

Access to extension and advisory services by emerging livestock farmers in uThungulu district municipality of KwaZulu-Natal

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ABSTRACT

Lack of access to agricultural extension and advisory services has been identified as one of the major challenges facing emerging farmers in South Africa. The purpose of this study was to determine the level of access to these services by emerging livestock farmers in uThungulu District Municipality of KwaZulu-Natal. A survey design was used with face-to-face interviews to collect data using a semi-structured questionnaire. A sample of 1 437 was randomly selected from 4 792 emerging livestock farmers in the district. Descriptive statistical analyses were performed using Statistical Package for the Social Sciences (SPSS) version 23 software. The results show that more than 90% of emerging livestock farmers in the district had high access to public extension and 14% had access to private extension, in addition. About 32% of the respondents also had access to extension and advisory services from agricultural cooperatives. There was an improvement in access to these services by emerging farmers compared to the past. The involvement of the private sector and cooperatives in rendering extension and

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advisory services to emerging livestock farmers shows that various stakeholders are involved in improving emerging livestock farmers in the province.

Keywords: Access, Extension services, Emerging farmers

1. BACKGROUND AND INTRODUCTION

Agriculture in South Africa contributes about 3% to the total Gross Domestic Product (GDP) (Department of Agriculture, Forestry and Fisheries (DAFF), 2017:73). Although its contribution to the GDP is low, the sector remains very important in ensuring food security and providing employment. Major subsectors in agriculture in South Africa are crop production, horticulture, and animal production. Animal production in the country contributes over 60% of agricultural income (DAFF, 2017:75). South Africa has a highly developed commercial sector and an emerging sector that produces live animals and products for local and international markets. The commercial sector is well organised and produces mostly beef and dairy cattle, wool and mutton sheep, mohair and meat goats, pigs, broiler and egg-laying chickens and ostriches (Leeuw, Mcdermott & Lebbie 1995:199; Meissner, Scholtz & Engelbrecht., 2013: 284). The emerging sector consists of smallholder and emerging farmers on communal lands. Smallholder farmers refers to a group of farmers who rely of family labour to grow subsistence- and cash crops on small-scale plots or farms (DAFF, 2012a:1). On the other hand, emerging farmers refers to a group of farmers who are involved in farming for home consumption (DAFF, 2012b:4). Senyolo (2007:3) defined emerging farmers as farmers who produce for home consumption and sell some of their products in the market. Livestock emerging farmers usually produce indigenous livestock and mixed breeds of cattle, sheep, goats, pigs, and poultry (Mapiye, Chimonyo, Dzama, Raats & Mapekula, 2009:197). For the purpose of this study, emerging farmers is defined as individuals who rear domestic animals for income generation through selling and household consumption. This paper will include emerging farmers involved in agricultural activities on smallholder settings and communal lands.

According to Muller (2003:246) and Scoones, Bishi, Mapitse, Moerane, Penrith, Sibanda, Thomson and Wolmer (2010:149), South Africa has great potential for livestock production as it is one of the leading producers of cattle in the Southern African region . Beef cattle production is an important and multifunctional survival strategy in rural areas, especially in marginal and remote areas with degraded lands and few economic opportunities (Ndoro *et al.*,

2014:63; Mudzilwana, 2015:1). Cattle are used for bride price (*lobola*), cultural rituals, hides, traditional clothes, meat, and sales of live animals. Scholtz *et al.* (2016:15) observe that the cattle off-take for emerging farmers is relatively low (<10%) compared to commercial farmers (37%), as most of the cattle do not make it to auction markets due to low quality body mass and finish. The main challenge facing smallholder farmers is lack of knowledge and skills on production and marketing of beef cattle (Ndoro, Mudhara & Chimonyo, 2014:77). Emerging farmers may not be able to brand their animals and classify them accordingly due to lack of information; as such, the meat of these animals will not fetch the maximum possible prices. There is little market research done by farmers; hence they are not aware of ever-changing consumer tastes and preferences. Furthermore, due to lack of marketing information such as classification standards, most emerging farmers remain price takers in the industry (Scoones *et al.*, 2010:142; Khapayi & Celliers, 2016:36). This may be attributed to the fact that most of the emerging farmers in South Africa lack farming knowledge and skills, which makes it more difficult for them to understand some technical information provided to them by agents; they need more access to extension and advisory services to achieve their goals (Meissner, Scholtz & Engelbrecht, 2013:313).

