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Promoting Commercialisation of African Indigenous Vegetables through Communication Strategies: lessons from Farm Concern International, Kenya

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Abstract

The study sought to analyse the efficiency of Farm Concern International's Communication strategies in promoting the commercialisation of African Indigenous Vegetables in Lari Sub-County, Kenya. Qualitative and quantitative research designs were adopted for the study and purposive sampling, followed by random sampling used to select 100 farmers from the five villages in Lari Sub County. The data was gathered from the primary source through the use of structured questionnaire for both quantitative and qualitative. The data was then processed and presented by the use of graphs, tables and pie charts and analysed by use of descriptive analysis. The study used two theories, Rational Argumentation Theory propounded by Cragan and Shields (1998) and Trans theoretical Model (TM) by Prochaska, Johnson and Lee (1998). The study established that the rate of commercialisation is currently high, with the majority of farmers earning between sh. 5, 000 to sh. 15, 000 per month. Majority of farmers sold AIVs to Uchumi Supermarket. The findings also indicated that FCI majorly used two forms of Ora-Media, *barazas* and demonstrations, to promote production, consumption and commercialisation of AIVs. However, a bit of Use of projector was also used, but no form of mainstream media or internet and drama was used. The study recommends that NGOs should liaise with financial institutions to train farmers on financial literacy and facilitate them to make savings to enhance production. Also, there is a need for more campaign by NGOs and other gatekeepers like the media, government leaders and local leaders to enhance increased production of AIVs.

Key Terms: Farm Concern International, Communication strategies, African Indigenous Vegetables.

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INTRODUCTION

African indigenous vegetables refer to vegetables grow naturally in a particular locality (Maundu, 1997). More than 45,000 plant species can be found in sub-Saharan Africa, and this includes approximately 1000 species that are consumed as green leafy vegetables. And, according to MacCalla (1994), these usually form an integral part of traditional African diets. Traditional and indigenous, as used in this context, refer to leafy vegetables which have for long been part and parcel of the sub-Saharan African food systems for ages. Indigenous leafy vegetables grow naturally in Sub-Saharan Africa whereas traditional leafy vegetables were brought to Africa more than a century ago and, since they have been in use for long, they have been adopted into the food culture in the continent (Smith, & Eyzaguirre, 2007).

However, AIVs have been one of the diets usually neglected by most people in the society as they are considered as poor man's crop. AIVs are therefore left to be grown and consumed by smallholder farmers in rural areas while majority go for exotic varieties such as kales, spinach and cabbages to supplement their diets with vitamins thus missing the nutritional value that goes with these indigenous vegetables.

LITERATURE REVIEW

Commercialisation of AIVs

Horticultural production (particularly of vegetables) is a major income-earner for smallholder farmers in Kenya. These farmers contribute more than 70 per cent of the output in this sector (McCulloch, & Ota, 2002). This is caused by the relatively higher returns in horticulture comparative to other cash crops. Additionally, this type of farming can be conveniently carried out on small and marginal farms in different climatic conditions (Minot, & Ngigi, 2004). Cabbages, onions, kales (*sukuma wiki*), tomatoes and indigenous vegetables (commonly known as African Leafy Vegetables (ALVs) such as *amaranth) are the most commonly grown vegetable crops smallholder farmers for both commercial and subsistence and purposes* (Omiti, Omolo, & Manyengo, 2004).

In the last 15 years, ALVs have become increasingly essential commercial products in Kenya, finding acceptance in both the informal and formal and markets of Nairobi and its environs. Prior to 2000, ALVs could only be found in the back-streets as well as a few open-air markets. But they have become quite common even in supermarkets since then. The city and its environs also feature grocery shops and retail kiosks that also stock the various types of the ALVs (Irungu et al., 2007; Otieno, Omiti, Nyanamba, & McCullough, 2009; Maundu et al., 1999).

