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The nexus between extension services and community libraries as agricultural information sources for smallholder farmers in Amathole District Municipality

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ABSTRACT

The provision of relevant, accurate, and timely agricultural information to smallholder farmers remains vital in enhancing rural agricultural productivity. The role of the agricultural extension institution in disseminating up-to-date agricultural information to farmers is considered crucial to agricultural development and sustainability. Community libraries could also be instrumental in providing agricultural information to smallholder farmers. This study, therefore, assessed the delivery of agricultural information to smallholder farmers by the extension officers and community libraries in Amathole District Municipality. Using purposive sampling and stratification, a total of 169 smallholder farmers were selected; while, purposive and convenience sampling were used to identify five extension officers and 15 community librarians respectively. The presentation of results was done by using simple descriptive statistical tools. Findings revealed that extension officers in the study area mostly utilised interpersonal channels to disseminate information which often causes a delay in timely delivery. Community libraries are not used as an information channel/source by extension officers and farmers. Farmers perceive the information delivery services of extension officers as ineffective while community libraries are perceived as meant for the literate. There is no existing collaborative effort between extension officers and community librarians in providing agricultural information to the smallholder farmers in the study area.

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Keywords: Information access, Extension information delivery, Strategies, Community library, Information formats and language.

1. INTRODUCTION

Access to information is fundamental for knowledge enhancement and instrumental in facilitating change (Lwoga *et al.,* 2011). It cannot be overemphasised that information is a valuable resource that farmers rely upon for the adoption of new technologies (Unagha & Ibenne, 2011; Adio *et al.,* 2016). The rural agricultural sector in particular requires up-to-date agricultural information for increased and sustainable productivity. Smallholder farming communities are faced daily with production information needs (Rahman *et al.,* 2013; Makhathini, 2013; Aker *et al.,* 2016), where if they (information needs) go unmet production declines. Yusuf *et al.,* (2013) and Mahonga (2014) concur that farmers require contemporary agricultural information to remain productive. According to the report of the Department of Agriculture, Forestry and Fisheries [DAFF] (2011), smallholder farmers' productivity is declining, and this situation could be partially attributed to constraints in accessing up-to-date agricultural information which restrains their entrepreneurial capabilities, further intensifying their poverty cycle (DAFF, 2011; & Thamaga-Chitja).

An increase in farmers' productivity relies not only on the generation of new technology, but is also imperative that farmers' information needs are met. Thus, facilitating efficient agricultural information dissemination cannot be underplayed in the present bid to especially transform rural agricultural productivity. Production increase incorporates readily available and easily accessible agricultural information. Access to diverse media sources is therefore very important and plays a vital role in the dissemination of information. Historically, smallholder farmers have been known to garner agricultural information from sources such as friends, other farmers, community leaders, and local government officials, amongst others (Farooq *et al.,* 2007). However, the agricultural extension platform has remained the most significant form of connecting to rural farming communities (Adekunle, 2013). The extension institution provides public information and training to smallholder farmers, both of which are critical to enhancing their productivity.

Extension officers' educational, advisory, and information delivery roles empower farmers to maximally utilise and sustain their resource use which addresses rural food security and poverty (Mpandeli & Maponya, 2014; Akpalu, 2013; Van Niekerk *et al.,* 2009). In South Africa, however, the delivery of efficient extension services remains farfetched as the sector has been impinged by numerous challenges, one of which is the insufficient number of extension officers which limits effective service delivery to the large South African farming communities (Liebenberg, 2015). A study carried out by Yusuf *et al.* (2013) opines that the limited number of extension workers hinders adequate dissemination of agricultural information to the farmers. Likewise, scholars have pointed out that there are not enough extension officers to efficiently deliver services to farmers (Msoffe & Ngulube, 2016; Nyareza *et al.*, 2012; Siyao 2012).

While Van Niekerk *et al.* (2009) has highlighted that extension officers are required to perform non-extension activities such as monitoring fencing and delivering production inputs. Such activities minimise the time required for extension officers to service farmers. For this reason, alternative information delivery media which could complement the extension services in rural communities could be given leeway to function in such a capacity. Among many suggestions given in the literature, such as the use of ICT, and community libraries, have been suggested and listed as alternative farmers' information custodians (Barakabitze *et al.,* 2015; Salman *et al.*, 2017; Aina, 2006; Mugwisi, 2014; Nyareza & Dick, 2012).