Access to agricultural extension and advisory services enables farmers to acquire information and skills that are required for crop and livestock production so that they can be food secure and generate income for other needs. This is made possible through the acquisition of skills and adoption of new technologies which lead to increased agricultural production and improved livelihoods for resource-poor farmers (Christoplos, 2010:3; Nnadi, Umunakwe, Nnadi, Chikaire & Okafor, 2012:366). However, lack of skills and knowledge about modern farming techniques has been identified as one of the major challenges facing livestock farmers in South Africa, mainly due to lack of access to information (Coetzee, Montshwe & Jooste, 2005:87; Khapayi & Celliers, 2016:36). In most cases, emerging livestock farmers do not have access to information due to lack of support from government extension agents (DAFF, 2012:22). This leads to food insecurity in the rural communities which predisposes them to reliance on government financial support services such as social grants. Therefore, the objective of this study was to determine the level of access to agricultural extension and advisory services by emerging livestock farmers in the uThungulu District Municipality, KwaZulu-Natal. The research sought to answer the question: What is the level of extension

access and who are the main extension service providers for emerging livestock farmers in uThungulu District?

2. LITERATURE REVIEW

Sikwela and Mushunje (2013:2503) report that from 1994 the South African National Department of Agriculture emphasised the importance of supporting and developing smallholder and emerging farmers in South Africa to alleviate poverty and unemployment in rural areas. After 1994 the government introduced new local government structures, reviewed the Agricultural and Marketing Acts, and introduced land reform and redistribution programme to develop smallholder and emerging farmers. This initiative was based on the belief that smallholder farmers can respond rationally to economic incentives if they are given appropriate opportunities

Mkhabela (2009:423) found that emerging farmers lack access to finance and support from government extension agents to be able to afford farming inputs, market information and farming knowledge and skills (Coetzee *et al.*, 2005:87). Moreover, smallholder and emerging livestock farmers cannot estimate the carrying capacity of their communal grazing lands because they do not know how to do so without the support of extension agents. The common outcome is overstocking and degradation of communal grazing lands (Mapiye *et al.*, 2009:201). This is contrary to the argument advanced by Allsopp, Laurent, Debeaudoin, & Samuel (2007:750), who say that livestock farmers know the right time to increase livestock numbers on pastures based on resources such as water points, abundant pasture and cropping lands. Williams, Mayson, De Satgé, Epstein and Semwayo (2008:16) suggest that access to quality extension and advisory services could be assessed by computing the ratio of extension officers to farmers. In their study, they estimated that in 2008 there were about 2 800 extension agents who served farmers at a ratio of 1:857 smallholder farmers, 1:21 commercial farmers and 1:878 combined. It shows that extension officers servicing farmers on small-scale plots or farms were expected to render services to more farmers. In 2011, the average ratio was 1:873, which is above the required ratio as stipulated in the norms and standards for agricultural extension and advisory services (Agricultural Research Council (ARC), 2011:8). These ratios show a disparity in accessibility of extension in the commercial and smallholder sectors. Williams *et al.* (2008:19) also maintain that access to extension and advisory services in South Africa is less efficient because of large distances between farms and the low level of literacy, which

makes it harder for them to form farmers' associations and cooperatives. Düvel (2005:199) suggests that there should be a wider partnership of extension and advisory services involving various stakeholders such as farmers, municipalities, non-governmental organisations and the private sector to address and boost the efficiency of services to farmers. Although the literature points to low levels of extension access (Sustainable Development Consortium, 2007:25; Akpalu, 2013:8042; Lukhalo, 2017:51), there has been progress in extension delivery in the country which cannot be overlooked (Stones & Terblanché, 2012:60-61).

