Perceived training needs among livestock farmers in the North Eastern Region of the Eastern Cape Province: A case of Ugie commonage

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Abstract

The present study was aimed was to assess the training needs of livestock farmers who farm in a commonage in Ugie which falls under North Eastern Region of Elundini Local Municipality, Eastern Cape. A well-structured interview schedule was used to obtain information from 44 respondents. Data were collected on socio-economic characteristics of the respondents, their livestock production enterprises and their training needs, which were ascertained in six major areas of cattle production. Data were captured on Microsoft Excel and analyzed using the Statistical Package for Social Science to generate descriptive statistics. Results showed that there were more males (59.1%) participants than females (40.9%) and the majority were above 50 years of age, 50% had primary education and came from a household size ranging from 1-10 people. The respondents perceived high need of training in animal healthcare (67.6%) at first place followed by feeding (38.7%), marketing (38.2%), general management and breeding contributing 35.7% and 19.4%, respectively. The study indicated that regular training programs in designated topic areas are urgently needed to close the knowledge gap among farmers.

Keywords: commonage, livestock, farmers, training needs, North East, Agricultural sector
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Introduction

By 2050, the world's population is predicted to reach 9.7 billion people, with Africa experiencing the biggest population growth (United Nations Department of Economic and Social Affairs, Population Division, 2019). This anticipated population growth, in combination with income growth and urbanization (Capper, 2013; Thornton, 2010; Smith *et a*l., 2013), would result in a rise in nutritional demands for agricultural products. Agriculture has a significant role in most African economies. Animal products account for 49.2% of the total gross value of agricultural production in South Africa (Department of Agriculture, Forestry and Fisheries [DAFF], 2019). It therefore, entails that Livestock could be seen as a critical component of the solution to poverty reduction, wealth creation, and even global food security (Meissner *et al*., 2013; Mandleni & Anim, 2012).

It is quite important, however, to note that poor husbandry practices, inadequate feed and water, and the prevalence of various animal diseases pose impediments to the growth of this subsector. Meeting the expected growing demand requires tremendous efforts in increasing livestock numbers through improved production. Climate change and harsh weather conditions, which are common in Africa, exacerbate the situation. To overcome these obstacles and boost livestock productivity, concerted efforts in training farmers are essential. It is important to highlight, however, that before any training is done, a training needs assessment should be conducted.

According to Barbazett (2006), the training institution must establish the "5 Ws" namely: who, what, when, where, why, and how training should be delivered well before any real training takes place. Processes for determining the importance of changes in knowledge, skill, attitude, and behaviour that will have the greatest influence on accomplishing organizational or individual goals are known as training needs assessments. Trainings allow development professionals to provide fresh information and dispel misconceptions about animal management, as well as reassuring them that the animals would be cared for properly (Ferreira & Abbad, 2012). As a result, the current study was carried out in order to identify the training needs of livestock producers in Ugie commonage.

Material and Methods

The study was conducted in Ugie commonage (Portions 1 and 2), which falls under Elundini local municipality in the Joe Gqabi District in the Eastern Cape province, South Africa. Ugie commonage (portions 1 & 2) is located approximately 10 kilometres north of Ugie at 31013′ 03.51″ S and 28013′ 26.71″ E with an elevation of 1333m. The area receives an average rainfall of 786 mm per annum with the mean annual temperatures ranged from 6°C to 24°C. Summer season is the wettest (130mm) and hottest (24°C), whereas winter season being the driest (13mm) and coldest (0°C) (Mucina and Rutherford, 2006).

