An Assessment of Smallholder Farmer's Status in the Capricorn District in Limpopo Province, South Africa.

Phokele Maponya (✉ maponyap@arc.agric.za)

Agricultural Research Council <https://orcid.org/0000-0003-4883-2474>

Research Article

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Abstract

This paper point the state of smallholder farmers in terms of the socio economic, support and yielding statuses in the Capricorn District, Limpopo Province, South Africa. The study used a representative sample consisting of 50 smallholder farmers, with 546 beneficiaries participating in the research. Four local municipalities were visited, namely: Polokwane, Molemole, Lepelle – Nkumpi and Blouberg. Quantitative and qualitative plan was used as a detailed questionnaire written in English. Focus group discussion, a stakeholder's discussion, and field observations were used. A purposive sampling technique was used to select fifty (50) smallholder farmers and data was coded, captured and analysed with a software Statistical Package for Social Sciences (SPSS version 20). Descriptive and Correlations analysis results showed a significant association among the following variables: Crops planted, Size of land, Source of water, Type of market and Land acquisition. The results also indicated that natural resources like land and water are the prerequisite for a smallholder farmer to engage in agricultural production. This will enable smallholder farmers to plant different crops and to identify market opportunities. It is recommended that organisations that oversee the improvement of socio economic conditions, policy, food security and rural development should use the results of this study as a guide for their planning and decision making for improved smallholder farmers' livelihoods.

Introduction

According to the FAO (2012), agriculture is a necessary sector of the economy of many expanding countries; as it significantly contributes to gross domestic product. Agriculture is crucial because of its significant contribution to ensuring food security, which remains a major threat in many expanding countries. Based on the World Bank (2007), agricultural production is important for food security as it is a source of food for most of the rural poor, especially due to the fluctuating nature of domestic production, which includes the limited saleable of food staples and foreign exchange limitations in terms of the ability to purchase imports. Agriculture is the main source of livelihood for 86% of rural households; 75% of the poor people still live in rural areas and derive the major part of their income from the agricultural sector and related activities (Dethier and Effenberger, 2012).

Based on the research conducted by Oladele and Mudhara (2016), the rural landscape of South Africa is typified by high levels of poverty, with approximately 70% of the country's poor residing in rural areas with underutilised and limited natural resources. This situation between rural poverty and under-utilization of natural resources was emphasised by the Minister of Agriculture and Land Affairs at the end of a Ministerial Lekgotla held on 2-4 November 2006 in Benoni. The Minister stated that, *"If you go to some of the poorest areas of our country, people have land, but poverty and food insecurity are still high"*. The Accelerated and Shared Growth Initiative for South Africa (ASGISA) has termed this situation a dead asset in the hands of the poor. The Departments of Agriculture and Land Affairs and the Land and Agrarian Reform Project (LARP) jointly proposed, among other things, the prioritization of the revival of agricultural production by 10 to 15% in former homelands, where valuable fertile land lies fallow. This plan is complemented by the objectives of the Department of Agriculture, Forestry and Fisheries (DAFF),

which is mandated to ensure reliable leadership in economic growth, job creation, food security and rural development.

The South African government developed the National Development Plan (NDP); the NDP is the most recent long-term development plan adopted by the government. It encompasses many sectors, including agriculture. The plan sets out strategic direction of the various sectors such as Water, Energy and Agriculture etc. until 2030. The policy points to the need to develop an integrated and inclusive rural economy. The plan noted that “Since 1994, the main challenge for rural development has been the need to combat the marginalisation of the poor” (NPC 2011). The reduction in rural poverty achieved between 1993 and 2008 has been attributed to the government’s social grants programmes. Nevertheless, rural areas remain in greater poverty and inequality when compared with urban areas.

According to Van Averbeké et al. (2011), smallholder farmers can be defined in many ways depending on the context, country and even ecological zone. Various studies also defined smallholder farmers as follows: According to LDA (2005) the term smallholder is interchangeably used with small-scale, resource poor, and peasant farmer while Zeidler et al. (2010) defined smallholder farmers as those farmers owning small-based plots of land on which they grow subsistence crops and one or two cash crops relying almost exclusively on family labour. According to Maponya et al. (2014) smallholder farmers are drivers of many economies in Limpopo Province, hence it is vital to evaluate and understand their status in order to maintain food security, create job opportunities and alleviate poverty.