Kiambu district is one of the key peri-urban production zones in Kenya. In 2003, the ALVs sales in Kiambu district increased from less than 31 tonnes a month to well over 600 tonnes a month in 2006. AVRDC (2010) approximates that about 9000 tonnes of ALVs have changed hands in trade in the informal and formal markets in the intervening period from 2008 to 2010 in central Kenya. Commercially, ALVs have gained popularity because of the exponential growth witnessed in their marketing over the last 15 years (Irungu et al., 2007). The growth can be accounted for by the increase in consumer demand for ALVs. The increased demand has resulted in ALVs entering the supermarket chains and other lucrative markets which result in better incomes (FAO 2012).

The International Plant Genetic Resource Institute (IPGRI - now Biodiversity) has been playing a critical role of promoting African Leafy Vegetables (ALVs) in Sub-Saharan Africa (SSA) since 1995 (IPGRI,2004). Nevertheless, more attention has been focused on seeds and neglecting sources of green leafy vegetable (Yadav, & Sehgal, 2004). This neglect has resulted in a greater percentage of the

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African population negatively disposed towards ALVs, leading to low levels of consumption, and a subsequent poor nutrition status (Obel-Lawson, 2006).

AIVs, in spite of their higher nutritional and economic value, have an image problem and have faced a myriad of challenges. Some of them include low awareness of their nutrition potential, perception as poor man's crop among farmers, lack of quality seed, technical production, utilisation packages and poor marketing system among others (Abukutsa-Onyango, 2002). Abukutsa-Onyango (2003) adds that AIVs have been neglected for long by researchers, policymakers and funding agencies. As a result of this neglect, many of these vegetables are facing extinction, yet the communities in the region continue to languish in malnutrition and poverty. The study will, therefore, investigate the FCI's ability to promote AIVs among smallholders' through the NGO's subsidiary role of communication.

Shaheen (2012) points out that most of the NGOs use both verbal and nonverbal methods to convey their messages through community mobilisers, but they find verbal communication more reliable and effective as it is simple and easy to communicate with common people in the mobilisation process. It is on this basis this study is formulated and will look into the impact the DoHoMa project had in Lari Sub County, as one of the areas it was implemented in Kenya by *Farm Concern International.* The indicators of efficient communication strategies used would be an increased production of AIVs, increased financial income and increased rate of consumption at the household level among the smallholder farmers.

METHODOLOGY

The study used both quantitative and qualitative design. Lari Sub-county was purposively selected due to its proximity to the capital city where the huge urban and peri-urban markets are for AIVs as well as other value chains like grains, dairy and horticultural products. It's also one of the sub-counties where the five-year DoHoMa project was implemented. This study's target population was 619 smallholder farmers involved in the DoHoMa Project and produced AIVs in Lari Sub-County. Purposive sampling followed by random sampling were used to select 100 smallholder farmers out of the total 619 engaged in the production of AIVs and under the DoHoMa Project.

This sample constitutes to 16.16% of the target population. Five villages were purposively selected based on where the DoHoMa project was implemented. In each village, 40 houses were identified, and the researcher gave them numbers. He then picked every house that had an even number so as to have 20 houses which gave a sample size of 100 respondents. The data was collected from the primary source through the use of a questionnaire for both qualitative and quantitative research designs. Graphs and other infographics like tables and pie charts were used to present data. To determine the validity reliability and of the interview schedule, 10 smallholder holder farmers under the DoHoMa programme were randomly selected and interviewed by the use of an actual questionnaire which helped to make corrections and changes where possible before the same activity was done on the actual sample.

FINDINGS AND DATA ANALYSIS

Communication Strategies and language(s) used by FCI

This section analyses the communication method(s) used by FCI to promote AIVs, the preferred communication method of the respondent, the language used and the preferred language choice of the interviewee.

Communication method

FCI mostly used *barazas* at 61%, demonstrations 30% and Use of projector 9%. None of the training conducted by the organisation used drama or media programmes, as shown in figure 1 below. *Baraza* is a form of Ora-media and has some advantages over the use of radio as observed by Wangari (2012). Its high participatory nature between the

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communicator and the audience elicits a quick response and necessary action as seen in the production, consumption and commercialisation of AIVs.