This form of a library has been instrumental in providing information to local communities, educating the people, and facilitating rural change and development (Raju & Raju, 2010; Fera, 2012; Islam & Ahmed, 2012). They could be of great use and effective media for farmers to timely and easily accessible agricultural information. For instance, if appropriately equipped and adapted to serve smallholder farmers, community libraries could become an efficient supplemental agricultural information source for rural farmers. For example, Islam and Ahmed (2012) revealed that, in Thailand, community libraries were crucial in providing agricultural information to the region’s rural farmers, which facilitated rural development. Available literature advocates for use of community libraries to play a complementary role because they are established in rural communities to provide access to information for its populace (Raju & Raju, 2010).

Community libraries have information centres that are set up to provide information for specific disciplines (Mugwisi, 2014). Thus, this feature could especially be beneficial to the agricultural community as agricultural context-specific information centres could be set up within the libraries for smallholder farmers so that they can easily gain access to the contemporary agricultural information they require for improved productivity. In Aina's (2006) opinion, community libraries and rural extension services play similar roles for providing essential information to rural communities. As such, they could both provide supportive and complementary information service delivery to these communities. In countries such as Ghana and Zimbabwe, scholars suggest a relationship between agricultural extension services and community libraries has been created where farmers can have timely, accurate, and relevant agricultural information, which has been documented as effective (Chisita, 2011; Lamptey, Sambo & Adwoa 2016). It cannot be overstressed that access to information is essential in daily life for sustaining livelihoods; also as a vital contributor to the improvement of farmers' productivity, access to agricultural information is crucial. Therefore, extension services must be supported in the endeavour to disseminate information to farmers. Various custodians of information that could complement extension services should be explored. This study, thus, assessed the delivery of agricultural information to smallholder farmers by the extension officers and community libraries in Amathole District Municipality. Given this statement, the study aimed to address the following questions.

1. Do farmers have access to agricultural information through agricultural extension service institutions and community libraries?
2. What are the formats and language presentation used to deliver information to farmers?
3. Is there any existing collaboration relationship between agricultural extension services and community libraries in providing smallholder farmers in the study area with agricultural information?
4.

In the following section, we outline the methodological approach used in the study.

2. METHODOLOGY

2.1 Study area

Amathole District Municipality (ADM) is one of the six district municipalities of the Eastern Cape Province and is under the greater Buffalo City Metropolitan area. ADM has six local

municipalities, namely: Amahlathi Local Municipality, Great Kei, Mbashe, Mnquma, Ngqushwa, and Raymond Mhlaba. ADM was purposively selected for this study based on the high prevalence of poverty in the municipality (Baiyegunhi & Fraser, 2015), especially amongst its smallholder farming households. Data was collected from Raymond Mhlaba Municipality only from smallholder farmers and agricultural extension officers – this was due to the logistics and proximity of the municipality to the researchers. Areas with functional community libraries in the municipality were then identified such as Adelaide, Alice, Bedford, Fort Beaufort, and Seymour communities and that is where data was gathered.

2.2 Units of analysis

The units of analysis were individual smallholder farmers, agricultural extension officers, and community librarians in the selected areas of the study.

2.3 Sampling technique and sample size

2.3.1 Smallholder farmers

Records of smallholder farmers in the selected areas were obtained from the respective agricultural extension officers assigned to cover each area. The combined lists of smallholder farmers in all five areas added to 2182 (Table 1). The expected sample size for the study was then calculated using Yamane's (1973: 258) econometric model, giving a total of 338. Due to financial and time constraints, the decision was taken to cover about 50% of the expected sample size, which totaled 169. To give an equal representation of the five towns, a stratified sampling technique was used with the following formula by Donner, Birkett a& Buck (YEAR) : $\frac{Number}{Total\ number} \times$ sample size [169] (see Table 1 for the number of smallholder farmers in each selected area). Based on the calculations, the sample population for smallholder farmers was drawn from Alice (62), Adelaide (11), Bedford (3), Fort Beaufort (39), and Seymour (54), giving a total of 169 smallholder farmers.

