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Perceptions of Communal Farmers on Extension Support Services Accessibility in the Port St Johns, Eastern Cape Province

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ABSTRACT

Communal farming is mainly practised in most rural areas of South Africa, and agricultural production plays a significant part in rural livelihoods. Lack of access to adequate resources has led to high vulnerability. Farmers' understanding, awareness, and experience of extension services are important. Extension services are vital in supporting farmers in acquiring information, gaining knowledge and skills, and engaging in agricultural production to solve farming-related problems. Therefore, the paper seeks to determine farmers' perceptions of extension services accessed. The study used a cross-sectional research design to collect data using a 5-Likert scale questionnaire. A snowball sampling method was used to select 115 communal farmers from Ntsimbini village in Port St Johns Local Municipality. Descriptive statistics and principal component analysis were used to analyse the collected data. The study's findings revealed that production challenges associated with limited access to support services affect crop and livestock production. Findings on farmers' perceptions revealed poor access to production inputs and infrastructural support. Therefore, extension services accessibility

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affects production inputs and infrastructural support. The study recommends that access and use of extension support services be improved through communication strategies conducive to all stakeholders involved in communal farming, as this will help improve access to support services for farmers.

Keywords: Access and Use of Support Material, Communication Strategies, Infrastructure, Perceptions

1. INTRODUCTION

In the Eastern Cape Province of South Africa, the communal farming system comprises villages with residential areas, cropping and grazing areas, and grazing lands shared by different livestock (Goni et al., 2018). Most farmers keep indigenous animals because of their potential adaptability to the local environment (Mthi et al., 2017). Communal livestock farming provides great potential for job creation, food producers, and income generation and continues to be an essential rural livelihood source in the province (Taruvinga et al., 2022; Duncan et al., 2020; Mmbengwa et al., 2015; Yitayew et al., 2013; FAO, 2009; Miao et al., 2005). However, the practice of crop-livestock farming in South Africa is susceptible to climate-related events, income fluctuation, social-related shocks, overgrazing, poor infrastructure, water scarcity, low productivity, diseases, limited access to information, poor adaptive capacity and limited extension services (Debie & Ayele, 2023; Gwala et al., 2022; Hajdu et al., 2020; Oduniyi et al., 2020). Access to extension services is important because it provides farmers with information on farming techniques, raises their awareness of several challenges and changing climate conditions, and also helps them learn about management practices that can help sustain agricultural production (Bontsa et al., 2023; Loki, Aliber, & Sikwela, 2021; Gwala et al., 2016). However, "addressing rural farmers' challenges often ignores farmers' perceptions and experiences (Chambers, 1988; Francis & Sibanda, 2001).

Perception is how organisms interpret and organise sensations to produce a meaningful experience (Lindsay & Norman, 1977; Ndamani & Watanabe, 2015; Pickens, 2005). Understanding smallholder farmers' perceptions of extension services could be vital for a better understanding the strategies that would be most effective in reducing challenges faced in agricultural production (Popoola et al., 2019). Perception is influenced and shaped by, among other things, the characteristics of the person, their experiences, the information they receive,

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and the cultural and geographical context in which they live (Van der Linden, 2015; Whitmarsh & Capstick, 2018). Farmers' susceptibility to challenges and uncertainties is sometimes intensified by a lack of knowledge and poor access to information (Mittal & Mehar, 2012). Akpotosu et al. (2017) and Jones et al. (2023) argued that the timely availability of relevant information is critical in agricultural enterprises to facilitate successful learning and social change. Understanding farmers' perceptions can help identify potential barriers to access support services and develop strategies or awareness design programs to address farmers' specific concerns. There is a need for extension support services aimed at addressing challenges associated with crop-livestock farming practices to enhance farmers' knowledge and access to support services and improve production (Gwala et al., 2022). Hence, this study aims to determine communal farmer's perceptions of extension services accessed.

2. STUDY METHODOLOGY

2.1. Study Site

The study was conducted in Port St. Johns (PSJ), a local municipality in the Eastern Cape Province of South Africa. Two communities, Thombo and Ntsimbini, were selected. The population size of farming households is 18190 (Stats SA, 2011). The household head is a sampling unit in this study because the household head is solely responsible for most socioeconomic activities and significant decisions (Ahmad, 2023). The communities were selected because most households practise farming, so access to extension services is vital. PSJ Local Municipality has a moderate, humid, and subtropical coastal climate. The climate is ideal for growing vegetables during summer and winter. Temperatures in the area vary from a maximum of 25 degrees Celsius in summer to a minimum of 20 degrees Celsius in winter.