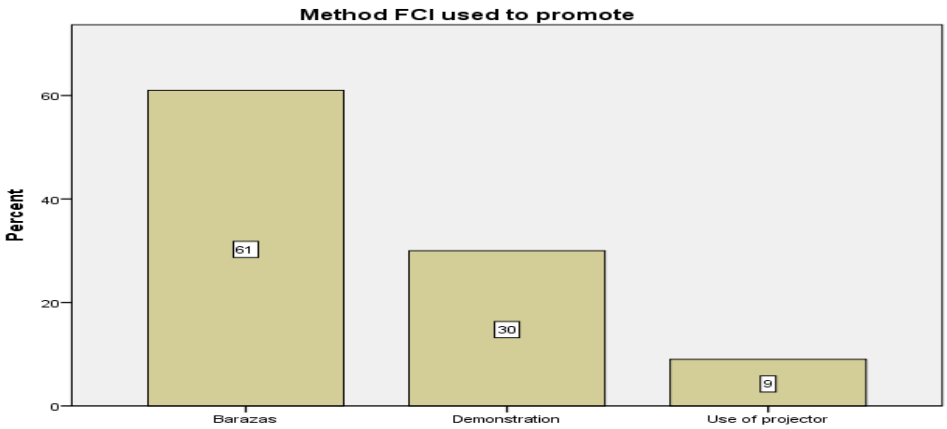

Figure 1: Communication Method Used

Communication method preferred by respondents

Much of practical work than theory. Notably, it is also important to realise that the majority, 63%, had only basic education while 5% had no formal education, and this could have contributed to their choice of method of communication. Only 36% preferred the use of *barazas* while none preferred the Use of projector method, as shown in figure 2. However, majority 64% of the respondents preferred demonstration which they cited was simpler because it entailed

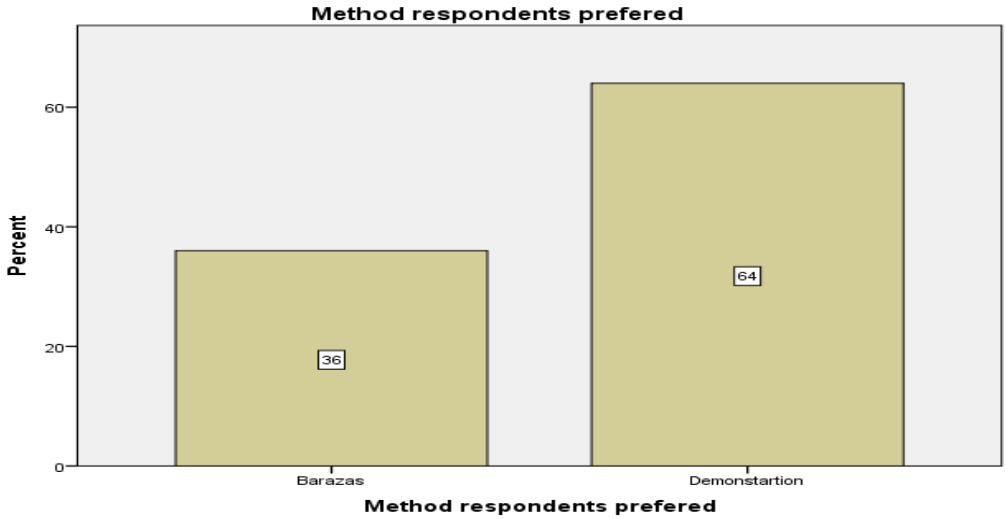

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Figure 2: Communication method preferred by respondents

Language used to promote AIVs

FCI majorly used Kikuyu and Swahili languages, 76% and 24% respectively, to train on AIVs in the *barazas* and demonstrations held in Lari Sub County. There was no *baraza* or demonstration that was conducted in English or other languages, as shown in figure 3 below.