2.3.2 Agricultural extension officers

Agricultural extension officers were purposefully selected for the survey. Only the field officers assigned to cover the selected areas for the study were interviewed, making a total of five field officers.

2.3.3 Community librarians

The study area has 33 established community libraries (Integrated Development Plan, 2017; Marwanqa, 2018). Data from Raymond Mhlaba municipality libraries were collected via visitations to the libraries and the convenience sampling technique was used to obtain data from the community librarians; meaning that only the librarians that were available and willing to be interviewed at the time of the survey were interviewed. The number of libraries from this municipality amounted to seven libraries, then from the rest of the libraries in ADM data was collected via emails, supplemented with phone calls, and nine responses were obtained which resulted in 15 libraries being sampled in the study area.

Semi-structured questionnaires were used to collect data from the respondents. The questionnaires were self-administered by all the selected farmers and extension officers and librarians except for librarians located outside RMLM; questionnaires were sent to them via emails and supplemented with phone calls for follow-up. Data was coded in Microsoft Excel and exported to the SPSS software for data analysis. Presentation of results was done using simple descriptive statistical tools (frequency and percentages and means)

Table 1: Selected areas, the population of smallholder farmers, and extension field officers

Selected areas	**Ward number**	**Number of smallholder farmers**	**%**	**Assigned extension officers**
Alice	3 and 5	800	37	1
Adelaide	2 and 4	146	7	1
Bedford	2 and 5	36	2	1
Fort Beaufort	4 and 9	500	22	1
Seymour	6 and 10	700	32	1
Total		**2182**	**100**	**5**

Source: Field Survey, 2019

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3. RESULTS

3.1 Demographic profile of respondents

3.1.1 Smallholder farmers (n = 169)

A majority (60%) of the farmers were men. Respondents' mean age was 33.8 (SD=17.60) years, while the majority (58%) had more than 11 years of farming experience. About 41% were fully into livestock production while the others (59%) either solely produced crops or practiced mixed farming. A total of 80% had attained the secondary/high school level of education.

3.1.2 Agricultural extension officers (n = 5)

A total of 60% of the officers interviewed were women. Respondents' mean age was 42.6 (SD=8.53) years, while the majority (80%) had obtained a tertiary degree. A significant percentage (60%) had more than ten years of extension service practice.

3.1.3 Community librarians (n = 15)

A majority (73%) of the librarians interviewed were women. Respondents' mean age was 39 years (SD=11.30), while the majority (74%) had obtained a tertiary degree. Only about 27% had more than ten years of library practice, while all (100%) of the librarians specialised in information science.

3.2 Access to agricultural information through extension officers and surrounding community libraries

3.2.1 Access to agricultural information through extension officers

A majority (55%) of the smallholder farmers indicated that they do not have access to agricultural information through extension officers (Table 2), while about 37% indicated that extension officers often used the demonstration method of the extension delivery system (Table 4).

Table 2: Farmers' access to agricultural extension services N=169

Do you have access to extension officers?	**Frequency**	**Percentage**
Yes	76	45
No	93	55
Total	**169**	**100**

Source: Field Survey, 2019

Table 3: Agricultural information delivery techniques used by extension officers (n = 5)

Information delivery techniques	**Mostly used(%)**	**Sometimes used (%)**	**Poorly used (%)**	**Do not use (%)**
Face-to-face individual interactions	100	0	0	0
Group meetings	100	0	0	0
Demonstration methods	80	0	20	0
Distribution of printed information materials	0	80	0	20
Use of surrounding community libraries	0	0	0	100
Use of contemporary information communication technologies (ICTs - mobile phones, e-mails, and social media)	0	80	20	0
Farmers' information day	0	80	20	0
Commodity groups	60	0	40	0

Source: Field Survey, 2019Source: Field Survey, 2019

About 93 farmers (Table 4) had no response when it comes to forms of extension delivery system, this is because these farmers have indicated they do not have access to extension officers.

