



Qualitative data analysis of extension services for Nguni cattle project beneficiaries in Nkonkobe local municipality, South Africa

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Abstract

The objective of the study was to determine the existence of extension services in the socio-economic status of Nguni cattle project beneficiaries. Focus group discussions were conducted in a community hall to engage beneficiaries of the project. Each group consisted of 7-10 people in each beneficial community. The results of the study revealed that animal sales and social grants were the main sources of income for the farmers' households. There was a significant difference ($p < 0.05$) between the sources of income. Cattle ownership had increased after the initiation of the Nguni Cattle Project, hence the increase in number of animal sales and household profit. Beneficiaries reported on the importance of keeping the Nguni cattle, selling and provision of manure being the two main uses of Nguni cattle in their households. Beneficiaries further explained that they are faced with a number of challenges, lack of fencing being the major challenge.

Keywords: Participatory Approach, Extension Service, Household Income, Nguni Cattle Project

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1. Introduction

Livestock production is a significant component in most rural livelihoods as it contributes to income generation, poverty alleviation and is also an entry point to rural development (ILRI, 1999). Eastern Cape province of South Africa is well known for livestock production in the country (Palmer and Ainslie, 2006) with a population of about 1.5 million cattle grazing on natural pastures on common grazing grounds. Moreover in this province, development efforts to improve cattle production have been initiated. Such efforts have been based on the use of fast growing imported breeds (Collins-Luswet 2000; Bester et al., 2003; Muchenje et al., 2008). However these exotic breeds are failing to cope in harsh environments in communal areas. Among other constraints feed is scarce, poor infrastructure, health management (Bester et al., 2003; Muchenje et al., 2007; Ndlovu, 2007) and limited access to extension services (Museumwa, 2009).

Eastern Cape Department of Rural Development and Agrarian Reform (EC DRDAR), the Industrial Development Corporation (IDC) and the University of Fort Hare (UFH) initiated the Nguni Cattle project in communal areas of Eastern Cape province. Nguni cattle have a reserved special function of upgrading the local cattle, tradition, household income, social status (Tada et al., 2013) and improving poverty in communal areas (Museumwa et al., 2007). Nguni breed unlike the exotic breeds is resistant to the harsh environmental conditions in communal areas.

Efforts to address constraints that rural farmers face often ignore farmers' perception, experiences (Chambers, 1988; Francis and Sibanda, 2001), tradition and skills (Norem et al., 1988). Since rural farmers have depended on indigenous or local knowledge for improved farming system, they are better equipped to design and develop intervention strategies in their farming systems (Chambers, 1988). Therefore informed decisions on livestock development programmes are best achieved through participation of intended beneficiaries (Tada, 2012). It is important to involve local people in development of plans and activities designed to change their lives (Nqeno, 2008). Participation of local people in any development initiative facilitates learning from and with community members to investigate and evaluate constraints and opportunities and make timely decisions regarding development projects (Alam and Ihsan, 2012).

In South Africa several approaches have been used to disseminate information and technology to communal farmers, but seemingly the participation of farmers in any development initiative has been inadequately tapped. The farming community requires assistance from extension service providers to become supportive components of production (Agholor, 2012). Participatory rural appraisals (PRAs) are one of the effective tools used to encourage farmer's participation in agricultural development (Francis and Sibanda, 2001) and is one of the appropriate approaches in identifying community problems and for understanding the socio-economic and cultural aspects of the community (Alam and Ihsan, 2012).

In this approach local communities act as an active analyst of their own situations whereby they estimate, quantify, compare, rank and list priorities of resources, constraints and opportunities based on their circumstances (Chambers, 1994; Bhandari, 2003). However there is a need for strong extension services led by governments operation in partnership with relevant role players to facilitate the transformation and improvement of small scale disadvantaged agricultural sector of South Africa (Department of Agriculture, 2005). Hence the objective of the study is to determine the existence of extension services on the Nguni

Cattle project beneficiaries to know whether there are extension services provided to improve socio-economic status of beneficiaries.

2. Materials and methods

The study was conducted in Ncera and Kwezana communities in Nkonkobe local Municipality of the Eastern Cape Province, South Africa. These rural communities were randomly selected from the list of Nguni cattle project beneficial communities. All beneficiaries of the Nguni Cattle project were invited into a community hall by the researcher. Focus groups discussions comprised of adults (men and women >35 years), youth (14-35 years) (National Youth Policy of 2009-2014, 2009) and local leaders were engaged in the discussion joining the group of adults (men). Each group consisted of 7 to 10 beneficiaries in both communities.