3. MATERIALS AND METHODS

The study was conducted in the uThungulu District Municipality in KwaZulu-Natal, South Africa. The municipality is situated in the northern part of the province and comprises six local municipalities: Nkandla, uMlalazi, Mthonjaneni, Ntambanana, uMhlathuze and Mbonambi. Many aspects of traditional culture are still preserved in this district and most of the inhabitants are mainly dependent on natural resources, social grants and pensions for subsistence. A few of them engage in small trade selling in informal markets and some practise subsistence farming (Lewu & Assefa, 2009:1150). A representative sample of 1 437 was randomly selected from the study population of 4 792 emerging livestock farmers in uThungulu District Municipality. This is a sampling fraction of 30%. Data was collected through face-to-face interviews with farmers using a semi-structured questionnaire. A five point Likert scale (which is used to allow the individual to express how much they agree or disagree with a particular statement) was used in answering questions to assess the accessibility of extension and advisory services by farmers from various stakeholders. The respondents who had access to a large extent and to a very large extent were considered as having high access to extension and advisory service. On the other hand, those who had access to some extent and access to a little extent were classified as moderate access. Lastly, the respondents who had no access at all were categorised no access to extension and advisory services. Data was coded, captured and analysed using SPSS version 23 (Statistical software to analyse research data). Descriptive statistics such as percentages, simple means and frequencies were determined.

4. RESULTS AND DISCUSSION

4.1 Demographic characteristics of the respondents

The demographic characteristics of the respondents are presented in Table 1. The results shows that there were more men (94%) in livestock farming than women in the study area. The age

group of most respondents (73.0%) was above 60 years and only 0.6% of the farmers were younger than 35 years. The mean farming experience was found to be 12.5 years for the sample. Marandure, Mapiye, Makombe, Nengovhela, Strydom, Muchenje and Dzama (2016:201) also noted in their study that the majority (>60%) of communal livestock farmers in South Africa were elderly people, and only 15% were younger than 40. This could be attributed to the fact that most farmers are from previously disadvantaged groups. In this current study, the results indicate that majority of the farmers (93%) did not have formal education. In comparison to other rural areas, the education level of farmers in uThungulu District Municipality was lower than that of farmers in uThukela District Municipality within the same province, as reported by Gcumisa, Oguttu and Masafu (2016:615), who found that about 27.5% of their respondents had no education.

The type of grazing land used by most respondents (78%) was communal land. There were few respondents who grazed their animals on private land. The average annual net income was R1 218. Over 90% of the farmers derived most of their income from non-farm activities, which implies that cattle farmers do not necessarily depend on farming income for their household needs. Most respondents received extra income from non-farming activities such as social grants from the government, different home industries and remittances. This is in line with findings of previous studies that communal farmers are not market oriented and therefore may keep cattle for social uses rather than economic gain (Ndoro *et al.*, 2014:63; Mudzilwana, 2015:52).

Table 1: Demography of respondents in uThungulu District Municipality (n = 1 437)

Variable	Frequency	Per cent (%)
Gender		
Female	123	8.6
Male	1314	91.4
Age group		
Younger than 35 years	8	0.6
35 - 40 years	44	3.1
41 - 50 years	105	7.3
51 - 60 years	231	16.1
Above 60 years	1049	73.0
Level of education		
No formal education	1336	93.0
Primary education	66	4.6
Secondary education	23	1.6
Tertiary education	12	0.8
Marital status		
Married	1199	83.4
Single	100	7.0
Widowed	133	9.3
Divorced	2	0.1
Home language		
IsiZulu	1435	99.9
IsiXhosa	2	0.1
Type of grazing land		
Private land	306	21.3
Communal land	1131	78.7
Main source of income		
Non-farm activities	1310	91.2
Farm income	127	8.8

4.2 Livestock ownership

Table 2 gives a summary of livestock ownership in the study area. The results indicate that the types of livestock owned by emerging farmers in uThungulu District Municipality were cattle, goats, sheep, poultry, pigs, horses, mules, and donkeys. This is in line with Leeuw *et al.* (1995:199) and Mapiye *et al.* (2009:201), who reported that livestock farmers in South Africa keep beef and dairy cattle, mutton and wool sheep, meat, milk and mohair goats, pigs, ostriches, ducks, turkeys, chickens (broilers and egg layers), horses and donkeys, among others. The majority (94.6%) of the farmers owned cattle compared to other types of livestock. The mean number of livestock types also shows that on average smallholder farmers kept more sheep (38), followed by cattle (23), poultry (22) and goats (17) on their farms (households). There is a high disparity in the number of cattle, goats, sheep and pigs as shown by the CV% in Table 2. However, the variation for poultry is medium, while the number of horses, mules and donkeys kept by the respondents varied lowly. According to Gomes (2009:477), CV below 10% is considered low, 20-30 is medium and high if is above 30%.