Table 4: Smallholder farmers' responses to the forms of extension delivery techniques (n = 169)

Information delivery techniques	Often (%)	Sometimes (%)	Never (%)	No response (%)	Total (%)
Face-to-face individual interactions	24	21	0	55	100
Group meetings	27	2	16	55	100
Demonstration methods	37	8	0	55	100
Distribution of printed information materials	17	5	23	55	100
Use of contemporary information communication technologies (ICTs - mobile phones, e-mails, and social media)	17	0	28	55	100
Farmers' information day	28	3	14	55	100

Source: Field Survey, 2019

3.2.2 Access to agricultural information through surrounding community libraries

A majority (60%) of community librarians noted that agricultural information was available in the community libraries, but the information mainly targets learners who are taking agriculture as a subject in school, while all (100%) of the librarians indicated that smallholder farmers did not visit the libraries to obtain agricultural information. About 73% specified that the libraries create awareness about library services in the communities; however, all of the librarians noted that such awareness does not specifically target smallholder farmers because they are generally about library services (Table 5). Responses from the smallholder farmers corroborate that of the librarians as they all (100%) indicated that they do not obtain agricultural information from the community libraries. The majority (62%) were unaware of the libraries' usefulness as a source of agricultural information while more than 80% showed interest in using the libraries as a potential information source in the future (Table 7).

Table 5: Availability of agricultural information in libraries (n= 15)

	Yes		**No**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Do you have agricultural information in this library?	9	60	6	40
Do farmers visit the library to acquire agricultural information?	0	0	15	100
Do you create awareness for the public about library services?	11	73	4	27

Source: Field Survey, 2019

Table 6: Farmers visit to the library to acquire agricultural (n=169)

Variables	**Yes**		**No**	
	Frequency	**Percentage**	**Frequency**	**Percentage**
Do you visit the library to acquire agricultural information	0	0	169	100

Source: Field Survey, 2019

Table 7: Reasons why farmers do not consider community libraries as agricultural information source n = 169

Reasons for exclusion of community libraries	**Yes**	
	Frequency	**Percentage**
Unaware of its usefulness	105	62
Unable to read and write	24	14
The distance to the community libraries	10	6
Lack of time to visit the libraries	5	3
Due to old age	20	12
Information obtained from extension officers is helpful and sufficient	5	3
Total	**169**	**100**

Assumptions about the community library		
The library is meant for educated people	105	62
The library is meant for learners	40	24
The library is meant for everyone in the community	24	14
Total	**169**	**100**
Anticipation of future use		
Anticipate future use of the library to access agricultural information	150	89
Do not foresee using the community library in the future	19	11
Total	**169**	**100**

Source: Field Survey, 2019

3.3 Formats and language of presentation of agricultural information to smallholder farmers in the study area

Eighty-three percent of smallholder farmers indicated printed material to be the most used format to convey agricultural information, while 41% of the smallholder farmers indicated English and isiXhosa to be the common languages that extension officers often use when disseminating information to them. Of the 150 smallholder farmers who showed an interest in using community libraries, about 71% indicated their preference for audio-visual materials, while 47% maintained their preference for the isiXhosa language as the primary language (Table 9).

Table 8: The formats and language used to present information for farmers with access to extension officers N=76

Variables	**Frequency**	**Percentage**
Formats		
Printed Material	63	83
Word of mouth	13	17
Total	**76**	**100**

Language		
English	19	25
IsiXhosa	15	20
Both English and IsiXhosa	31	41
Afrikaans	11	14
Other language(s)	0	0
Total	**76**	**100**

Source: Field Survey, 2019

Table 9: Distribution of smallholder farmers based on their preferred format and language of information presentation (n=169)

Presentation format	**Yes**	
	Frequency	**Percentage**
Printed materials	30	18
audio-visual materials	120	71
No response	19	11
Total	**169**	**100**
Language format	**Frequency**	**Percentage**
English language	5	3
isiXhosa language	80	47
Afrikaans language	21	13
English and isiXhosa languages	44	26
Other languages	0	0
No response	19	11
Total	**169**	**100**

Source: Field Survey, 2019

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3.4 Existing collaborative effort between extension officers and community librarians in providing agricultural information to the communal farmers in the study area

All (100%, n=15) of the community librarians indicated that they had no existing collaborative relationship with extension officers in providing agricultural information to smallholder farmers in the study area but showed interest in possible future collaborations (Table 10).

Table 10: Community librarians' responses to collaborating with extension officers (n=15)

Collaborating with extension officers	Yes		No	
	Frequency	Percentage	Frequency	Percentage
Do you work together with extension officers to provide contemporary agricultural information to smallholder farmers?	0	0	15	100
Do you receive any form of agricultural information from extension officers to provide up-to-date agricultural information to smallholder farmers who visit the libraries?	0	0	15	100
Would you like to collaborate with extension officers in the near future to provide smallholder farmers with the necessary information to improve their productivity?	15	100	0	0

Source: Field Survey, 2019

4. DISCUSSION

4.1 Access to agricultural information through extension officers and surrounding community libraries.

The importance of providing farmers with up-to-date agricultural information cannot be overemphasised as it is an important factor for production increment. Agricultural extension officers in the study area mostly used demonstrations, group meetings, and face-to-face

individual interactions to convey agricultural information to the farmers (Table 3). These information-conveying methods are called interpersonal channels. Interpersonal channels seem to be widely used by extension officers as a tool to disseminate information to farmers. Other studies have also found that workshops, mobile phone calls, meetings, demonstrations, field days, and seminars were the most used channels by field agents to provide farmers with information (see, for example, Elia et al., 2015); Kigatiira et al., 2018). The preference for these channels emanate from the fact that they are reliable and enable extension officers to interact with farmers, which than contributes to farmers' active participation in programme activities (Elia et al., 2015; Kigatiira et al., 2018).

In such interactions, farmers can gain autonomy, and a feeling of being in charge. A study by Marathe and Badodiya (2016), conducted in the Sawai Madhopur block of Sawai Madhopur district in Rajasthan, confirms that farmers learn more about something when they have observed and practised than merely learning through theory. Kigatiira *et al* (2018) are of the view that, interpersonal channels better influence change of behaviour toward receiving new agricultural information amongst farmers. However, the use of interpersonal channels in the study area could adversely affect smallholder farmers for timely access to agricultural information as they will have to wait for extension officers to personally disseminate the information; a process that may take longer than necessary due to several challenges faced by the extension delivery system. For example, Table 1 indicates that over 800 farmers that are in wards three and five have only one extension officer to cover the entire area. This makes extension service delivery very difficult.

A majority (55%) of the farmers in the study area complained about not having access to extension services because of the limited number of agricultural extension officers who can provide such services. Agricultural extension services remain core custodians of relevant and improved agricultural information for farmers and such information is paramount to improving the productivity of farmers (Khan & Akram, 2012; Baiyegunhi *et al.,* 2018; Nyareza & Dick, 2012; State *et al.*, 2015; Adio *et al.,* 2016). Agricultural extension officers have pointed out that they have existing challenges regarding effectively and sufficiently conveying agricultural information to farmers, which also adds to the complaint of farmers in the study area about their dissatisfaction with the services provided by extension agents.

Research by Lamontagne-Godwin *et al.* (2017) also pointed out that some of the causes for poor extension services include the limited number of agricultural extension officers and the lack of transport for them to visit farmers. Additionally, other studies have shown that the issue of limited access to extension officers is not only affecting farmers in the study area but also farmers in Limpopo, Gauteng, and KwaZulu-Natal experienced similar issues, including a lack of access to up-to-date agricultural information due to the limited number of extension officers (see, Akpalu, 2013; Baiyegunhi *et al.*, 2018; Maoba (2016). Akpalu (2013) confirmed that new agricultural information, innovations, and technology needed to assist farmers to improve productivity are constantly generated from various research stations to be disseminated to farmers by the extension officers. Thus, it is imperative to pay attention to the lack of extension officers which impinges effective and sufficient delivery of improved agricultural information to farmers.

Other countries have developed strategies to mitigate the limited number of extension officers to visit farmers. For example, Kenya, Nigeria, and Saudi Arabia adopted an e-extension approach, Nigeria reported mobile phones and radio to be effective to complement extension, while Kenya and Saudi Arabia reported only mobile phones to be effective (Tata & Mcnamara, 2018; Nwabugwu *et al.*, 2019; Afzal *et al.*, 2016). South Africa as well makes use of mobile phones and smart pens but vast numbers of farmers' extension officers service are mostly located in remote areas with a poor network, thus they have been cut off from accessing agricultural information. Therefore, the use of a community library by an association with public extension services could bring extension services nearer to the smallholder farmers. Aina (2006) suggested for African countries utilisation of community libraries to be one of the tools extension services could make use to convey agricultural information to farmers. The custodian is believed to be able to complement extension services information delivery to farmers, community libraries are closer to where farmers and equipped with resources that could be useful for farmers when well utilised (Aina, 2006).

4.2 Use of community libraries to complement agricultural extension services

Various sources of literature (Obidike, 2011; Ugwoke, 2013; Rahman, 2016) have asserted that a library is the hub of information for the public, and, therefore, it should be actively involved in disseminating agricultural information to farmers as they are also a part of the public meant to be served. Community libraries are within reasonable boundaries where farmers can easily

access information, thus their involvement in agricultural information dissemination is crucial. Agricultural extension services could collaborate with community libraries and use their resources such as documentaries, information centres, and audio-visual material for constant provision of up-to-date agricultural information to farmers. The view of Chisita (2011) is that the library is an important entity for accessing all kinds of information with no exceptions.

According to Bopape *et al. (*2017), the library plays a pivotal role in contributing to the socioeconomic development of people in the community by providing access to information. A community library could as well contribute a lot to farmers' access to information that could help improve productivity. Unfortunately, in the study area, community libraries are not actively involved in catering to farmers' information requirements. The results show that 60% of community libraries in the study area have indicated that they do not have information that predominantly targets farmers; the information they have in their libraries is for learners who are taking agriculture as a subject in school.

Additionally, all of the librarians revealed that they do not have farmers coming in to seek agricultural information in their libraries. On the other hand, because of their assumption that the library is only meant for elite people and also because of their unawareness that the library could be useful to them as well, all of the farmers in the study area also reported they do not approach the library to seek agricultural information (Table 6). Therefore, there is a need for a paradigm shift by farmers regarding the library so that they can make use of its services. Community libraries do create awareness about the services they provide, but they do not include awareness about agricultural information in their awareness campaigns. Thus, community libraries should also actively engage farmers as their target market as well.

4.3 Format and language presentation of agricultural information to farmers

There is a substantial percentage (45%) of farmers in the study area who indicated they have access to agricultural extension services and they receive agricultural information from them. Therefore, learning about the formats and the language presentation of agricultural information provided by the extension officers could not be ignored. The results indicate that demonstrations are the most extensively used formats that enable farmers to obtain information from extension services. The results provided by the farmers regarding formats and methods used to convey information correlate with those given by the extension officers. The formats

are traditional but still relevant to reach out to farmers. Studies conducted in Kenya have outlined group demonstrations to be widely used as an effective extension method to disseminate information to farmers in the country (Ali-Olubandwa *et al.,* 2011).

The results of the findings in the study area indicate that farmers anticipate future use of the community libraries if the libraries are well stocked with what will benefit them, hoping that the information will be in the language and format desired by the farmers. It cannot be overstressed that the format and language used when providing farmers with agricultural information are crucial for the proper conveying of the message. The results from the study area show that community libraries have agricultural information on printed material and in the English language. In cases where information is in a foreign language, library services such as information repackaging (a process of re-organising and re-packing information from a consolidated format and foreign language to presenting it appropriately for ease and in understandable format and language for the library users (Dongardive, 2013)), could be of help to be utilised by farmers. The use of the local language is a strong factor while communicating extension messages. According to Lamptey *et al.* (2016), using the local language for extension presentation had been reported to enhance better learning and adoption of technologies.

In terms of a collaborative relationship between agricultural extension services and libraries, the study results show that there is no existing collaborative relationship between these two entities despite the idea that they can complement extension service delivery (Table 10). Working relations could be established at the community libraries where farmers could meet. Available facilities like audio, audio-visual, and graphical formats of information could be made available for the farmers in various agro-enterprises. More important in the era of Covid-19, community libraries could be used as the centre where farmers could have webinar interaction with the extension officers, considering the non-availability of webinar facilities by individual farmers. Also, considering the proximity of extension officers to the farmers, community libraries could play a significant role here.