In comparison, the maximum is 21 degrees Celsius, and the minimum is 8 degrees Celsius (Kambanje et al., 2018). Rainfall is received mainly in summer, from October to March. Port St. Johns gets between 1100 and 1400 ml of rain annually. The area generally experiences favourable weather conditions, but droughts and floods occur occasionally, although not frequently (Obi & Maya, 2021).

2.2. Research Approach

The study aimed to determine the quality of extension services accessed by communal livestock farmers using quantitative research methods. The sample size was calculated using Yamane's

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formula n= $N/(1+N(e)^2$ i.e. n= 18190/1+18190 $(0.05)^2$= 395. Based on the willingness and availability of household heads during the study, a cross-sectional survey of 115 farmers was attained using the snowball sampling technique.

A Likert scale questionnaire was developed (based on a review of the relevant literature on extension support services) comprising 18 statements to which respondents had to agree or disagree. Statements covered the farmers' perceptions on 1) production inputs, infrastructural support and challenges; 2) quality and relevance of the support material; and 3) communication strategies between stakeholders. The Likert scale questions allowed for responses that varied from strongly disagree (5), disagree (4), don't know (3), agree (2) to strongly agree (1). Total and mean perception scores were computed for each support item, after which a cut-off mean score of 3.5 [(5+4+3+2+1) /5+0.5)] was used to differentiate between the various levels of perceptions (support services provided to farmers, quality and relevance of the support material, communication strategies of accessing support service) for the farmers. A rating of ≥1.5 indicated ineffective extension support services and poor access, while <1.5 indicated effective extension support services and good access. The content and face validity of the questionnaire were also calculated. The Cronbach's alpha reliability coefficient was 0.82. Descriptive statistical analysis was done, while an exploratory Principal Component Analysis (PCA) (Orthogonal rotation technique) was performed on the data collected for the communal farmers, using SPSS version 2 (2021).

3. RESULTS AND DISCUSSION

3.1. Demographics

The demographic characteristics of communal livestock farmers revealed that more males (68.7%) were involved in communal farming than females and that 47.8% were between 60-69 years old. About 39.1% of the respondents had primary school as their highest level of education. A significant number (54.8%) of respondents were married. Only 5% of farmers were between 30 and 39 years old. The results show that communal farming was popular amongst elderly male farmers compared to female and youth farmers. As shown in the table, the majority (88.7%) of the respondents had up to five occupants per household. This showed that some household members would likely provide family labour for crop and livestock farming.

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TABLE 1: Characteristics of Survey Respondents (n=115)

Attribute	Category	Frequency	Percentage
Gender	Male	79	68.7
	Female	36	31.3
Age	30-39	5	4.3
	40-49	16	13.9
	50-59	20	17.3
	60-69	55	47.8
	70-79	10	8.6
	80-89	9	7.8
Marital status	Single	33	28.7
	Married	63	54.8
	Divorced	3	2.6
	Widowed	16	13.9
Highest level of education	No formal education	28	24.3
	Primary	45	39.1
	Secondary	33	28.7
	Tertiary	9	7.8
Household size	1-5	102	88.7
	6-10	13	11.3

3.2. Communication and Advisory Services

Farmers obtained information from different sources through several channels. Research results in Table 2 reveal that 55.6% of farmers received information from other farmers, and 18.2% indicated that they received information from extension officers. After other farmers, media was most frequently used as an information source (26.2% of farmers). Only 10.4% of farmers indicated receiving information from community meetings, and most (58.6%) highlighted media as the common communication channel. Only 8.7% and 7.8% of farmers received dip and vaccines, respectively.

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Additionally, 14.8% and 11.3% of farmers received water and fodder support services during drought seasons. Such support services were reported to assist farmers in coping with drought and low feed. However, the services are accessed quarterly. The latter affects agricultural production as the crop and livestock produce will be at its lowest status. The majority (57.4%) of farmers reported that they did not receive any advisory support services. These findings imply that farmers/neighbours were the study area's primary information source. This could be because farmers in the community used the local language to share information (Bontsa et al., 2023). Unlike media, where information might be communicated in a foreign language, using a one-way communication approach could result in information distortion given the level of education of most farmers in the study.