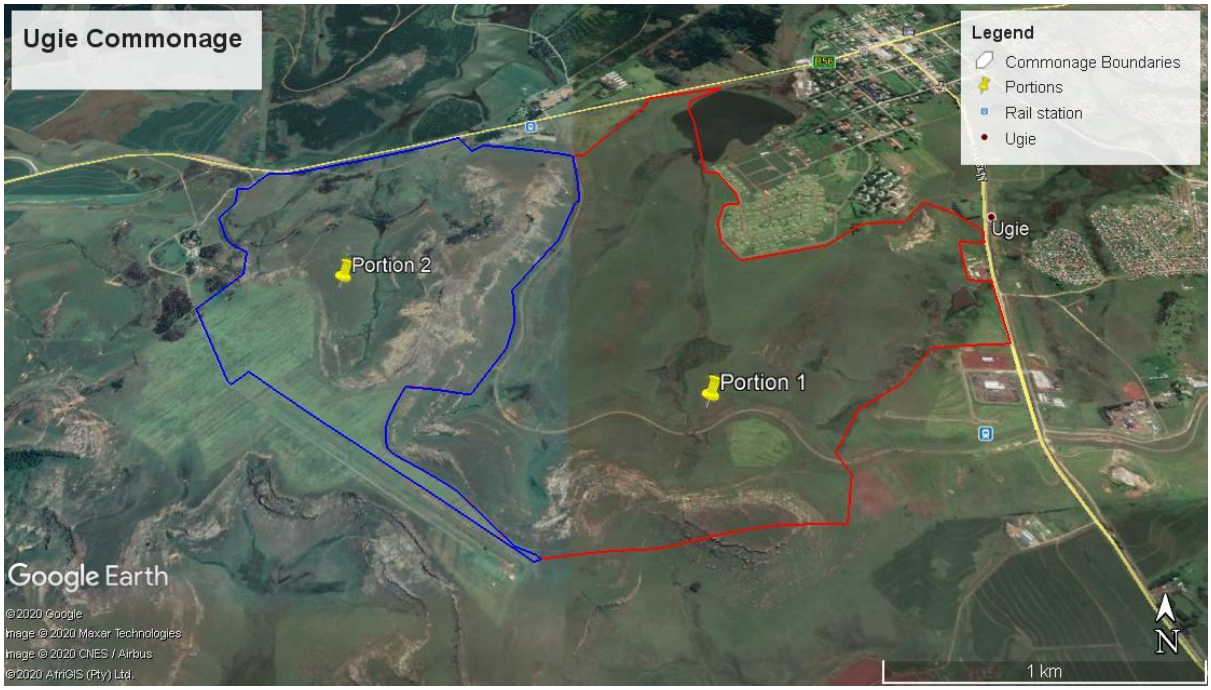

Figure 1 Map showing the Ugie commonage (Portion 1 and 2) Source: Google maps Pro 2020 AfriGIS

Ugie commonage resources like grazing land is shared by amongst community members, nonetheless, the stocking rate in relation to the grazing capacity it's no longer monitored as anticipated, such has resulted in the depletion of grazing resources. The commonage falls under Grassland biome known as the East Griqualand (Gs12), landscape is characterized by sloping mountainous which are covered with grasses and bush clumps (Mucina & Rutherford, 2006).

Herbaceous layer is dominated by various grass species such as *Alloteropsis semialata, Aristida species (congesta and junciformis) Brachiaria serrata, Digiteria tricholeanoides, Elionorus muticus, Eragrostis species (chloromelas, plana, racemosa), harpochloa falx, Heteropogon contortus, Hyparrhenia hirta, Melinis nervglumis, Microchloa caffra, Paspalum dilatatum, Sporobolus africans, Themeda triandra, Cynodon Dactylon, Trachypogon spicatus, Andropogon appendiculatus and Tristachya leucothrix* (Mucina & Rutherford, 2006). Soil parent material is that of mudstone and sandstone (Mucina & Rutherford, 2006). Soil parent material is that of mudstone and sandstone. Soils are well drained with the depth of 500mm - 800mm and clay content ranged from 15% to 55%.

Data collection and Analysis

Using a pretested structured questionnaire and the personal interview method, data was collected from 44 randomly selected respondents. The duration of data collection was from 01-03 October 2021. A list of major thematic categories under animal husbandry techniques was created for this study. Data were captured on Microsoft Excel 2013 and analyzed using the Statistical Package for Social Science (SPSS, 2000) to generate descriptive statistics.

Results

The general characteristics of the livestock farmers in the Ugie Commonage are presented in Table 1. Majority (59.1%) of households from which information was obtained were headed by males while only 40.9% were female headed. The age distribution of the farmers was fairly evenly spread over various age groups, with the highest representation found in the greater than 50-year category. Table 1 also shows that only 38.6% were above 50 years. It revealed that most of the farmers (61.4%) belonged to active age group of 18 to 49 years. About 6.8% of the farmers had no formal education, % had not.

Table 1 Socio-economic characteristics of livestock farmers in the Ugie commonage

Variables	Number (N=44)	Percentage	Mean
Age			
< 30	09	20.5	42.6
30 to 39	12	27.3	
40 to 49	06	13.6	
≥ 50	17	38.6	
Gender			
Female	18	40.9	
Male	26	59.1	
Marital Status			
Single	14	31.8	
Married	22	50.0	
Divorce	03	6.8	
Widow	05	11.4	
Educational Level			
No formal education	03	6.8	
Primary	22	50.0	
Senior secondary	16	36.4	
Post matric	03	6.8	
Household size			
1	07	15.9	3.8
2 to 5	27	61.4	
6 to 10	09	20.5	
>10	01	2.3	

Table 2 shows that, out of the five major areas of livestock rearing practices, 'animal healthcare' was the most important and ranked first by respondents for the purpose of training (total score =40) followed by 'marketing' (total score = 23), 'feeding' (total score = 22), 'general management' (total score = 17), and 'breeding' (total score = 13).