The implication is that the dearth of agricultural information will remain a common challenge for the majority of rural farming communities, as access to information is central to productivity enhancement, and contributes its quota to stimulating growth and empowering smallholder farmers from production to processing and even marketing phases of their

agricultural businesses. Agricultural extension services and community libraries can, therefore, play pivotal roles in the effort to ensure that existing agricultural information gaps are abridged. This can be achieved through increased extension support and equipping community libraries to be able to serve the information needs of smallholder farmers in their respective locations.

5. CONCLUSION

Results of the study show that interpersonal methods are widely used by extension agents to convey agricultural information to farmers. Considering that each extension officer has alarge number of farmers to service, and the challenges these officers encounter (i.e., such as lack of transport to visit farmers), the use of interpersonal methods could delay farmers' timely access to agricultural information. This is because interpersonal methods, largely require physical interactions. Therefore, it is imperative that the use of community libraries to complement extension services be explored. Results in this study further show that community libraries are not being utilised by both farmers and extension officers as a custodian to transact agricultural information. Thus, a kind of collaborative relationship between agricultural extension services and community libraries should be facilitated in the study area.

6. RECOMMENDATIONS

The study recommends the following:

1. The issue with regards to format and language in which agricultural information is being disseminated to farmers can be combated with the use of library resources such as information repackaging techniques, and information centres with information formats such as documentaries and audio-visual material. This could be achieved only when libraries are equipped to accommodate farmers as well.
2. A working collaboration relationship between the agricultural extension and community library services can be established in a model approach (Figure 1).
3. Community libraries need to be well-equipped to accommodate farmers as well.

The study recommends the following model:

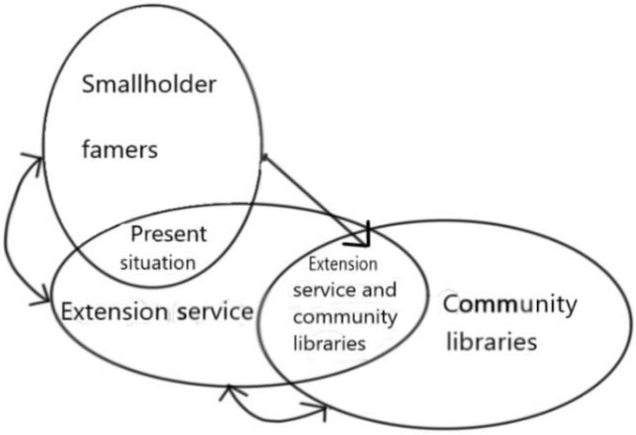

Figure 1: An agricultural extension services – community library model

Source: Researcher, 2020

- **A – Farmers and agricultural extension services**

Farmers highly depend on agricultural extension services to obtain relevant and up-to-date agricultural information. But, there is a limited number of agricultural extension officers to convey such information to farmers. Also, farmers are located in remote areas where it is difficult for extension officers to reach them on time due to infrastructure challenges such as poor roads in rural areas.

- **B – Community libraries**

They are located within reasonable boundaries where they can be easily accessed by farmers. They have various resources such as documentaries, pictographs, audio-visual material, screens, and information centres and they can perform information repackaging which could be effectively utilised by farmers.

- **C – Agricultural extension services and community libraries' collaborative relationship**

There could be an exchange of information where extension officers would utilise a library as a custodian where farmers could obtain agricultural information. For example, an extension officer could drop bulletins with agricultural information in the library, and with an information repackaging tool in the library information on the bulletins could be converted to an audio-visual material format for farmers. Also, a documentary could be recorded by an extension

officer on a farm on how to plant a cabbage then leave it in the library where farmers would go and watch it using library resources. Information centres could be established in libraries that cater only to farmers, which would make it easy for farmers to access information in the library.

- **D – The collaborative benefit to farmers**

- Improved access to proven agricultural information.

-Improved productivity.

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