

Proceedings of the 21st Standing Conference for Eastern, Central and Southern African Library and Information Association (SCECSAL), Sunbird Capital Hotel, Lilongwe, Malawi, 28th July to 1st August, 2014, pp. 305 – 312. ISBN 978-99908-0-454-6.

**THE ROLE OF KASISI AGRICULTURAL TRAINING CENTRE IN PROVIDING
INFORMATION ON ORGANIC TO THE SMALL SCALE FARMERS IN KASISI
AREA OF CHONGWE DISTRICT, ZAMBIA**

Naomy Mtanga

University of Zambia, School of Education, Department of Library and Information Studies,
Lusaka, Zambia

Felesia Mulauzi

University of Zambia, School of Education, Department of Library and Information Studies,
Lusaka, Zambia

Ired Mwale

Lacrina Farm, Lusaka, Zambia.

ABSTRACT

This paper presents the findings of a study that was undertaken to investigate the role played by Kasisi Agricultural Training Centre (KATC) of Chongwe District in Zambia, in the provision of agricultural information to small scale farmers in Kasisi area, with specific focus on organic farming. Both quantitative and qualitative methods were used in which data from forty (40) small scale farmers was collected using semi- structured questionnaires while five (5) members of staff at KATC were interviewed. The results revealed the different types of information that small scale farmers needed, their knowledge of programs offered by the training centre and challenges they face in accessing such information. The paper concludes with recommendations to help improve the dissemination of information to the small scale farmers, thus resulting in increased production and ultimately improving their economic situation.

KEYWORDS: Agricultural Information, Organic Farming, Small-scale farming, Economic development, Kasisi Agricultural Training Centre

1. INTRODUCTION

Agriculture plays a very important role in the development of any country as it is one of the fundamental sectors that are cardinal for national development. It is the primary sector of a country that can lead to industrialization as well as the development of other vital sectors in the country such as transport. In addition, agriculture can improve overall national food security, eliminate poverty, hunger and chronic malnutrition (Grigg, 1995). However, for effective performance of the agricultural sector, there is need for use of information efficiently and effectively. Farmers need to know how they can have maximum production output from their yields and this can only be possible if they have the right information and know how to use it. In today's world information is regarded as the most important factor of production far more important than land, labour and capital. Having all these factors of production without effective information use does not usually yield the intended results. Likewise, agriculture production without including information use is not effective. When farmers do not know for example the soil type, seeds and rainfall patterns due to lack of information, their productivity will be affected and result in food insecurity. However, with the right type of information in the right quantities

and quality as well as format, farmers become knowledgeable about production, management, storage, preservation, and marketing of their agricultural produce. When such knowledge is used effectively, it can lead to increase in production and ensure food security in the country.

The ineffective use of information or its unavailability causes poor management of farms as well as farm produce. For a developing country like Zambia whose economy is mainly agrarian, issues of food insecurity arise causing hunger and starvation among the local people who cannot access food because they can neither produce it nor purchase it due to lack of purchasing power. With its vast resource endowment in terms of land, labour and water, Zambia has potential to expand its agricultural production. Of Zambia's total land area of 752,612 km², 58% is classified as medium to high potential for agricultural production, with rainfall ranging between 800mm to 1400mm annually and suitable for the production of a broad range of crops, fish, and livestock. However, since most of the farmers in Zambia are small scale farmers, who can hardly afford agricultural inputs such as fertilizers and pesticides, organic farming is the best option because it is affordable and also ensures the sustainability of natural resources. In this regard, Canadian Organic Growers (2001) submits that organic farming is an integrated system of farming based on ecological principles. Farmers who farm organically use natural systems to control pests and disease in crops and livestock, and avoid synthetic pesticides, herbicides, chemical fertilizers, growth hormones, antibiotics or genetic modification.