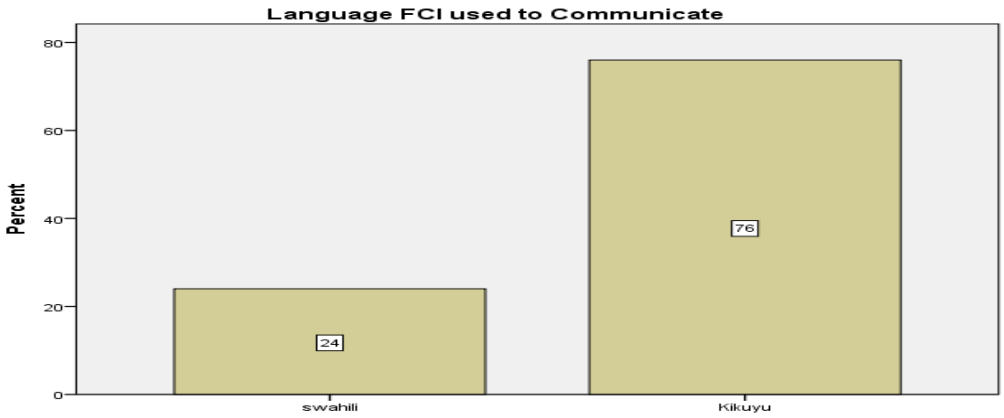

Figure 3: Language used to promote AIVs

Language preferred by respondents

In spite of the use of Kikuyu and Swahili language in promoting AIVs, some people, 18%, preferred the English language while 5% and 77% still preferred Swahili and Kikuyu languages respectively as shown in figure 4 below.

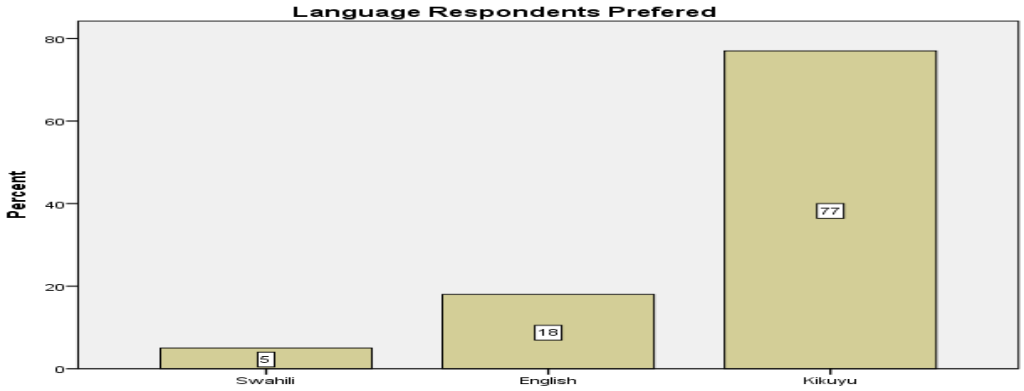

Figure 4: Language preferred by respondents

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Kikuyu thus remains the preferred language of communication in the region because it is the first language of the majority. Those who preferred Swahili and English were relatively educated at secondary or tertiary level.

Rate of AIVs Commercialisation

All the respondents admitted to having been informed of the economic value of AIVs by FCI through various methods of communication.