The discussions were facilitated with the use of semi-structured interview guide. The discussions were based on sources of income, farming systems, Nguni Cattle project and farmers' perception on delivery of extension services. Other questions were probed based on response of beneficiaries. The discussions were conducted in IsiXhosa with the assistance from enumerators who understands both IsiXhosa and English. The enumerators were trained on how to facilitate group discussions and trigger conversation. Notebook was used to capture response from different groups of farmers and a tape recorder was also used to record discussion as to ensure that no information will be missed during discussions. Content analysis (where a researcher works thoroughly through each transcript looking to see how often certain factors or issues arise) was done. Chi square test was used to determine degree of association between categorical variables.

The rationale for ethical approval as to ensure that the research process is conducted ethically was followed. This involved establishing procedures for the informed consent of Nguni Cattle project beneficiaries involved in the research as well as appropriate handling of research findings (secure storage of data, confidentiality where agreed). The ethical clearance was obtained from the University of Fort Hare Ethics Committee (Certificate Reference Number: MON01SGWA01).

3. Results and discussion

The results of the study revealed that different beneficiary households depended on various sources of income for survival. Such sources of income include old age pension, child support grant and animal sales. Previous studies observed similar findings (Mngomezulu, 2010; Mapiye et al., 2009; Monde, 2003). Youth indicated child support grant and old age pension of their parents as their monthly sources of income. Whereas women headed households depended on three sources of income these include old age pension, child support grant and animal sales. Men reported that their households mainly depended on old age pension and animal sales. It is evident from the study that women were the only group of farmers who depended on three sources of income as compared to other groups of farmers. A study by Musemwa et al. (2010) presented similar findings. Monde (2003) highlighted that household combine more sources of

income to make ends meet, this is also evident in this study. All the statements on sources of income reported by youth, men and women were supported by local leaders as true. There was a significant difference ($p < 0.05$) between sources of income.

Cattle ownership of farmers from both communities differed according to different age groups. There were no significant differences that were noted. Surprisingly all groups of farmers from both study areas possessed almost the same number of cattle ownership, sales and yearly profit. Youth did not own any cattle before the initiation of the Nguni cattle project but after the project was initiated they owned a number of cattle as shown in Table 1. It is apparent from this study that livestock numbers have increased after the initiation of the Nguni cattle project. The increase in number of cattle owned resulted in increase of animal sales and profit made by each group of farmers except youth (Table 2).

The beneficiaries of the Nguni Cattle project further explained that they make profit from animal sales yearly especially during December holidays. This is the time of the year where most families conduct traditional ceremonies including weddings, cultural rituals, boys' initiation school and family gatherings. The highest recorded increase in profit for animal sales was made by men followed by women. Local leaders agreed with the decree made by men that, profit from animals sales has increased by the amount greater than R9000 since the Nguni cattle project was introduced in their communities. Beneficiaries further explained that Nguni breeds increased the number of cattle in their household because these breeds are highly adaptable to harsh environment and can withstand draught conditions.

Table 1. Average number of cattle owned and sold before and after the initiation of the Nguni Cattle Project in Ncera and Kwezana

	Youth	Men	Women	Local leaders
COB the NCP	0	2	2	2
COA the NCP	1	3	3	3
CSB the NCP	0	1	1	1
CSA the NCP	0	2	2	2

COB= Cattle Owned before, COA=Cattle Owned After, Cattle Sold before, Cattle Sold After, Nguni Cattle Project, Number Of Cattle, 1= 1-5, 2= 6-10, 3=11-15

Nguni cattle project beneficiaries kept Nguni breeds for different purposes see Table 3. Farmers from different discussion groups prioritised reasons for keeping cattle differently. Surprisingly the ranking of these groups in both communities was the same. As shown in Table 3, selling Nguni cattle was ranked as the most important use by men, women and local leaders. A study by Mngomezulu (2010) agrees with these findings. These breeds were sold within their neighbourhood, community and relatives for funeral, cultural rituals and wedding ceremonies. Limited access to marketing facilities for animals and animal products was

mentioned as the reason for selling cattle on local communities. Musemwa et al. (2007) also observed similar marketing constraints.