According to ARC-ISCW (2017), the annual rainfall varies from less than 400 mm in the north to 500 or more south of Polokwane. Summer temperatures are mild to warm (T_{max} in January 27-28°C) on the Polokwane plateau, warm to hot (T_{max} in January 29-32°C) over the bulk of the area, and hot (T_{max} in January 33-34°C) in a narrow belt along the Limpopo River. Winter temperatures are cool to cold (T_{min} in July 3-4°C) on the Polokwane plateau and somewhat mild (T_{min} in July 5- 6°C) over the bulk of the area. Moderately deep to deep, well drained, sandy or loamy soils occur fairly widespread to the west and south of the Polokwane plateau. The Capricorn district municipality covers part of the Limpopo and a part of the Olifants water management area (ARC-ISCW 2017).

According to Capricorn District Municipality (CDM 2014), high agricultural potential exists in the southern side of the Molemole local municipality and Polokwane local municipality. There is also a high agricultural potential in the Lepelle Nkumpi local municipality especially in Grootfontein and Zebediela. There are also a number of irrigation schemes in the Capricorn District, namely the Polokwane south region and the Dendron-Vivo irrigation region. These irrigation regions are highly suitable for the production of vegetables, tobacco, cotton, and citrus (CDM 2014). In terms of popular cultivated crops, potatoes is the most popular followed by tomatoes. Citrus productions are also substantial contributors to the agricultural output of the Capricorn district municipality and there is also a comparative advantage in the agro-processing industry (CDM 2014). The aim of the paper is to evaluate the status of smallholder farmer in terms of agricultural production. The following objectives were realised: (1) To identify and

describe the socio economic status of the smallholder farmers (2) To identify and describe variables that are associated with agricultural production.

Materials And Methods

The research used a mixture of quantitative and qualitative methods. A comprehensive open and ended questionnaire written in English was developed as a quantitative data collection method while the qualitative data collection method included focus group discussions and field observations. As part of standard protocol for conducting the study, meetings were held with all stakeholders in the Capricorn district namely: (1) Local municipalities, (2) Department of Agriculture, Forestry and Fisheries (DAFF), (3) Department of Rural Development and Land Reform (DRDLR), (4) Local economic agencies and (5) Local farmers to introduce and explain the purpose of the study. A purposive sampling technique was used to select fifty agricultural projects and to assess consistency and similar elements like infrastructure needs, skills availability, production challenges, agricultural training needs, and water source needs, educational level, land acquisition, size of land farming experience, source of water, inputs and implements used. Only high yielding smallholder farmers linked to the Agripark Project were selected for the study. The data was coded, captured and analysed using Statistical Package for Social Sciences (SPSS) and descriptive and correlations analysis were conducted.

Results And Discussion

A total of 50 smallholder farmers in 4 local municipalities were visited and as shown in Figure 1 and Table 1. The four local municipalities visited were: Polokwane (46%), Blouberg (20%), Lepelle Nkumpi (20%) and Molemole (14%). Capricorn District has a total of 546 beneficiaries and spread across local municipalities as shown in Table 2: Polokwane (271), Blouberg (105), Lepelle Nkumpi (90) and Molemole (80).

The results from Table 1 show that Polokwane Local Municipality (46%) has the highest number of smallholder farmers compared to Blouberg (20%), Lepelle Nkumpi (20%) and Molemole (14%). It is not surprising to see that Polokwane Local Municipality has higher number of smallholder farmers compared to other local municipality. One of the reasons is that Polokwane Local Municipality is situated at the central point of all business activities compared to the other local municipalities and there are several market opportunities compared to local municipality such as Molemole. The majority of people work and live in Polokwane.

The results from Table 2 show that Polokwane Local Municipality has the highest percentages (49%) of the beneficiaries compared to Molemole (15%). The second local municipality within the Capricorn District which has the second highest number of beneficiaries is Blouberg (19%), then Lepelle Nkumpi (17%). The last local municipality which has the lowest number of beneficiaries was Molemole. In total Capricorn District municipality has 546 beneficiaries.

The age distribution of smallholder farmers indicated that the majority were in age group 46 – 50 and >60 (34% and 24% respectively) while age category 18 – 35 is at 22% and age category 36 – 45 is at 20%. In Capricorn District, 16% of smallholder farmers had incomplete primary education, 22% had completed primary education, 14% had incomplete secondary education, 30% of smallholder farmers had completed secondary education and 18% had tertiary education completed (Table 3). The results in Table 3 indicated the gender composition as females at 36 % and males at 64 %. The majority of farmers (98%) were farming full time (Table 3) and in line with project sampling criteria, which targeted fulltime farmers who will focus their passion on the farming operation. Hence, a key feature for sustainable rural productivity will clearly be to develop the capacity of the principal users of the land. About 34% of smallholder farmers had 1-5 years in farming, 22 % had 6-10 years, 34 % had 11-20 years, 4 % had 21-49 years and 6% had > 50 years. The farming experience is very important in order for the smallholder farmer to be able to produce quality agricultural products, be able to meet market demands and respond to market expectations as well as better adoption of new production systems. It was highlighted several times that the majority of smallholder farmers are failing to meet market requirements due to several factors including: (a) Lack of agricultural experiences, (b) Incorrect agricultural practices, (c) Lack of understanding of the market requirements, (d) Poor planning, Lack of financial resources and also limited access to technology (Makhura 2001; Mpandeli 2006; Maponya and Mpandeli, 2012). The complex regulatory and standard-related restrictions are also too difficult and very expensive to adhere to by the smallholder farmers in order to penetrate the market. That is why people are advocating for the establishment of the informal markets, especially for the perishable products so that farmers can easily sell surplus production. Within the current marketing system the risk is too high; if the big corporate food retail stores reject the product, the farmer has nowhere to go but lose his/her produce. These are some of the factors hindering the majority of smallholder farmers to be able to produce high quality agricultural produce across the country including the Capricorn district.

Results on land acquisition (Figure 2) indicated that the majority of smallholder farmers used permission to occupy (PTO) (76%) as a means of land acquisition, own finance (14%), Land redistribution for agricultural development (LRAD) (6%), inheritance (2 %) and Community land (2 %). PTO is a type of land acquisition where farmers are given occupation rights over a certain piece of land by village chiefs/municipalities/government department; and Land redistribution for agricultural development (LRAD) was designed by government to assist previously disadvantaged citizens in South Africa to access land specifically for agricultural purposes. Capricorn District smallholder farmers used different water sources for irrigation, with boreholes being the most utilized (76%), followed by river (8%), dam (4%), while combination of water sources were also used as seen in Table 4.

Figure 3 indicates that most smallholder farmers were engaged in informal markets (66%) with 26% trading in both formal and informal markets while a small number of smallholder farmers engaged in formal market (8%). The fact that the majority smallholder farmers are not actively involved in formal market is a serious challenge as the smallholder farmers are facing several constraints including: (a) Lack of market access information, (b) Lack of understanding of market dynamics, (c) Poor access to inputs and credit.

Table 5 indicates that approximately 98 % of smallholder farmers received extension services, while 2% were not. Of the group receiving extension services, about 92 % received a formal extension service, while other smallholder farmers received different types of extension services. Universally, agricultural extension's role in small-farmer development is educational and extension officers are expected to provide or disseminate information to farmers. According to Igodan (1996) extension workers must be involved in the monitoring and evaluation of the performance of farmers in development projects. The feedback from the monitoring process allows extension personnel to detect areas of defects and provide corrective measures through proper education.

Access to land is a basic requirement for farming and control over land is synonymous with wealth, status and power, in many areas. In the case of Capricorn district, most of the smallholder farmer had access to 1 – 5 hectare of land (38 %), while only 16%, 26% and 6 % of smallholder farmers had 6 – 10, 11 – 20 and 21 - 49 hectares in size respectively (Figure 4). A number of smallholder farmers had land of >50 hectares (14%).