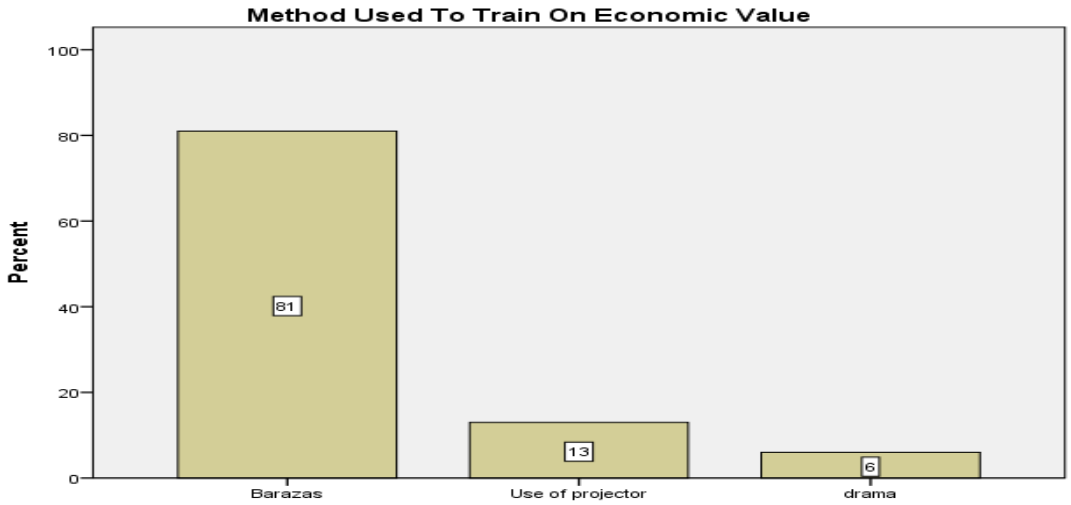

Figure 5: Method used to train on the economic value

Most of the training on the economic value of AIVs were conducted through *barazas,* while the use of drama was rarely used. The use of *barazas* was 81%, Use of projector 13% and drama was 6% while media was not used at all as shown in figure 5 above. Perraton (1978) states that use of *baraza*, as a method of group learning, is more effective than individual learning, use of radio or any other form of communication.

Monthly income

Before FCI implemented the DoHoMa Project in the region, none of the respondents neither grew nor generated income from AIVs. After the training on production and economic value of the crop, the respondents currently earn between Kshs 1,000 to 15,000 per month. On the other hand, those who produce exotic vegetables earn between Kshs 500 to 5000 per month. This shows that farmers who produce AIVs earn more income than those who produce exotic vegetables. Irungu et al. (2007) note that ALVs have gained commercial importance over the past 15 years due to enormous marketing. FAO (2012) indicates the increase in marketing attributed to increased consumer demand for ALVs, which results in the sale of the value chain in supermarkets and better incomes.

Market options provided by FCI

All the respondents interviewed admitted to having been informed on the available markets for AIVs. They include Wangige market, Uchumi Supermarket, Limuru, Kangemi, Soko Mjinga, Muthurwa, Gikomba, Githurai, Korogocho and Mai Mahiu.

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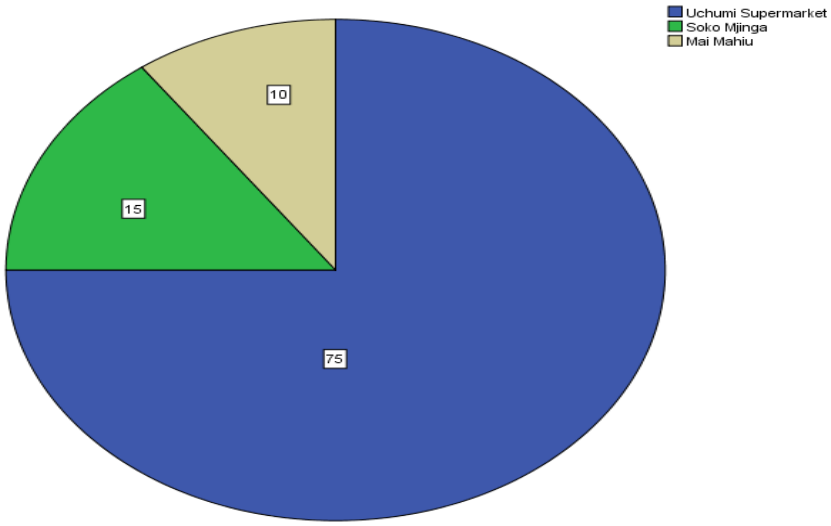

Figure 6: Markets where farmers sell AIVs

Out of the 10 markets provided by FCI, only three were used by respondents to sell AIVs. 75% sold at Uchumi Supermarket, 15% sold at Soko Mjinga while 10% sold at Mai Mahiu market as shown in figure 6 above. Uchumi Supermarket, which is a formal market, takes the largest share of AIVs produced by farmers in the region. Otieno et al. (2009) note how ALVs were found in back-street and open-air markets before the year 2000. Since then, the scholar indicates how the value chain has become a common occurrence in most supermarkets which sell in large quantities.

Irungu et al. (2007) identify how the city and its environs also feature grocery shops and retail kiosks that also stock the various types of ALVs.