Table 2. Profit in cattle production after initiation (2005-2013) of the Nguni cattle project in Ncera and Kwezana

Focus group	Profit before 2004	Profit After 2004
Youth	0	0
Men	1	2
Women	1	1
Local leaders	1	1

$P < 0.01$, 1=R5000-9000, 2= >R 9000\

Farmer respondents further explained that when needs arise they obtain cash from selling cattle. Local leaders also highlighted that since the majority of communal farmers are unemployed the money received from animal sales helps them to pay school fees and funeral expenses within the village. The ranking for manure was the second in importance from all age groups as it was used for crop production. Lack of extension support services such as financial support and high unemployment was a reason highlighted for the use of manure as fertiliser. Musemwa (2009) also reported limited access to extension services as the constraint to cattle production. Beneficiaries from both communities indicated that they did not use their animals for draught power since they do not practice field cropping they only practice home gardens.

Table 3. Uses of Nguni cattle as indicated by different focus groups in Ncera and Kwezana during 2013

	Consumption	Cultural rituals	Skin Hides	Selling	Manure
Youth	1	0	0	0	2
Men	4	3	5	1	2
Women	3	0	0	1	2
Local leader	4	3	0	1	2

1 rank most important use within the communities

The findings of the study indicates that lack of extension services (lack of fencing for grazing and dipping facilities), high unemployment rate of youth, youth not interested in agriculture and stock theft were the major constraints that affected cattle production in both research communities. The ranking of these constraints differs according to age groups and there was a significant ($p < 0.05$) difference between these constraints (Table 4).

The absence of fencing for the grazing lands was mentioned by men, women and local leaders as the major constraint that affected grazing land management practices. Stock theft was mentioned and ranked equally by all groups as a constraint that hindered cattle production. Both challenges mentioned above were also evident in the study by Mngomezulu (2010). Only youth mentioned high unemployment rate as a major constraint, this is also evident in a study by Nqeno (2008). Local leaders, men and women did not support or agree with youth due to the reason that if youth could engage in agricultural activities, complaining about limited job opportunities would be a different story. As indicated in Table 5 local leaders reported that youth does not want to engage in agriculture. This is the same with the findings by Lesoli (2011) and Gwelo (2012) that youth in the villages of the Eastern Cape province demonstrated low interest and commitment to agriculture and lack of participation in livestock rangeland management. This affects cattle production because there will be limited transfer of knowledge from generation to generation. In contrast, a study by Mngomezulu (2010) reported that that majority of farmers (adults) from Amatole basin agreed that a high percentage (90%) of youths is participating in cattle production.

Table 4. Major constraints faced by different age groups of Nguni Cattle project beneficiaries at Ncera and Kwezana communities during 2013

	Youth	Men	Women	Local leaders
Constraint				
Lack of fence	2	1 ^a	1 ^a	1 ^a
Limited dipping facilities	0 ^b	2	2	7
Lack of dams	0 ^b	6	6	5
Poor road conditions	4	5	4	4
Lack of marketing support services	0 ^b	7	7	6
Lack of veterinary support services	5	4	5	8
Stock theft	3	3	3	3
High unemployment rate of youth	1 ^a	0 ^b	0 ^b	0 ^b
Youth not interested in agriculture	0 ^b	0 ^b	0 ^b	2

1a indicates the most important constraint within a community 0b Constraint not mentioned

3.1. Veld management and animal health

Majority of farmers from all groups reported that they rarely monitored health status of their cattle because of limited knowledge and training on disease cattle management. The former statement could be the reason to death and late treatment of animals. According to study done by Nqeno (2008), veterinary extension support recommended farmers to dip their cattle weekly during rainy seasons. Respondents in this study opposed this statement, lack of veterinary support services and unavailability of dipping facilities being the reasons. Hence their cattle spend long periods without being dipped not unless they collect money from beneficiaries and buy the dip. Farmers indicated that they used to have fence for their grazing lands since these lands are their main source of feed for their animals but that is no longer the case. They further explained that lack of fencing for communal grazing lands necessitated to poor veld management. According to Bester et al. (2003) and Ndlovu (2007), poor rangeland management and lack of infrastructural support affect cattle production. Although the latter is the case farmers further highlighted that there is no provision of infrastructural support services from government (extension officers). Farmers also explained that there were no regulations set by community members and leaders to manage rangelands and there are no disciplinary decisions taken by members of the community to deal with people who misuse rangeland resources (chopping of trees, burning veld and stealing fence and poles).

