal-oriented in response to their aging their understanding of how the world is and what is possible, and constraints imposed by certain choices and experiences. Some studies showed that there is a gap between females and males level of aspiration, in some instances females become more motivated and goal-oriented than males vice versa. This gap may be due to structural inequalities and perceived barriers, which impede the fulfilment of aspirations and goals.

Individuals that have formal education tend to become more inspired to continue with higher education than those who did receive formal education at all. Studies show that educated individuals aspire and have ambition to pursue professional careers such as being doctors, engineers, accountants and scientist, while others who are not educated are less motivated to do so, and they rather go find jobs to work for a living. However, those who did not receive formal education may be more inspired for their family members and or children to receive formal education because of the opportunities that they may witness that arose from having formal education. Individuals are said to set aspirations and goals that are multi-dimensional and realistic in nature meaning they can be achievable, but also they set these according to their income they receive. Some aspirations and goals require use of money for them to be achieved; hence, the well-resourced individuals are able to achieve in no time some of the aspirations and goals than those who are disadvantaged financially that take a longer period to achieve them. These differences simple imply that aspirations and goals of individuals tend to increase in line with higher socio-economic backgrounds of the individual. The increase in aspirations and goals of individuals, however does not guarantee that one would achieve better outcomes than those who are less inspired and goal-oriented. Studies show that some individuals who had high aspirations and goals failed to highly achieve those, this is due to inefficient use of resources by individuals. Hence, these factors presents gaps in the level of aspirations and goals of individuals and the fact that these differences exist has important implications for policy and practise, as they highlight how government and other organisations may reduce existing inequalities that prevent individuals from attaining their aspirations and goals.

RESEARCH METHODOLOGY

The study adopted a cross sectional design. A multistage sampling technique was used, where in the first stage, random sampling was used to select Nelson Mandela Bay Metro Municipality (NMBMM) out of seven district municipalities in the Eastern Cape; this was followed by selecting Kwa-Nobuhle randomly among other farm areas in the NMBMM as a study area where three smallholder crop agricultural projects that practise irrigation to grow crops namely, Mothers Gift, Masiphuhlisane and Molly Black Burn were also randomly selected. Since there was no data base for smallholder crop farmers at the Department of Agriculture in Kwa-Nobuhle, this current study in the last stage used snowball sampling of seventy (70) smallholder crop producers. Primary data was therefore collected from the sampled smallholder farmers through face-to-face interviews and focus groups that consist of structured questions. Structured questions consist of both open and closed ended questions. Descriptive statistics was utilised to describe socio-economic features of smallholder farmers and to analyse farmer's aspirations and goals as well as their impact on crop production. These were presented in the form of tables and figures consisting of percentages, frequencies and means. These included smallholder farmer's age, gender, number of years attended schooling, household size, farming experience, size of land, crops produced and their aspirations and goals. These indicators were important for analysis of both the first and second objectives.

FINDINGS AND DISCUSSION

Distribution of Demographic and Socioeconomic Characteristics of Smallholder Farmers

Table 1 presents finding of household age, gender, years spent in school, agricultural ex-

perience, size of land utilised and household size. The analyses of these features were important because the type of aspirations and goals smallholder farmers take into consideration are structured through them. Age plays a significant role in farm production and could be either advantageous in terms of old aged farmers may have experience in farming which help them in production as compared to young farmers or could be disadvantageous in that it could mean that farmers are no longer productive. The results from the Table 1 show that the youngest farmer was 35 years of age and the oldest was 83 years of age, the average age amongst farmers was 61 years. This implies that smallholder farmers of Kwa-Nobuhle mostly are old implying that they are above the youthful productive stage. The farms were largely dominated by women, a maximum of 2 in Table 1 represents that women were coded as 2, while a minimum of 1 was coded to represent males. Sixty-three percent (63%) of women were found to dominate the farms, this means that women are the household heads and this could be because men migrated to other places in search of better paying jobs, or that the women are either divorced or are widowers. The increased number of women participating in farming may also be due to affirmative action programs and policies in recent years which promote women's access and control over or inherit farm plots (Kibirige 2014). A small proportion that is, two percent (2%) of farmers had no formal education at all, while the largest proportion that is, ninety-eight percent (98%) reported that they obtained formal education and spent on average 6 years, while others spent up to a maximum of 18 years. This implies that education has an important role to play on farmers in terms of farmer's ability to adopt new technologies, access information and knowledge.

Table 1 shows that twelve percent (12%) of the farmers had no experience in farming, while a large proportion that is, eighty-eight percent (88%) had some type of agricultural experience

Table 1: Descriptive statistical summary of household's demographic and socio-economic characteristics

	N	Minimum	Maximum	Mean	Std. deviation
Age	70	35	83	61.94	11.107
Gender	70	1	2	1.50	.504
Years Spent in School	70	0	18	6.51	4.017
Agricultural Experience	70	0	14	5.34	3.379
Size of Land	70	.15	2.00	.7334	.51084
Household Size	70	0	12	4.27	2.838

Source: Field Survey 2014

that averaged from 3 to a maximum of 14 years. This implies that most of the farmers are knowledgeable, skilled and could act as source of information (such as input use, fertilizer application, what to produce, when to produce, water use for irrigation purposes and where to sell produce) to those farmers who have no experience. A small proportion that is, three percent (3%) of farmers utilised a minimum of 0.15 hectares of land to practise crop production, while a small minority that is, forty-percent (40%) of farmers utilised a maximum of 2 hectares. The average size of land used by the large proportion that is, fifty-five percent (55%) was 0.73 hectares. Size of land plays a very crucial part in farmer's formation of goals and aspirations and in farm production. Small size implies that farmer's aspirations and goals will be limited, farmers will focus on one aspect at the time, the farmer cannot aim to achieve all the aspiration and goals in one production. Additionally small size limits the production of variety of crops; the farmer would be limited to produce only one crop at a season. Lastly, household size has an important role to play on the formation or structure of the type of aspirations and goals farmers consider and in production. Farmers who have access to larger family size tend to have aspirations and goals which also includes family members implying that farmers set aspirations and goals that they would like to achieve in order to help their family members livelihoods improve. Household family size affects production in that, farmers who have larger family size would be advantageous in that a farmer would obtain free labour. Nevertheless, it could also be discouraging as the larger family size could mean that the farm produce is consumed in the household instead of being sold to the markets. Table 1 lastly shows that a small proportion that is, thirteen percent (13%) had a family size of zero (0), while a larger proportion that is, eight-seven percent (87%) had household size ranging from average of two (2) to a maximum of 12.

Distribution of Households by Type of Aspirations and Goals Taken into Consideration

Every successful farmer poses some type of aspirations and/or goals. This means that farmer's involvement in agricultural activities is merely because farmers want to achieve those to improve their livelihoods including that of their family members, communities and other individuals.

Table 2 shows that a large proportion of farmers of about seventy-one percent (71%) reports that they do take into consideration aspirations and goals which act as motivators in their farming business while a small minority of farmers of about twenty-eight percent (28%) indicates that they do not consider aspirations and goals. The reason for such is attributed to the fact that farming as a smallholder producer has no guarantees that the desired aspirations and goals can be achieved through this type of farming alone.

Smallholder farmers hold multidimensional aspirations and goals rather than unilateral and these help them in exploiting farm resources more efficiently which results in increased production, sustainable operation of the farm and improved livelihoods of farmers. Table 3 shows that smallholder farmers' consider various aspirations and goals. The aspirations and goals in Table 3 of improving standard of living, increasing productivity/production, save for children education, farmers to be paid a constant price for produce and to make profit were the most highly considered shown by hundred percent, eightytwo percent, seventy-eight percent, seventy-six percent and seventy-five percent in farmers responses respectively. These results therefore, indicate that farmers are more motivated to work in the farm with the intention to increase productivity and to be paid a constant price for produce, which could lead to improvement in farmer's livelihoods, profit generation that would enable farmers to save for their children's education.

The results from Table 3 further show that aspirations and or goals of making more time to spend on non-farm activities, passing the farm

Table 2: Statistical summary of aspirations and goals

Aspirations and goals responses		Frequency	Percent	Valid percent	Cumulative percent	
No	0	20	28.2	28.6	28.6	
Yes	1	50	70.4	71.4	100	
Total		70	98.6	100		

Source: Field Survey 2014

business to the next generation, clear debts and buy/rent extra land for production were not highly taken into consideration by most farmers shown by seventy-eight percent, seventy-two percent, fifty-five and fifty-one percent responses respectively. This implies that farmers are devoted to their farming activities, but would not wish to pass the business to their children due to constraints that tend to limit their growth. Buy/rent extra land was also amongst some of the aspirations and goals that were mostly not considered, this is because land is often government owned or in case of rural areas are owned by the chief/traditional leaders and farmers, therefore, do not have sufficient financial means to buy or even rent land from other farmers.

Table 3: Statistical summary of types of aspirations and goals considered

Type of aspirations and goal	Response	Percent (%)
To Make Profit	No	24.3
	Yes	75.5
To Clear Debts	No	55.7
	Yes	44.3
Buy/Rent extra land	No	51.4
•	Yes	48.6
Pass the business to the	Yes	27.1
next generation	No	72.9
Increase Productivity/	No	17.7
Production	Yes	82.3
Save for Children's	Yes	78.6
Education	No	21.4
Improve Standard of Living	Yes	100
1	No	0
Farmers to be Paid a	Yes	76.4
Constant Price	No	23.6
Make More Time to Spend	Yes	21.4
on Other Non-farm Activitie	s No	78.6

Source: Field Survey 2014

Distribution of Households by Aspirations or Goals Identification

The findings of the study show that ninety-seven percent (97%) of smallholder farmers consider making profit or sufficient income as an aspiration, another ninety-four percent (94%) consider that farmers to be paid a constant price for produce as an aspiration as well. Eighty-four (84%) and seventy percent (70%) of farmers consider buying or renting land as well as passing the business to the next generation and clearing of debts as an aspiration. Sixty-three percent (63%) and fifty-nine percent (59%) of farmers

consider saving for children's education and improving standard of living as an aspiration respectively. Lastly, thirty-eight percent (38%) and seventeen percent (17%) of farmers consider making more times to spend on activities away from farming and increasing production or producing the best quality output as an aspiration. However, eighty-three percent (83%) of the farmers consider increasing productivity or producing the best quality output as a goal so as to yield profit and consistent price for produce yielded in the near future, sixty-two percent (62%) of farmers consider making time to spend on activities away from farming as a goal because these are immediate activities that would help obtain extra money that can be used to buy farm inputs for increased production. Forty-one percent (41%) consider improving standard of living a goal rather than aspiration. This therefore indicates that farmers structurally form their aspirations and goals accordingly and knowingly that they have to meet certain goals first before they can achieve their aspirations.

Distribution of Households by Aspirations and Goals Rankings

The finding of the study shows that seventy-eight percent (78%) of the respondents reported that making profit or sufficient income is very important to the farmers. This therefore means that farmers are profit driven; hence, the majority sixty-eight percent (68%) of the farmers also indicated that increasing produce or producing the best quality out is also very important to meet the aspiration and or goal of maximising profit. Additionally, sixty-seven percent (67%) and sixty percent (60%) farmers indicated that improving standard of living and buying/ renting extra land for production is also very important. This means that for increasing production and profit maximisation that would generally improve farmers' livelihoods some of the farmers would require additional land to practice intercropping.

Furthermore, with regard to aspirations and goals order of importance, the finding of the study shows that fifty-four percent (54%) and fifty percent (50%) of the farmers respectively indicates that saving for children's education and farmers to be paid a constant price for produce was ranked as very important. This implies that farmers in the market receive different pric-

es for their crops, for some it is low while for other it is average. However, forty-five percent (45%) and forty percent (40%) of the farmers respectively indicated that passing the business to the next generation and making more time to spend on activities away from farming is not important. This is because farmers do not aspire to see their children in the same or similar situations as them in this sector; hence, fifty-four percent (54%) of the farmers desire to save for children's education so that their children could receive formal or tertiary education to work in other sectors that have better paying jobs. A proportion of forty-two (42%) of farmers indicated that clearing debts was regarded as the least important meaning that it does not affect farmer's performance and the level of farm production.

Comparison and Impact of Aspirations and Goals on Crops Produced

An independent t-test was run to determine if there is equality in the means between small-holder farmers considering aspirations and goals to those who do not concerning crop productivity. This test was used to measure the significance level to determine the influence of aspirations and goals on crop production. Smallholder farmers who considered aspirations and goals were regarded to be efficient in the use of farm resource and were coded as 1 while those who did not were regarded as inefficient and coded as 0. Table 4 is the result of the t-test.

Table 4 further shows that there is a difference in the means of smallholder farmers who take into consideration aspiration and goals (mean=806.0508) as motivators of increasing crop production in the farm to those who do not consider aspirations and goals (mean=659.0000).

This mean difference between farmers implies that crop production improves for those who consider aspirations and goals because farmers are able to make efficient use of resources while declines for those who do not consider such. The mean difference however is statistically significant (Sig. 0.035) this therefore implies that aspirations and goal influence crop production meaning that smallholder farmers increased productivity and the efficient use of allocated resources highly depends on the type of aspirations and goals farmers take into consideration. Therefore, the results are contrary to the null hypothesis of the study hence the null hypothesis was rejected that aspirations and goals do not influence crop production in the light that aspirations and goals have a significant influence on crop production and serve as important elements that result in increase in farm production.

CONCLUSION

The study provided an important social aspect of farming. Farming is not just an activity on its own; it is motivated by some type of individual's aspirations and goals. Hence, for livelihood and productivity to improve, it can only exist when farmers develop, pursue and value their aspirations and goals. Set aspirations and goals of smallholder farmers are influenced by their demographics, socio-economic characteristics, experiences and farmers surrounding environment. Smallholder farmers considered multidimensional and realistic in nature type of aspirations and goals for themselves and some for their families such as to make profit, clear debts, buy/rent additional farmland, pass the business to the next generation, increase productivity/ production, save for children's education, improve standard of living. Additionally, for farm-

Table 4: Comparison of smallholder farmer's crop productivity, t-test of equality of means

Levene's test for equality of variance Responses	t-test for equality of means										
	N F	F	Sig.	t	df.	Sign. (2 tailed)	Mean differ- ences	Std. devi- ation	Std. error –	95% confidence interval for mean	
										Lower bound	Upper bound
Do not consider: 0 Consider: 1 Total of all Crops Produced	11 59	.875	.035	1.083 3.001	1 69	.186 .368	659.000 806.050	528.421 469.692		304.001 683.648	1013.998 928.453

Source: Field Survey 2014

ers to be paid a constant price for produce and have more time to spend on other non-farm activities. Therefore, their level of importance in such aspirations and goals differs for each farmer. The study reveals that twenty percent (20%) smallholder farmers are not motivated, inspired or even goal oriented; these farmers perceive farming as just an activity to grow food and consume. In fact, these farmers were found to be inefficient in allocating resources and this negatively influences their level of productivity. Aspirations and goals of smallholder farmers were found to be statistically significant (p=0.035) to total crop production, implying that they are motivators in increasing crop productivity.

RECOMMENDATIONS

Policy makers, government, Non-Government Organisation's (NGO's), private organisations and institutions must begin to critically take into consideration farmer's aspirations and goals as they clearly indicate farmer's preferences amongst government development programs set to support them. Aspirations and goals as indicated in the findings had an influence on agricultural production, which could help increase productivity and could ultimately influence food security status, improve livelihoods of smallholder farmers and create employment opportunities.

ACKNOWLEDGEMENT

The researchers of this paper are thankful and grateful to the National Research Foundation (NRF) and the University of Fort Hare (UFH) as well as Govern Mbeki Research Development Centre (GMRDC). This study would not have been possible without all their financial support.

REFERENCES

- African Smallholder Farmers Group (ASFG) 2013. Africa's Smallholder Farmers: Approaches that Work for Viable Livelihoods. From http://www.asfg.org.uk/downloads/final-asfg_africas-smallholder-farmers.pdf/ (Retrieved on 3 October 2017).
- Backeberg GR 2005. Water institutional reforms in South Africa. *Water Policy*, 7: 107-123.
- Bernard T, Dercon S, Orkin K, Taffasse AS 2014. The Future in Mind: Aspirations and Forward Looking Behaviour in Rural Ethiopia. From </https://www.csae.ox.ac.uk/workingpapers/pdfs/csae-wps-2014-16.pdf/>(Retrieved on 1 October 2017).

- Basarir A 2002. Multidimensional Goals of farmers in the Beef Cattle and Dairy Industries. From </http:// etd.lsu.edu/docs/available/etd-0611102-122027/unrestricted/Basarir_dis.pdf/> (Retrieved on 20 January 2017).
- Cary JW, Holmes WE 1982. Relationship among Farmers Goals and Farm Adjustment Strategies: Some Empirics of a Multidimensional Approach. Parkville: University of Melbourne.
- Denzau AT, North DC 1994. Shared Mental Models: Ideologies and Institutions.Kyklos. From </http://ecsoman.hse.ru/data/957/750/1216/9309003.pdf/>(Retrieved on 22 February 2017).
- Delgado CL 1999. Sources of Growth in Smallholder agriculture in Sub-Saharan Africa. From </ http://www.ifpri.org/sites/default/files/publications/delgado99_01.pdf/> (Retrieved on 14 October, 2017).
- Department of Agriculture, Forestry and Fisheries (DAFF) 2010. Estimates of the Contribution of the Agriculture Sector to Employment in the South African Economy. South Africa: Economic Services Department of Agriculture, Forestry and Fisheries.
- Department of Agriculture (DOA) 2001. The Strategic Plan for South African Agriculture. Pretoria. South Africa: Directorate of Agricultural Information Services.
- Food and Agriculture Organisation of the United Nations (FAO) 2011. Save and Grow a Policy Makers Guide to the Sustainable Intensification of Smallholder Crop Production. Rome. From </http://www.fao.org/docrep/014/i2215e/i22115e.pdf> (Retrieved on 2 October 2017).
- Groenewald J, Nieuwoudt L 2003. Demands on and challenges for South African agriculture. In: L Nieuwoudt, J Kirstein (Eds.): *The Challenge of Change: Agriculture, Land and the South African Economy.* Pietermaritzburg: University of Natal Press, pp. 265-283.
- Hallensleben A 2012. Characterising Poor Smallholder Farmers in Nicaragua: Factors Influencing the Success or Failure of Micro-Irrigation Users. From </ http://www.poverty.ch/documents/Master Hallensleben.pdf> (Retrieved on 20 September 2017).
- Haller AO, Miller IW 1963. *The Occupational Aspiration Scale: Theory Structure and Correlates.* United State of America: Michigan State University.
- Harper S 2010. Implicit Value Judgments in the Measurement of Health Inequalities. From </Online library. willey.com/> (Retrieved on 14 October, 2017).
- Hezell PC, Poulton SW, Dorwad A 2007. The Future of Small Farms for Poverty Reduction and Growth. 2020 Discussion Paper 42. Washington, DC: International Food Policy Research Institute.
- International Food Policy Research Institute (IFPRI) 2013. From Subsistence to Profit: Transforming Smallholder Farms. Washington, DC: International Food Policy Research Institute.
- Kibirige D 2014. The Impact of Human Dimensions on Smallholder Farming in the Eastern Cape Province of South Africa. PhD Thesis, Unpublished. Alice: University of Fort Hare, South Africa.
- Kirstein JF, Van Žyl J 1998. Defining Small-scale Farmers in the South African Context. From </http://ageconsearch. umn.edu/bitstream/54898/2/26% 20Kirsten% 20%26% 20vq=an%2 %Zy%20% December% 201998. pdf/> (Retrieved on 2 October 2017).