Table 2: Livestock ownership by emerging farmers (n = 1 437)

Livestock type	Minimum	Maximum	Mean	Standard deviation	Coefficient of variation (%)	Frequency of farmers (%)
Cattle	2	160	24	19.8	82.5	94.5
Goats	0	88	17	10.6	62.4	57.4
Sheep	4	106	38	28.3	74.5	53.7
Poultry	6	56	22	7.9	35.9	11.2
Pigs	2	22	8	4.3	53.8	8.6
Horses, mules and donkeys	2	18	82	4.3	5.2	4.8

The minimum number of cattle, pigs and horses, mules and donkeys owned by respondents was the same at two. Although the average number of sheep is high, only 53.7% of the respondents' owned sheep compared to cattle at 94.5%. This is not surprising because in the Zulu culture, cattle are a symbol of pride for men who own homesteads. All men who work

away from their home areas are expected to buy cattle and build their homes in their ancestral lands, and they are also expected to slaughter cattle from their own herds to secure ancestral blessings for the well-being of their families (Ainsley, 2005:132). Cattle are also reserved for special ceremonies such as marriage feasts, funerals and circumcision (Bayer, Alcock & Gilles, 2004 3). Similar cultural views were found by Chimonyo *et al.* (1999:112), who report that in Zimbabwe cattle are used for socio-cultural functions such as bride price and for settling disputes in lieu of fines in the rural areas.

4.3 Types of agricultural extension and advisory services

The types of agricultural extension and advisory services accessed by emerging livestock farmers in uThungulu District Municipality include public extension services, private extension services and extension services offered by agricultural cooperatives. The cooperatives are regarded as service providers in the context of this paper rather than recipients.

4.3.1 Level of access to public agricultural extension and advisory services

Table 3 shows the level of access to public extension and advisory services by emerging livestock farmers in uThungulu District Municipality. On average, 82.7% of farmers had access to public agricultural extension and advisory services to a very large extent, and 10.5% had access to these services to a large extent. This implies that an average total of 93.2% of emerging livestock farmers in the study area had high access to public extension and advisory services. The local municipality which had access to extension and advisory services to a very large extent and large extent combined was Ntambanana with 95.4%, followed by Mthonjaneni and Nkandla with 94.7% and 94.2%, respectively. The local municipalities with the least access to extension and advisory services was Mlalazi at 89.9%. However, on average 6.7% of the respondents in the district municipality had moderate adequate access to public agricultural extension and advisory services.

Table 3: Access to public extension and advisory services

Name of local municipality	Level of access (%)				
	Very large extent	Large extent	Some extent	Little extent	Not accessible at all
Mbonambi	78.8	13.9	7.7	0	0
Mhlathuze	78.8	13.6	7.2	0.4	0
Mlalazi	77.1	12.7	9.8	0	0.3
Mthonjaneni	86.1	8.6	4.9	0	0.4
Nkandla	85.6	8.6	5.7	0	0
Ntambanana	89.7	5.7	4.6	0	0
Average	82.68	10.52	6.65	0.06	0.12

4.3.2 Access to private extension and advisory services

Table 4 shows the level of access to private extension and advisory services by emerging livestock farmers in uThungulu District Municipality.

Table 4: Access to extension and advisory services from private sector (n = 1 437)

Name of local municipality	Level of access (%)				
	To a very large extent	To a large extent	To some extent	To a little extent	No access at all
Mbonambi	1.2	9.1	10.9	56.4	22.4
Mhlathuze	1.5	10.6	11.0	54.5	22.3
Mlalazi	0	19.3	47.1	31.0	0.3
Mthonjaneni	0	16.9	30.3	44.9	7.9
Nkandla	0	17.0	30.7	44.8	7.5
Ntambanana	0	9.2	26.4	60.9	3.4
Average	0.45	13.7	26.1	48.8	10.6

The results show that a small fraction of the respondents (14.2%) had high access to private agricultural extension and advisory services. This is also supported by the fact that the majority of the participants (74.9%) had moderate access to private extension and advisory services. The local municipalities which had high access to private extension and advisory services were Mlalazi, Nkandla and Mthonjaneni with 19.3%, 17% and 16.9%, respectively, as shown by the proportion of the respondents who had access to a very large extent and large extent combined.