TABLE 2: Communication and Advisory Support Services

Communication, advisory support services and frequency	**Frequency**	**Percentage**
Sources of information		
Community/ other farmers	64	55.6
Extension officers	21	18.2
Media	30	26.1
Communication channel		
Media	67	58.3
Field visit	22	19.1
Meetings	12	10.4
Phone call	14	12.2
Type of advisory support services		
Dip	10	8.7
Vaccines	9	7.8
Water	17	14.8
Fodder feed	13	11.3
No support services	66	57.4

3.3. Quality of Extension Services

About 19% and 9% of farmers rated extension services as good, moderate quality and relevant to the farming practices. However, the majority (28%) of farmers from those who indicated

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access to extension services (Table 3) reported poor quality and irrelevance of extension services. Advisory support services (fodder, water and dip) are provided quarterly; by that time, most crops had been lost, and there had been more livestock deaths. Timely and frequent provision of support services to farmers before production losses is important to prevent various challenges. A study by Bontsa et al. (2023) also identified the extension advisory services accessed by farmers in rural areas as being non-helpful and of poor quality.

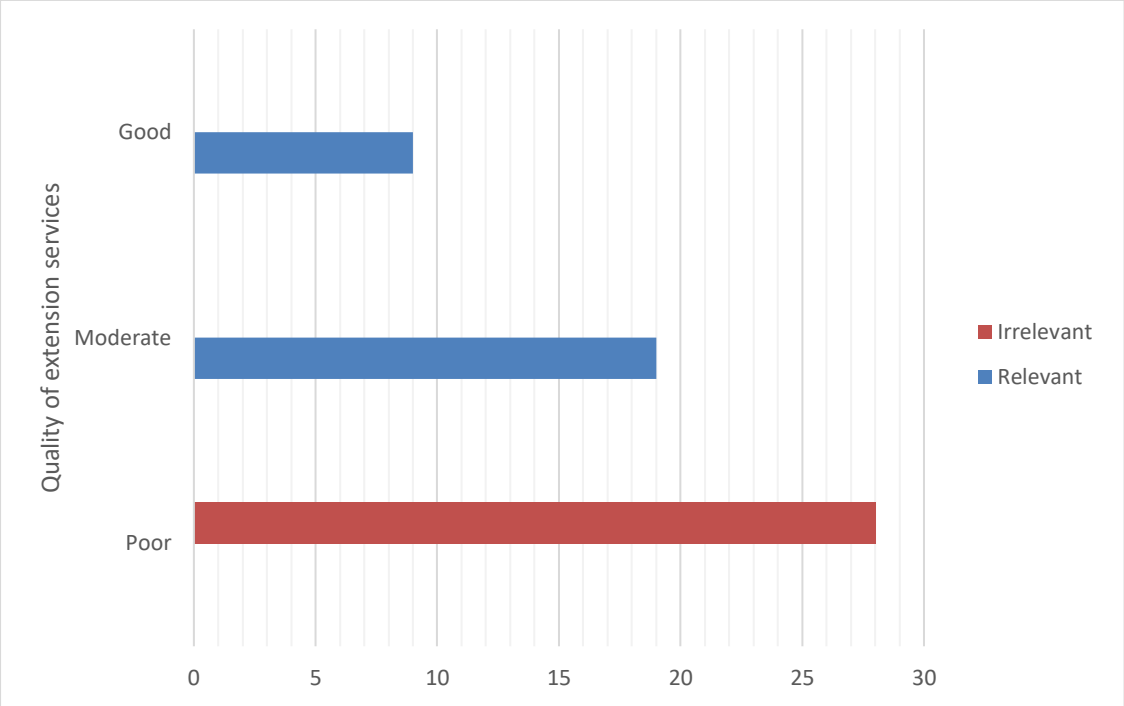

FIGURE 1: Quality and Relevance of Extension Support Services

3.4. Perceptions of Farmers on Production Inputs, Infrastructural Support and Challenges

The study assessed the perceptions of communal farmers regarding accessing support services and production challenges in the study area. Seven variable factors were analysed (see Table 3); all the variables yielded a result of <1.5. The findings confirm poor infrastructure and limited and inadequate access to support services.