Reasons why farmers produce AIVs

All the respondents who were interviewed mostly preferred producing AIVs than exotic vegetables. A majority, 51%, cited high income accrued to AIVs, 20% admitted that only a small piece of land is required for production, 19% admitted that AIVs are easy to produce while 10% cited resistance to pests and diseases as shown in table 1.

Ekesa, Walingo and Abukutsa-Onyango (2009) concur with the findings as ALVs have short production cycles, requires few purchased inputs, thrives in poor soil, ability to resist to pests and diseases, and are acceptable to local tastes. NRC (2006) adds that ALVs grow well in small plots with the limited resources possessed by village families, yet they produce high yields and have strong nutritional value.

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Table 1: Why AIVs are preferred most

	Frequency	Per cent	Cumulative Percent
➢ High income	51	51.0	51.0
➢ Are easy to produce	19	19.0	70.0
➢ Requires a small piece of land	20	20.0	90.0
➢ Are pest and disease resistant	10	10.0	100.0
➢ Total	100	100.0	

Challenges faced in the production and marketing of AIVs

A majority, 57%, of farmers lack piped water for irrigation while 19% pointed out poor roads during rainy seasons and lack of means of transport as shown in figure 7 below. Also, 15% cited pests and diseases as another challenge, 9% stated lack of capital while none faced challenges in marketing or lack of technical know-how in production. It thus shows that farmers in Lari Sub County can produce more if they can be provided with adequate facilities like water, means of transport, capital, effective ways and chemicals to control pests and diseases.

However, Mwaura (2013) only indicates a lack of technical support. Out of the 55 MHH, 67.3 per cent had no access to technical support for ALVs farming, while 32.7 per cent had. Of the 28 FHH, 64.3 per cent had no access to technical support, while the remaining 34.7 per cent had access to technical support. This indicates the extent of AIVs neglect by the Ministry of Agriculture and other responsible stakeholders in ensuring proper and optimum production.

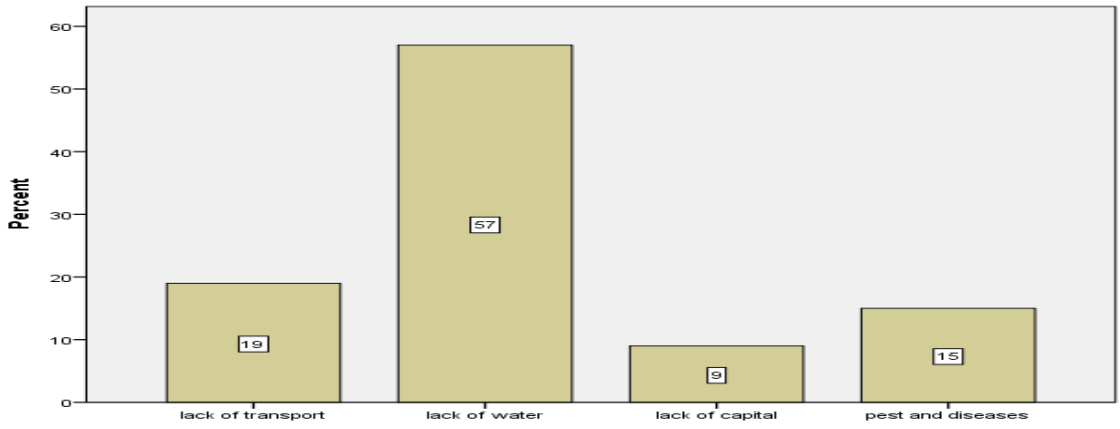

Figure 7: Challenges faced in producing and marketing AIVs

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Project benefits

The respondents interviewed cited various benefits gained from DoHoMa Project which ranged from a reliable source of income, improved health, savings, stable and reliable market, improved land cultivation, bank services, capacity building, improved diet and improved community welfare through the ability to contribute to various joint activities. Some of these findings concur with DFID and R4D (2010) that ALVs can support urban, rural, and peri-urban populations in terms of subsistence and income generation, without requiring huge capital investments.