3.2. Participation of farmers in Nguni cattle project

Different genders from both study areas have different role they play in the project, they share and gain different indigenous experience and knowledge. Nguni cattle project beneficiaries from Ncera community mentioned that only 17% of youth farmers were actively participating in the project. This activeness is seen in terms of the role played in the project such as herding cattle to and from communal grazing lands and assisted in dipping cattle during dipping seasons. Local leaders at Kwezana indicated that youth in this community does not participate in any activities in the project. Poor youth participation implies a breakdown in the transfer of indigenous skills from elders to the youth as suggested by Lesoli (2011). Adult males reported they are the ones who do most of cattle production activities. Musemwa (2009) found the same results. Large domination of males in this project could be the reason. Cattle production activities done by men include cattle management and handling, ear tagging (to know the parents of the off-spring) and dipping activities. These activities increase farmers' level of knowledge in terms of cattle production.

Women are minimally involved in cattle production activities as compared to men. They reported their fulltime involvement in many household activities (looking after children, cooking and cleaning) as the reason to the latter statement. Although farmers play these roles in cattle production, they indicated some challenges encountered, lack of extension support services being the major challenge. Farmers from both study areas further explained that they require training and assistance in cattle management, record keeping, feeding management and disease control as these are essential in cattle production. A study by Nqeno (2008) also highlighted these facts.

3.3. Effect of Nguni Cattle Project on beneficiaries' local indigenous knowledge, cultural value and beliefs

Findings of this study indicated that farmers are rich and diverse in terms of local knowledge that passes through generation. Farmers pointed out that they used indigenous knowledge to run the project because they receive limited assistance from extension officers. This is also evident in the study done by Chambers (1988) that farmers depended on indigenous or local knowledge for improved farming system. Beneficiaries of the Nguni cattle project reported that, the project affects their local indigenous knowledge and cultural beliefs, because within the community they have different beliefs and customs depending on each household. Most of the beneficiaries believe that Nguni cattle are not suitable for cultural ceremonies due to their small body frame they prefer exotic (Brahman) and non-descript cattle. They suggested that combination of local and scientific knowledge can change their attitudes and local belief. Furthermore they highlighted that opportunities in indigenous cattle production exist in South Africa, but most of the small scale farmers do not utilize these opportunities due to lack of assistance from extension officers.

3.4. Farmers' perceptions on agricultural extension services and cattle production

In both communities lack of extension support services from government was mentioned to be a challenge that affects cattle production. Farmers also mentioned that government used to support communal farmers with veterinary support such as dipping of livestock for ticks and vaccination. But of late, government is providing veterinary support for only state controlled diseases. As a result, farmers experience high cattle disease rate. According to Mwale et al. (2005) conventional veterinary medicines are rising and becoming unaffordable to many resource limited livestock farmers in most African countries. Farmers also explained that agricultural extension interventions to support farming projects are limited. The communication networks (roads) were in a bad condition and veterinary support services for cattle production were also limited. Farmers further elucidated that projects are being implemented in certain communities but no training and farming skills are provided. They are expected to use indigenous and local knowledge to run the projects. Hence most projects experience financial losses' and infrastructural vandalism.

In both communities beneficiaries of the Nguni cattle project stated that they think historical issues have an effect on limited access to extension services.

4. Conclusion

In both research areas farmers' respondents depended on government grants and animal sales for improved livelihoods. Since the initiation of the Nguni Cattle Project there has been a change in the communities both in terms of increase in cattle ownership and household income. Historical issues had an impact on limited access to extension services as perceived by beneficiaries. From the study it is evident that beneficiaries received no extension support services to improve their socio-economic status and also to market their animal produce. Different groups of farmers highlighted some challenges they face and lack of fence was a

major constraint highlighted by adults. Additionally, youth highlighted high unemployment rate as their main constraint. Although that is the case, it is evident that the Nguni cattle project has improved beneficiaries' household income and social status. However it is recommended that beneficiaries are provided with necessary extension services such as fencing facilities and in-service training on cattle management. These extension services will help to ensure that the project maintains its success. Fencing the grazing lands might help to reduce stock theft in the beneficial communities. To effectively implement and ensure successful provision of extension services to farmers it is important for extension offices to conduct situation analysis with the involvement of farmers. This will help to get more information on physical, economic and technical characteristics of the beneficial community. Knowing the availability of resources, problems, needs of farmers and making use of farmers' indigenous knowledge can assist in effective implementation and provision of extension services to farmers. It is vital to provide extension services that are in line with the needs and problem of project beneficiaries to ensure sustainability of the project. Moreover, participation is key because rural farmers have depended on indigenous and local knowledge for cattle production so combination of extension research knowledge and farmers' indigenous knowledge can assist to ensure positive delivery of extension services to farmers.

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