The Ministry of Agriculture considers a small-scale farmer to be someone who cultivates less than 5 hectares of land (Zambia Ministry of Agriculture, n.d.; Chomba, 2004). For the purpose of this paper, we will take a small scale farmer to be one with little financial means as well as one with less than 5 hectares of land where different crops are grown. In any case those with limited financial resources are unlikely to own several hectares of land since they cannot even manage to cultivate them.

1.1 Kasisi Agricultural Training Centre (KATC)

Kasisi Agricultural Training Center (KATC) was established in 1974 and initially offered a two-year course in conventional agriculture. In 1990, the institute changed its training program to focus on short courses in organic and sustainable agriculture. The overall objective of KATC is

to empower local people in Chongwe district and those who come from elsewhere to enable them to improve and sustain their lives through use of appropriate and ecologically sound agricultural techniques. Currently, KATC offers a variety of three to five days and two weeks courses in organic agriculture, including residential, on-farm courses and study circles. On-farm courses allow small-scale farmers to learn how to practice organic farming. At the end of the program, they are given pieces of land where they are able to practice organic farming techniques that they have learnt. Principally, KATC teaches farming techniques that do not require fertilizers and pesticides and that require reduced water input or irrigation. This is appropriate because small-scale farmers cannot easily afford the expensive fertilizers and pesticides and the water reservoirs are drying up. Within 35 years of trial and error, the members of KATC had become pioneers in developing the knowledge of sustainable agriculture, and simple, inexpensive, yet effective tools for small-scale agribusiness in the country.

KATC's five-day courses encompass broad knowledge in the production of organic vegetables and cotton, biological pest management, agro-forestry, beekeeping, administrative tasks like farm management and internal control systems. Their programs aim at training rural families as well as agricultural extension officers for government and field staff of NGOs. The participants come from Zambia and from neighbouring countries such as Malawi and Zimbabwe. In addition to residential training, KATC offers village based training. Some staff members offer extension services in the district. KATC works with approximately 1,200 small scale farmers. Some research on organic agriculture is also done at KATC and in the villages. A workshop in Appropriate Technology researches and develops equipment and tools suitable and affordable for use in rural areas, such as fuel efficient stoves. This workshop also undertakes the repair and maintenance of farmers' equipment. KATC has always relied on donors for its work. Since it is becoming increasingly difficult to fund core expenses, the centre is expanding into Production Units. Currently, it has a dairy herd of 30 animals and sells the milk to a cheese factory. It also set up some irrigation schemes and there are 80 hectares presently under irrigation (KATC, 2001).

1.2 The importance of information on organic farming

Lack of information has been identified frequently as a barrier to organic farming and or conversion to organic farming (Blobaum, 1983; Fairweather, 1999; Midmore et al., 2001). Emphasising the importance of information on organic farming, Padel (2001) argues that organic farming is not typical of technical innovations, but is instead an information-based innovation, with those engaged actively seeking information outside of the mainstream of agriculture and from others involved in organic farming. Studies of conventional farmers' opinions about organic farming reveal, among other issues, their limited knowledge and interest in more information (Fairweather, 1999; Wynen and Edwards, 1990). In a similar vein, Lockeretz (1991) asserts that expansion of organic farming would be associated with an acceleration of knowledge accumulation among organic farmers (along with an increase in the technical support available from governments and farm advisors). External inputs would be replaced in part by information and management; yet little is known about what information is needed, when farmers might require it, and where it could come from. Therefore, he maintained, that organic farming would be a mainly software-based innovation and, like other low-input systems of agriculture, information-intensive.

Wynen (1993) in a case study on organic conversion in cereal/livestock farming found that information about organic agriculture was important in technical, regulatory and marketing areas. The study concluded that with regard to farmers' decisions whether to switch to organic farming, it was extremely important that they be well- informed about organic farming. Waltz (2004) equally found that the most severe barriers to organic farming transition were lack of information and experience in organic production, and an inability to identify markets.