CONCLUSION

Production of AIVs has numerous advantages as compared to exotic vegetables ranging from the use of small pieces of land, easy and cheap production, and resistance to drought, market availability to high income. However, the mentality that AIVs are food for the poor is still etched in people's mind resulting in huge production of exotic vegetables. Also, the proceeds earned from the sale of AIVs is still minimal in spite of the huge market potential for AIVs in Lari Sub County. The markets include both formal and informal, but the majority prefer selling to Uchumi Supermarket due to regular supply and income, which enable them budget. The following recommendations were drawn from the research findings. First, Agriculture based NGOs need to incorporate other means of communications like mainstream media, posters, internet and billboards to implement projects. Second, community-Based Organisations need to liaise with financial institutions to train farmers on financial literacy so as to increase savings and facilitate them to increase the production of AIVs.

References

Abukutsa-Onyango, M. O. (2002, August). Market survey on African indigenous vegetables in western Kenya. In *Proceedings of the Second Horticultural Seminar on Sustainable Horticultural Production in the Tropics.* Jomo Kenyatta University of Agriculture and Technology (JKUAT) (pp. 39-46).

Abukutsa-Onyango, M. O. (2003). Unexploited potential of Indigenous African Vegetables in Western Kenya. *Maseno Journal of Education Arts and Science, 4*(1), 103-122.

Cerqueira, M. T., Casanueva, E., Ferrer, A. M., Fontanot, G., Chávez, A., & Flores, R. (1979). A comparison of mass media techniques and a direct method for nutrition education in rural Mexico. *Journal of Nutrition Education, 11*(3), 133-137.

Cragan, J. F., & Shields, D. C. (1998). Understanding communication theory: The communicative forces for human action. St. Louis: University of Missouri.

Daniel, J. A., & Marquis, C. (1983). Interaction and independence: *Distance education: International perspective* (pp. 339-359), Beckenham, Kent: Croom Helm.

DFID, & R4D. (2010). *Opportunities and constraints in the subsistence production and marketing of indigenous vegetables in East and Central Africa.* R4D Project URL: http://www.dfid.gov.uk/R4D/Project/1702/Default.aspx.

Ekesa, B. N., Walingo, M. K., & Onyango, M. O. (2009). Accessibility to and consumption of indigenous vegetables and fruits by rural households in Matungu division, western Kenya. *African Journal of Food, Agriculture, Nutrition and Development*, 9(8).

FAO. (2012). *Women and sustainable food security: Towards sustainable food security*. FAO Rome, Italy. Retrieved on 13 August 2015 from http://www.freefullpdf.com

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Farm Concern International (2013). *Annual Report.* A Decade of Innovations & Impact.

Farm Concern International (2013). *Programme Briefs*. Celebrating 10 Years.

Higgs, J., & Mbithi, P. (Eds.). (1977). *Learning and living: Education for rural families in developing countries*. Rome: FAO. Retrieved on 13th August 2015 from http://www.freefullpdf.com

IPGRI. (2004). With time running out, scientists attempt a rescue of African vegetable crops. *International Plant Genetic Resource Institute*, Rome, Italy. Retrieved on 04 March 2015 from http://www.futureharvest.org

Irungu, C., Mburu, J., Maundu, P., Grum, M., & Hoescle-Zeledon, I. (2007). Analysis of markets for African leafy vegetables within Nairobi and its environs and implications for on-farm conservation of biodiversity. *A Consultancy Report for Global Facilitation Unit for Underutilised Species*, Rome, Italy. Retrieved August 14th, 2015 from http://www.freefullpdf.com

Kerr, D. (1995). *African popular theatre: From the pre-colonial times to the present*. Nairobi: EAEP.

Maundu, P. M. (1997). The status of traditional vegetable utilisation in Kenya. *Proceedings of the IPGRI International workshop on Genetic Resources of Traditional Vegetables in Africa, Conservation and Use.* ICRAF-HQ, Nairobi: IPGRI.

MacCalla, A. F. (1994). *Agriculture and Food Need to 2025: Why we should be concerned.* Washington, DC: CGIAR.

Maundu, P. M., Njiro E. I., