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Information-seeking behaviour: A case study on farmers in Maputo City, Mozambique

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Abstract. In the agricultural sector, which is a pillar for the development of the world economy, and for family subsistence, having information is critical. The objective of this study is to analyse the information-seeking behaviour of farmers in Maputo City, Mozambique. A case study was conducted involving ten farmers from the KaMbukwana and KaMovata Municipal Districts. For the practice of agriculture, farmers in Maputo City largely depend on information from their fellow farmers and on government institutions as a reliable source. Other sources of information include television, workshops and non-governmental organisations. There is a high perception of relevancy of information for practice of agriculture; the farmers appeal for the use of information and communications technology as a mechanism to share information.

Keywords. Farmers, information-seeking behaviour, Maputo City, urban agriculture

Introduction

Information is an entity that enriches society and advances various professional groups. It is a crucial tool for a professional group, such as farming, as it enables farmers to understand, learn and be able to cope with new trends (Koja-Odongo & Mostert, 2013). Agriculture is known to be the base of food security worldwide and therefore forms an important sector in the global economy. Food security rose significantly in 1996 and consequently led to a higher demand from the agricultural sector (Padel, 2001). This crisis led to the rise of urban agriculture. A simple definition of urban agriculture is practising agriculture (growing plants and keeping livestock) around urban cities and towns (Mahapatra, 2016). According to Opara (2008), urban agriculture has been integrated into the economy and ecology of cities.

The aim of the study was to analyse the information-seeking behaviour of farmers in Maputo City, Mozambique. Maputo has rural areas where urban farming is developed, called green areas (Engel & Júnior, 2019). The areas are used for vegetable farming and other small-scale family farming. The areas cover about 1300 ha and accommodate the families of 14500 farmers distributed in 33 organisations responsible for the produce and commercialisation of vegetables (Neilson & Rickards, 2016).

Currently, this activity is performed in four districts, namely KaMavota (897.5 ha), KaMubukwana (26.8 ha), KaTembe (16.5 ha) and KaNyaKa (9.0 ha). In these districts, the

average productions pop up to at least 75 thousand tons of vegetables per annum, which is 37.50% of the existing consumption and a need of at least 366 thousand tonnes for consumption per year (CMM, 2016; Schmidt, 2017).

In the process of seeking information, farmers and agricultural experts work together to find the best method for practising farming (Meitei & Devi, 2009). Information-seeking behaviour is aimed at fulfilling purpose and satisfying goals. This aspect of seeking information expands farmers' knowledge of agriculture. Owolade (2008) defines information-seeking behaviour as human behaviour in relation to diverse information and data.

According to Wilson (2000), information-seeking behaviour emerges when a need is perceived by an information user in different stages or sequences. The user thus seeks formal or informal information sources or services to satisfy the requirements. The demand for information leads to either success or failure when data are deemed relevant or irrelevant by the user, respectively. Successful or relevant information satisfies the perceived need. Additionally, the model highlights that part of the information-seeking behaviour involves the sharing of information between people.

Methodology

The study used a qualitative research approach since it involved the gathering of abstract or non-numerical data (Merriam & Tisdell, 2015). For this study, ten farmers in Maputo City were recruited, five from KaMbukwana and five from the KaMavota Municipal Districts. A sample size of ten was deemed appropriate to address the main aim of the study. This sample size was large enough to obtain sufficient data to adequately describe the phenomenon of interest. Therefore, adding more participants is not likely to result in additional information or perspectives due to saturation having been attained. According to Dworkin (2012) and Glaser and Strauss (2017), the sample size in qualitative research should be determined by whether saturation is reached.

The data collected from the interviews were coded and analysed thematically (Joffe, 2011). The method was crucial to the examining of the data in order to identify common patterns or themes in information-seeking behaviour among farmers in Maputo City.

Results

In Table 1, the farmers' socio-demographic characteristics (participants) show that 60% of farmers were female and 40% were male. The majority (60%) of farmers fell into two age brackets, namely 26–35 and 36–45 years, 20% in the 46–54 years bracket, and 10% in each of the 16–25 years and 55–64 age groups. For farmers' years of experience, both 1–4 and 15–20 years had 20% each while 5–9 years and 10–14 years had 30% each. The majority (70%) of farmers are partially engaged in agriculture, while 30% are fully engaged in agriculture.

Table 1: Socio-demographic characteristics of participants

Variables	Responses	Frequency (n = 10)	Percentage
Gender	Male	4	40
	Female	6	60
Age groups	16–25 years	1	10
	26–35 years	3	30
	36–45 years	3	30
	46–54 years	2	20
	55–64 years	1	10
Participation by municipal district	KaMavota Municipal District	5	50
	KaMbukwana Municipal District	5	50

Time in agriculture activity	1–4 years	2	20
	5–9 years	3	30
	10–14 years	3	30
	15–20 years	2	20
Engagement in other activities	Yes	7	70
	No	3	30

There was a positive response regarding relevancy of information in agricultural activities (80%) as opposed to irrelevance (10%) and indifference (10%) (Figure 1).

Figure 1: Perception of relevancy of information in agricultural activities

The information sources for the farmers were 40% from colleagues, 30% from government institutions, and 10% each from television, workshops and NGOs (Figure 2).

Figure 2: Information source

Farmers' colleagues were an important information source for the majority (50%) of farmers, followed by government institutions at 30%, and then 20% who made no distinction. From this data, the farmers got more information from their colleagues than from other sources (Figure 3).

Figure 3: *Most important source of information*

Figure 4 reveals that 50% of farmers were regularly satisfied with their information needs, while 30% and 20% reported irregularly and not at any time respectively.

Figure 4: *Satisfying information needs*

Figure 5 reveals that the most information needs were on fertilisers (30%), followed by the market (20%), pedology (20%), irrigation (20%) and weather (10%).

Figure 5: Information needs

Farmers in Maputo referred to getting their information from technology platforms (50%) over other sources like government extensionists (30%) and workshops (20%) (figure 6).

Figure 6: Preference of sources to get information

Discussion

The socio-demographics showed that most of the participants in this research (60%) were women. This agrees with several sub-Saharan studies and those in Maputo City, Mozambique, showing that most women in Africa are involved in agriculture (Alagappan & Kumaran, 2020). Since women constitute most farmers, hindrances in their products are affected by, among other factors, low literacy, less land acquisition rights and fewer incentives in agricultural practice. Empirical studies have shown that women are comparatively less informed than their male counterparts on agricultural technologies (Daman, 2003; Sadaf et al.,

2006). Improving women's agricultural literacy will therefore enhance household food security. Thus, farm productivity and yield would be improved through information (Opara, 2008).

In the study, the majority of the farmers were in the age bracket 26 to 45 years. This age group is increasing rapidly, growing in the sub-Sahara areas (Gashu et al., 2019), and is therefore promising for the future of agriculture in Africa. They also constitute those that can access information more readily than the older age group of people and the younger group because most enjoy financial independence, enabling them to access information. Since economic dependence has been cited for low information acquisition amongst farmers in rural areas, especially women (Opara, 2010), these groups are less advantaged in terms of information access. Most farmers are experienced in agriculture, as revealed in these studies. Thus, they are well informed on the factors contributing to low agricultural production, and therefore farmers have a safety net by not engaging in a single income-generating activity like agriculture. It shows that farmers are risk-averse, and therefore adopted to risk-averse approaches for income security. Such insurance is contributed by the dependence of crops production under rain-fed agriculture in Sub-Saharan Africa (Lemessa et al., 2019), including Mozambique (Armand et al., 2019), which is likely to be erratic, leading to crop failures.

Most (80%) farmers perceive information on agriculture activity gathered through their preferred information sources and colleagues in agriculture as relevant. Elsewhere, friends, relatives and neighbours who act as colleagues of farmers were found to be significant sources of knowledge and information, including in Zambia (Kaniki, 1991), rural India (Chakrabarti, 2001), Tanzania (Chilimo, 2008), amongst fishermen in Uganda (Ikoja-Odongo & Ocholla, 2003) and Nigeria (Njoku, 2004). This means that regardless of agricultural activity, farmers share information amongst themselves. Thus, farmer groups would be significant and influential when they are well equipped with the right agricultural information. However, contrary to their rural counterparts, these farmers preferred information and technology platforms. Thus, farmers' education on digital agriculture should be a priority for policymakers. Studies show that digital literacy is increasingly being promoted by infrastructural investment in most sub-Saharan communities; urban areas like Maputo City are the most advantaged. This is indicated by 70% of the poorest and 20% in developing countries already having access to mobile phones (World Bank, 2016). Governments and other agriculture stakeholders should invest in low internet rates to increase social media interaction through platforms such as WhatsApp, Twitter and Facebook to promote new yielding germplasms, agricultural technology, diseases and pest control, markets, and any other relevant information on agriculture. This kind of platform saves money and time, thus making agriculture attractive and profitable. Additionally, a more comprehensive consultation may be sought quickly and reliably from farmers. Quick response in terms of agricultural information is vital in diseases and pest control, especially perishable agricultural goods. In urban agriculture, mostly horticultural crops are grown, which are perishable.

From the information needs, most farmers sought more information on fertiliser, irrigation, and pedology. This means that more farmers are engaged in crop farming than animal farming. Thus, most information would be to improve crop production. Therefore, regularity in this information should be increased to enhance products. It forms the core of Mozambique's vital agricultural sustainability policy, including intermittent input support to farmers and increased irrigation.

Conclusions

The results of this study on the exploration of the farmers' information-seeking behaviour show that there is a high perception of relevancy of information in agriculture

activity. This could mainly be due to sources from their colleagues who also practise agriculture. Among the different information needs, information on fertiliser and pedology that address soil deficiency was more critical; thus, most farmers were mainly crop farmers. This is supported by an additional need for information on irrigation. The role of government was also seen as an important source of information. Therefore, to increase regularity and reduce both irregularity and indifferences in information needs, the most preferred information source, namely technology and a communication platform, should be increased to allow farmers to interact with each other. On farmers' level, this could be achieved by social media platforms by allowing farmers to form groups where questions and answers can be posted. On the government level, government extensionists could also join these farmers with more discussion and engagements. Additionally, investment in digital technology enables low message costs, which should be encouraged for agriculture.

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