- Machethe C 2004. Agriculture and Poverty in South Africa: Can Agriculture Reduce Poverty? Paper Presented at the Overcoming Underdevelopment Conference, 28-29 October, Department of Agricultural Economics, Extension and Rural Development, Pretoria, South Africa.
- Makhura M, Mokoena M 2003. Market access for small-scale farmers in South Africa. In: L Nieuwoudt, J Groenewald (Eds.): The Challenges of Change. Pietermaritzburg: University of Natal Press, P. 11.
- Mudhara M 2010. Agrarian Transformation in Small-holder Agriculture in South Africa: A Diagnosis of Bottlenecks and Public Policy Options. From </hd>

 http://www.plaas.org.za/sites/default/files/publications-pdf/Mudhara.pdf> (Retrieved on 12 June 2017).
- Ncube A 2012. Impact of Livelihood Diversification on Household Food Security: The Case of Hurungwe District, Zimbabwe. From http://uir.unisa.ac.za/bit-stream/handle/10500/6905/dissertation_ncube_a.pdf?sequence=1 (Retrieved on 20 July 2017).
- Ortmann G, Machethe C 2003. Problems and opportunities in South African agriculture. In: L Nieuwoudt, J Kirstein (Eds.): The Challenge of Change: Agriculture, Land and the South African Economy. Pietermaritzburg: University of Natal Press, pp. 47-62.
- Oxford English Dictionary (OED) 1989. Oxford English Dictionary. 2nd Edition. Oxford: Oxford University Press.
- Patrick GF 1981. Effects of alternative goal orientations on farm firm growth and survival. *Journal of Agric Econ*, 3: 29-38.

- Pienaar PL 2013. Typology of Smallholder Farming in South Africa's Former Homelands: Towards an Appropriate Classification System. Master's Thesis, Unpublished. Cape Town: University of Stellenbosch.
- Simon HA 1979. Rational decision-making in business organizations. *American Economic Review*, 69: 493-513
- Statistics South Africa 2013. What Census 2011 Say about Household Agriculture. Statistical Release: Agricultural Households. Pretoria: Statistics South Africa
- Van Averbeke W, Mohamed SS 2006. Smallholder farming styles and development policy in South Africa: The case of Dzindi Irrigation Scheme. *Agrekon*, 45(2):136-157.
- Van Kooten GC, Schoney RA, Hayward KA 1986. An alternative approach to the evaluation of goal hierarchies among famers. Western Journal of Agricultural Economics, 11(1): 40-49.
- Vink N, Kirsten J 2003. Agriculture in the national economy. In: L Nieuwoudt, J Groenewald (Eds.): The Challenge of Change: Agriculture, Land and the South African Economy. Pietermaritzburg, South Africa: Natal University Press, pp. 1-19.

 Wegner L, Zwart G 2011. Who Will Feed the World? The Production Challenge. From </hr>
- Wegner L, Zwart G 2011. Who Will Feed the World? The Production Challenge. From </https://www. oxfamnovib.nl/Redactie/Downloads/Rapporten/whowill-feed-the-world-rr-260411-en.pdf/> (Retrieved on 3 October 2017).

Paper received for publication on July 2017 Paper accepted for publication on October 2017