Niemeyer and Lombard (2003) in a study of organic farmers in South Africa, examined socio-demographic aspects, farming operations, motivations, and problems of conversion. They recommended that conversion to organic farming be supported, not necessarily via direct financial support to the organic farmers, but by different instruments such as the development of an improved infrastructure for marketing, networking and information exchange.

Two studies (Fairweather, 1999) found the number of farmers with an interest in organic farming to be considerably greater than the number adopting or actively inquiring about organic farming, highlighting

the role that better technical, financial and marketing information could potentially play in influencing farmers' attitudes.

2. STATEMENT OF THE PROBLEM

The Ministry of Agriculture and The National Agricultural Information Services (NAIS) and other key stake-holders do provide agricultural information to farmers in the country. However much of the information provided is on conventional farming and little attention has been given to organic farming. Since a considerable proportion of the Zambian population is involved in small scale farming as a means of living, there is need to assist them to increase their productivity in order to improve and sustain their lives through use of appropriate and ecologically sound agricultural techniques, such as organic farming. Other relevant information for farming is that on climate patterns, soil types, seed and water. KATC is a pioneer in developing the knowledge of sustainable agriculture, and in developing simple, inexpensive, yet effective tools for small-scale agribusiness in the country. Over the 35 years of developing and training in sustainable agriculture, very little information is documented about its activities and the outcomes and impact of its training programs, especially that on organic farming to small scale farmers. It was thus imperative that this study be carried out to assess the contribution that the Institute was making to national development through empowering small-scale farmers and how this could further be enhanced.

3. RESEARCH OBJECTIVES

3.1. General Objective

To investigate the role that Kasisi Agricultural Training Center plays in the provision of information to small scale farmers in the Kasisi area of Chongwe district.

3.2. Specific Objectives

- i. To discover the information needs of small-scale farmers in the Kasisi area.
- ii. To establish whether small scale farmers in Kasisi area were aware of the programs at Kasisi Agricultural Training Centre on organic farming.

- iii. To determine the effect of the information on organic farming that Kasisi Agricultural Training Centre (KATC) was disseminating to small scale farmers in the area.
- iv. To find out the challenges faced by small scale farmers in accessing information provided by the training centre.
- v. To suggest ways of enhancing the provision of information to small-scale farmers.

4. RESEARCH METHODOLOGY

A survey method was used to conduct the research using both qualitative and quantitative approaches. Saunders, Lewis and Thornhill (2007), state that surveys are used to answer questions on who, what, where, and how much. In this regard, the method helped to identify who provided information to the small-scale farmers, what information was sought and why the information was sought. Bless, Higson-Smith and Kagee (2006) point out that qualitative research is concerned with studies pertaining to peoples, perceptions or feelings towards certain policies, actions or other occurrences that cannot be measured numerically. Cooper and Schindler (2001) assert that quantitative research involves measurement in terms of quantities or numbers). The qualitative approach brought out the farmers' perceptions and feelings regarding information that was provided by KATC while the quantitative approach was used to bring out statistics of the small scale farmers that had accessed information from KATC.

The target population consisted of 60 small-scale farmers within the Kasisi area of Chongwe district. Out of these a sample of 40 farmers were randomly selected to participate in the study. Data was collected using semi-structured questionnaires, which were administered to the respondents. In addition to questionnaires, interviews were held with five (5) members of staff from the training centre. Quantitative data was analysed using the Statistical Package for Social Sciences (SPSS) while qualitative data was analyzed using content analysis. The latter involved interpreting the views and perceptions of respondents that were given both during the interviews and from the questionnaires. The statistical package was used to generate frequencies and tables.

5. RESEARCH FINDINGS AND DISCUSSION

The research yielded 100% response rate as all the 40 questionnaires were completed. The respondents comprised 18 male and 22 females whose level of education did not go beyond secondary school education. Nineteen respondents had attained secondary education. Another nineteen had only gone as far as primary school level while two had never been to school. Information was elicited from the small-scale farmers on how long they had been practicing organic farming. The responses revealed that 32.5% had engaged in organic farming for less than five years, 47.5% for 5 years, 15% for 10 years and only 5% had practiced for 20 years. Table 1 below portrays the findings. It can be seen that 80% of the respondents had engaged in organic farming during the last five years an indication that more small-scale farmers are turning to organic farming. This is in contrast to 20 years and 10 years ago when only 2 and 6 of these farmers respectively were practising organic farming. This is likely because more farmers are getting to learn about organic farming.

Table 1: Years engaged in organic farming

Years of Organic Farming	Respondents	Percentage
Less 5 years	13	32.5
5 years	19	47.5
10 years	6	15
20 years	2	5
Total	40	100

5.1 Information needs of small-scale farmers in Kasisi

The study sought to find out in what areas small-scaled farmers required information. As shown in table 2 below, the results revealed that 22.5% needed information on organic farming, 55% were in need of market information for their organic products, 7.5% required information on how to control major pests while 22.5% were in need of agro-credit information. Other information the farmers needed to have was on what cooperatives existed in their area (indicated by 20% of respondents), and field supervision programmes conducted by KATC (indicated by 7.5% respondents). Cumulative totals do not add up to 40 or 100% since some respondents indicated more than one type of information needed.

Table 2: Farmers' information needs

Types of information	Respondents	Percentage
Organic farming	9	22.5
Marketing information	22	55
Pest control	3	7.5
Agro- credit	9	22.5
Cooperatives	8	20
Field Supervision programmes	12	30

The study further revealed the various sources of information that farmers accessed. Although information was obtained through radio (indicated by 45% of respondents), other farmers (25% of respondents) and agricultural extension officers (17.5% of the respondents), the largest number (62.5%) indicated Kasisi Agricultural Training Centre as their chief source of information. Ten percent indicated that they had obtained information from all the different sources including radio, other farmers, agricultural extension officers and KATC. Table 3 below portrays the findings. It should be noted though that some respondents indicated more than one source of information, hence the cumulative percentages here do not add up to a hundred. What is remarkable though is that all the farmers obtained all their information about organic farming from the training centre, which is indicative of the important role it is playing in providing the needed information to the small-scale farmers.

Table 3: Sources of information

Sources of information	Respondents	Percentage
Radio	18	45
Other farmers	10	25
Agricultural Extension Officers	7	17.5

KATC	25	62.5
All the above sources	4	10

The frequency of access to information was another issue that was investigated and results showed that 30% of the respondents accessed information from the centre on a weekly basis, 5% fortnightly, 57.5% monthly, 5% quarterly and 2.5% every farming season. As can be seen from table 4 below, majority of the respondents accessed the needed information on a monthly basis while only 30% received information every week. Failure to access information more often can be attributed to great distances that farmers have to travel to reach the training centre.

Table 4: Frequency of access of information

Frequency	Respondents	Percentage
Weekly	12	30
Fortnightly	2	5
Monthly	23	57.5
Quarterly	2	5
Every farming season	1	2.5
Total	40	100

5.2 Respondents knowledge about the programs at KATC and their participation

When asked about what programs offered at KATC the small scale farmers were aware of, 45% indicated that they knew about the on-farm courses, 27.5% said they were aware of the study circles, 20% were aware of residential programs and only 7.5% indicated that they were aware of the village based trainings. With regard to how farmers came to know about the programs at KATC, 50% of these indicated that it was through KATC personnel, 32.5 through extension officers, 15% through other farmers and 2.5 through personal inquiry. It is thus, important to note that KATC works in cooperation with extension officers working under the government through the Ministry of Agriculture and Cooperatives. These findings are similar to a study by Aina (1986) in which it was revealed that agricultural extension officers occupied a strategic position in the agricultural production cycle in that they liaised between the farmers and research

scientists and also between farmers and policy makers. However, it is important to note that in this study small-scale farmers depend on other means of accessing agricultural based information apart from extension officers.

In investigating what programmes the small-scale farmers had participated in, it was revealed that 27.5% had participated in the production of organic vegetables and cotton, 25% in biological pest management, 7.5% in agro-forestry, 22.5% in bee-keeping and 17.5% had participated in all the programs. This is presented in table 5 below.

Table 5: Programmes farmers participated in

Programmes	Respondents	Percentage
Production of organic vegetables and cotton	11	27.5
Biological pest control	10	25
Agro-forestry	3	7.5
Bee-keeping	9	22.5
All the programs	7	17.5
Total	40	100

5.3 Impact of programme on small scale farmers

From the responses by small scale farmers, it is evident that generally, they are satisfied with the programs that KATC is running as indicated by 38 (95%) of the respondents. When further probed for what specific programmes or aspects of information they had been provided which they appreciated most, 47.5% indicated organic farming. They acknowledged that knowledge on organic farming had greatly impacted on their farming as they were now able to grow various crops and use organic methods of treating pests without having to spend money they could ill afford on expensive pesticides and other chemicals. Thus organic farming had proved to be cost effective and helped small-scale farmers who had undergone the training program to maximise their production output from their yields thus increasing household food security for their families. This demonstrates that if more small-scale farmers embrace organic farming, it would

substantially contribute to economic development since farmers can produce more food and have surplus to sell.

5.4 Challenges faced in accessing information from KATC

The major challenges that small-scale farmers faced in accessing information from KATC were investigated. One of the major challenges was that of language of instruction in the various short programmes as well as the literature used to disseminate information such as brochures and flyers. As it has already been revealed the highest level of education attained by the respondents in this research was secondary education with some respondents not having been to school at all. Since the instruction in the programmes run by the institute is mostly in English, farmers found it difficult to follow what is taught. In fact 75% of the respondents indicated that they faced this challenge. The other challenge mentioned by both the farmers and staff of KATC is that of distance from the far flung areas where farms are spread to the training institute. Small-scale farmers are thus unable to frequently visit the agricultural training centre to find out latest information about national pricing of commodities and other issues affecting them. For the same reason agricultural extension officers rarely managed to visit their farms, especially that they were very few as well. The officials from KATC confirmed this inadequacy of agricultural officers asserting that there was one (1) agro-extension worker to a thousand (1000) small-scale farmers.

5.5 Ways to improve information dissemination to small scale farmers

Concerning the ways in which KATC should improve on its programmes, 35% of the respondents indicated that it should introduce new programs, 22.5% indicated that it should improve on its existing ones, 25% said it should increase the duration of the courses and 17.5% indicated that it should increase in the number of its trainers. Respondents who proposed the introduction of new programs were those who had already taken part in the already existing programmes. A good number of these farmers had recently switched from conventional farming to organic farming and hence needed more information on the practice.

6. RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

- i. KACT should provide information in local languages so as to reduce the current difficulties in which most agro-literatures are published in English.
- ii. The government should train and deploy more agriculture extension workers to help and disseminate agricultural information especially on organic farming to small-scale farmers.
- iii. Various stakeholders in the agricultural sector must recognize the importance of organic farming by ensuring that adequate market information for organic products is made available to extension officers and eventually small scale farmers.
- iv. The government should enhance national organic agricultural policies in order to make the necessary resources available so that national, regional and international development partners can identify priority areas of support.

7. CONCLUSION

This study has demonstrated that organic farming is a feasible option for small-scale farmers who cannot afford expensive fertilizers and pesticides in order to increase their yields. By engaging in organic farming, the study has shown that small-scale farmers have been able to grow a variety of crops to ensure food security for their households and even spared some produce to sale, thus improving their economic situation. With appropriate national organic agricultural policies in place, more small-scale farmers could be empowered to improve their economic status and thus contribute to the economic development of the country as a whole. It is hoped that if and when the above recommendations are considered by the concerned authorities then information will no longer be a missing link as it currently is.

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