Table 2 Major training needs as perceived by livestock owners of the Ugie Commonage

Variables	Male (n=31)		Female (n=11)		Total Score
	No (%)	Rank	No (%)	Rank	
Marketing	17 (21.2%)	2	06 (17.0%)	4	23
General management	08 (10.0%)	5	09 (25.7%)	2	17
Animal Healthcare	29 (36.2%)	1	11 (31.45)	1	40
Feeding	15 (18.7%)	3	07 (20.0%)	3	22
Breeding	11 (13.7%)	4	02 (5.7%)	5	13
Total	**80**		**35**		**115**

Discussion

Livestock owners rely on animal husbandry for a living, they should be offered training in various aspects of livestock rearing. The training needs of livestock farmers in major areas of livestock rearing indicated their areas of priority in terms of training. Data in Table 1 show that the majority of respondents were male. The dominance of male in this study is in agreement with findings of Adedeji *et al.* (2013) in Nigeria and Mthi *et al.* (2020) in Eastern Cape Province. Results of age of farmers implies that majority (61.8%) of the farmers were still in their economic (18-49) active ages. This supports Popoola *et al*. (2017) findings and suggests that cattle farming is a career that is done by people of various ages. Most of the farmers were married; this is expected with result obtained for their age. The level of education of the respondents implies that majority of them cannot read and write; this may hinder better communication as well as adoption of innovations as reported by Ayanwuyi *et al*. (2007). Contrarily with our findings, Matsumoto *et al*. (2006) reported high marriage rate on farmers involved in agricultural activities.

The respondents' level of education suggests that the majority of them can read and write, which could help them keep better records and embrace and apply new technologies that could improve livestock production. But Asanwana (2001) had different results where the majority of farmers cannot read and write. These results are in agreement with those of Butt *et al*. (2011) where the majority of respondents had primary to post matric education. Household size is an essential characteristic that influences per capita food consumption and household food security by determining the overall household food need. The majority of respondents' households had 1–11 persons, with the average household size being 3.8. This result agrees with result of Adebisi *et al.* (2020) who also reported an average family size between 2-4 members.

The current results indicate that farmers ranked animal health the first thematic area. These findings are in consonance with the findings of Patil *et al*. (2009), Okwoche *et al*. (2015) and Shahjar *et al.* (2018). Farmers' ranking of animal health care the first training need might be due to the fact that loss of animals due to diseases has a negative impact on a farmer's income and genetic improvement. Impact of livestock diseases on import and exports has been reported in previous studies (Dehove *et al*., 2012; Barratt *et al*., 2019). However, the World Bank (2010) reported that the direct and indirect impact of livestock diseases on the economy is estimated at more than $20 billion and over $200 billion, respectively.

Management was ranked second among major areas of livestock rearing practices (with score = 17), according to the data in Table 2. Singh *et al*. (2018) also observed comparable findings in Banda District of Uttar Pradesh. Contrary to the findings from this study, Gour *et al*. (2015) reported that management practices were ranked first. Table 2 exhibits that feeding practices was ranked the third major area for training. Similar results were reported by Gour *et al*. (2015) and Kavithaa & Vimalrajkumar (2020) in Tribal farmers of Madhya Pradesh and Erode district of Tamil Nadu respectively. The main reason feeding is ranked third in terms of training may be attributed to feed inaccessibility and shortage during prolonged dry seasons and competition of grazing land with building of homestead and crop production.

With regards to livestock rearing practices, marketing emerged as the forth-training need (Table 2). The results from the study correlate with Mohan *et al*. (2006). The data presented in Table 2 reveals that breeding practices were ranked as the last training needs by the farmers. Opposing to our findings, study conducted by Shahjar *et al*. (2018) farmers' perceived breeding practice ranked as a second training need.

Conclusion

The outcomes of the study indicate that both males and females were active in cattle rearing. A survey of livestock farmers' training needs indicated that the majority of farmers said they needed training in animal health, general management, feeding, marketing, and breeding. The study clearly demonstrates that animal rearing practices training is urgently needed in the livestock business. It is necessary to make sufficient efforts to encourage livestock owners to seek training in diverse livestock production approaches. As a result, proper training in all aspects of animal husbandry should be offered in order to boost productivity. It is recommended that, a further study being conducted in various farming systems in the Eastern Cape Province.

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Author's contribution

S. Mthi identified the research area and title. S. Mthi, T. Thubela, N. Mgujulwa, T. Ntsabo, A. Mfono and N. Jokana collected field data. S. Mthi and F. Rumuso-Gwaze developed a spreadsheet and captured the data. S. Mthi, F. Rumuso-Gwaze and S. Tokozwayo analysed and interpreted the data. S. Mthi wrote the manuscript approved the final manuscript. All authors have read and agreed to the published version of the manuscript.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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