4.3.3 Access to extension and advisory services from agricultural cooperatives

Table 5 shows the level of access to extension and advisory services from agricultural cooperatives. The findings indicate that on average the majority of the respondents (55.6%) had no access at all to agricultural extension and advisory services from agricultural cooperatives. The local municipality which had high access to extension and advisory services from agricultural cooperatives was Ntambanana (82.8%) as shown by the combined proportion of access to a very large extent and large extent. In the other local municipalities, less than 25% had high better access to extension and advisory services from agricultural cooperatives. This is an indication that in some local municipalities in uThungulu District, agricultural cooperatives are well organised, whereas in others they are not. Alternatively agricultural cooperatives in other municipalities do not offer or lack extension services.

Table 5: Access to extension and advisory services from agricultural cooperatives

Name of local municipality	Level of access (%)				
	To a very large extent	To a large extent	To some extent	To a little extent	No access at all
Mbonambi	0	15.8	9.1	0	75.2
Mhlathuze	1.5	10.6	11.0	54.5	22.3
Mlalazi	0	22.1	1.0	0	76.8
Mthonjaneni	0	22.8	0	0	77.2
Nkandla	0	23.0	0.9	0	76.1
Ntambanana	52.9	29.9	0	11.5	5.7
Average	9.1	20.7	3.7	11	55.6

The information in Tables 3, 4 and 5 shows that the three major sources of relative accessibility of extension services are government, the private sector and agricultural cooperatives. The findings are in line with those of Oladele and Mabe (2010:2322) that most small-scale farmers rely on public extension to receive information about improved technologies. The results implies that there was an improvement in the level of access to agricultural extension and advisory services compared to other studies by Nel & Davies (1999:264); Koch & Terblanché (2013:115). Although the comparison shows that access to extension services has improved in the current study compared to others, it is worth noting that the sample size and study areas differ vastly. On the other hand, very few people had access to private extension services. The low access to private extension and advisory services is attributed to the fact that farmers are expected to pay for the services they receive. Ngomane (2002:35) reports that most of the smallholder farmers who depend on public extension services cannot afford to pay the fees charged by private extension services. Another reason for the low access to private services could be that private agricultural extension and advisory services target commercial farmers, whereas public extension services are more focused on smallholder farmers (Koch & Terblanché, 2013:114). Household demographic data shows that the average annual income of the respondents was R1 218, which was an indication that emerging livestock farmers are unlikely to afford private extension and advisory services.

On average about 32% of the respondents had better access (to a very large extent and to a large extent combined) to extension and advisory services from agricultural cooperatives. The low access to these services from agricultural cooperatives could be attributed to the fact that very few farming communities in South Africa are organised in cooperatives, and in most cases these services do not exist. Therefore, if local governments were fully involved with extension services, emerging farmers could be organised into cooperatives to provide extension services to emerging farmers.

The results show that agricultural extension and advisory services in uThungulu District Municipality are rendered by different stakeholders. They also show that there is a wider partnership in extension and advisory services involving various stakeholders such as farmers, municipalities, non-governmental organisations, and the private sector to address and boost the efficiency of services to farmers in South Africa as suggested by Düvel (2005:191). The involvement of the private sector and cooperatives in rendering agricultural extension and

advisory services in the emerging livestock sector is an indication that various stakeholders are coming together to improve the agricultural sector in South Africa.

5. CONCLUSION AND POLICY IMPLICATIONS

In conclusion, it can be noted that generally emerging livestock farmers had high access to public agricultural extension and advisory services compared to private and cooperatives. It is an indication that access to extension services has improved among previously disadvantaged farmer compared to the nationwide studies conducted. Furthermore, it implies that government extension officers (agricultural advisors) play a major role in supporting emerging livestock farmers in uThungulu District. Apart from public extension and advisory services, the private sector and agricultural cooperatives are also supporting farmers even though their services are limited to small group of farmers. The policy implication is that government will be expected to revise the ratio of extension officers to farmers because the demand for services will be high if more emerging farmers continues to access public extension and advisory services. Moreover, the need to increase the number of extension officers per municipality will be expected.

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