As indicated by Figure 5; 64 % of smallholder farmers had received some level of agricultural training, while only 36% had no agricultural training. It is well documented that smallholder farmers that have been capacitated obtain good yields compared to farmers who are not trained. Smallholder farmers need to be trained to be able to obtain good agricultural production and produce good agricultural products. The training could assist them to be able to minimised agricultural risk especially incorrect agricultural practices, minimised the impact of climate variability and change etc. According to Maponya et al. 2016, skills development in the agricultural sector, including entrepreneurship training is highlighted as critical. This includes the training of a new cadre of extension officers to respond to the needs of smallholding farmers, contributing to their ability to engage in market systems and particularly the value chains related to food.

Determining correlation among variables

Correlation is a bivariate analysis that measures the strengths of association between two variables and the direction of the relationship. In terms of the strength of relationship, the value of the correlation coefficient varies between +1 and -1. When the value of the correlation coefficient lies around ± 1 , then it is said to be a perfect degree of association between the two variables. As the correlation coefficient value goes towards 0, the relationship between the two variables is weaker. The direction of the relationship is simply the + (indicating a positive relationship between the variables) or - (indicating a negative relationship between the variables) sign of the correlation. Usually, in statistics, four types of correlations are measured, namely: [Pearson correlation](#), Kendall rank correlation, Spearman correlation, and the Point-Biserial correlation. In this investigation, Spearman correlation analysis was used. According to the results of the analysis the following variables were found to have significant correlation: Crops planted, Size of land, Source of water, Type of market and Land Acquisition.

Table 5 explains variables analysed and as indicated in Table 6, there is significant association among variables crops planted, size of land, source of water, type of market and land acquisition. The positive

association among the variables studied is expected since natural resources like land and water are the prerequisite for a smallholder farmer to engage in agricultural production. Taking a holistic look into the various variables will go a long way in enabling smallholder farmers plant different crops and identify market opportunities. Moreover, smallholder farmers with large land size could allocate their land partly for food crop production and partly for cash crop production, giving them a better competitive advantage with reduced risk to participate in formal, informal and both markets. This included all different land acquisitions i.e. Own finance, lease, permission to occupy, land redistribution for agricultural development etc.

Conclusion

The study attempted to identify and analyse the socio economic characteristics and the relationship among different variables in order to understand the status of smallholder farmers in the Capricorn district. The smallholder farmers in the Capricorn district are facing multiple challenges exacerbated by socio economic challenges as highlighted in this paper. There is a need to develop strategic interventions to, effectively, manage these constraints with development initiatives. Smallholder farmers are still facing major challenges in the agricultural sector in the Capricorn district and also other parts of the country. It was thus important to understand the status of the smallholder farmers in order to establish remedial actions that guide policy makers and other smallholder farmers supporting bodies. This could also help these supporting bodies understand the key factors responsible to the status of smallholder farmers in the Capricorn district and enables better decision making. This study is important for policymaking since little was understood about the status of smallholder farmers in the Capricorn district. There is need for government to recognise, reward and assist informal ventures that belong to smallholder farmers that have access to only informal markets into more formalised ventures. This further illustrates that institutions that are responsible for improving socio economic conditions, policy, food security and rural development are critical for improved smallholder farmers' livelihoods.

Declarations

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5.7 Consent to participate (include appropriate statements) Consent to participate statement was included in the questionnaire for the respondents to read and sign before the interviews.

5.8 Consent for publication (include appropriate statements) The author gives consent for publication.

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Tables

Due to technical limitations, the tables are only available as a download in the supplemental files section.

Figures

Figure 1

Capricorn District Municipality Map

Figure 2

Smallholder Farmers Land Acquisition

Figure 3

Smallholder Farmers Market Access

Figure 4

Smallholder Farmers Market Access

Figure 5

Smallholder Farmers Agricultural Training

Supplementary Files

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