3.5. Perceptions of Communication Strategies for Providing Support Services

Table 4 presents communication strategies used when providing the support services. Results on: The procedure for communicating with extension advisors was spelt out clearly to farmers in training; there are massive education and training workshops by the government for communal farmers on farm management, farmers field workshops to ensure that they are

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registered on the government database so that they benefit and be updated on relevant information, establishment of relevant association that assists with information sharing, yielded a result of more than 1.5. All other variables were below 1.52. The findings indicate inadequate or poor use of relevant communication strategies (workshops, training, farmer's field visits and consultations) to provide and/or access extension services.

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TABLE 3: Perceptions of the Farmers on Production Inputs, Infrastructural Support and Challenges (n=115)

Support material	**SA**	**A**	**NE**	**D**	**SD**	**%**	**Mean scores**	**Std Dev.**
Farmers were encouraged to keep fodder banks and crop residues for animal feed	8	9	36	22	39	100	1.52	.261
Farmers were only supported with poor attention to crop-livestock production	3	59	309	13	4	100	0.53*	.173
Support services (feed, water, fertiliser, seedlings, dip, medication, machinery) were inadequate	0	5	18	32	60	100	0.49*	.311
Inadequate actions were taken to reduce poor information access, water services, tertiary services	41	54	264	18	11	100	0.92*	.268
There was poor infrastructure for farming practices to take place	64	27	10	10	3	100	0.52*	.369
Limited training of farmers by department officials on farming techniques	56	31	17	5	6	100	0.69*	.236
Poor development of farmers' skills in the identification of crop deficiencies and livestock diseases	95	15	5	0	0	100	0.43*	.224

Strongly Agree (SA), Agree (A), Neutral (NE), Disagree (D), Strongly Disagree (SD)

- * = Significant if the mean score is <3.5.

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TABLE 4: Perceptions of Communication Strategies for Providing Support Services

Perceptions	**SA**	**A**	**NE**	**D**	**SD**	**%**	**Mean scores**	**Std Dev.**
There is massive education and training workshops by the government for communal farmers on farm management	5	9	3	29	69	100	1.51	0.345
The procedure for communicating with extension advisors was spelled out clearly to farmers in training	3	11	3	19	79	100	1.52	.289
Government focuses only on large-scale farmers	0	0	111	2	8	100	0.47*	.261
Limited training of farmers on the use and interpretation of information during field days	61	32	13	5	4	100	0.47*	.231
There was a lack of training for crop-livestock farmers on how to keep fodder banks and conserve crop residues as animal feed and how to store seeds for the next growing season	70	30	7	3	5	100	0.45*	.209
Farmers field workshops to ensure that they are registered on the government database so that they benefit and be updated on relevant information	3	6	15	12	79	100	1.50	.286
Establishment of a relevant association that assists with information sharing	3	3	9	39	62	100	1.53	.239
Farmers receive relevant information about their farming practices through meetings	0	1	5	36	73	100	0.41*	.218
Workshops or consultations assist in coordinating the application for support material on face-to-face consultations	30	19	44	93	22	100	0.48*	.321
Farmers always apply best farming practices to prevent and mitigate future disasters	50	12	25	17	11	100	0.68*	.223
Farmers are encouraged by extension advisors to acquire insurance plans in case of emergencies	10	10	95	0	0	100	0.49*	.293

Strongly Agree (SA), Agree (A), Neutral (NE), Disagree (D), Strongly Disagree (SA)

* = Significant if the mean score is <3.5.

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4. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The study pursued to investigate the perception of farmers on extension support services. Research findings revealed that farmers had limited access to support services, with a few indicating access to extension support. The extension services have been reported to be of poor quality and irrelevant and do not address farmer's needs. Poor communication strategies, limited access to resources, inputs and access to relevant information, lack of awareness, lack of capacity and effective communication channels affect communal farmers. The study recommends that the responsible stakeholders enhance their capacity and clarify their roles in this regard. Extension services should be accessible to farmers, and communication strategies be improved for effective information exchange. The consideration of farmers' needs should be a priority so that the support services provided align with the farmers' interests and needs. Communal farmers need to be capacitated in farming techniques to improve agricultural production. Mass media, particularly radio and social media, should be incorporated into awareness campaigns, in which reporting channels and contact numbers should be made clear so that farmers are aware of approaching conditions and can transmit the relevant information to others.

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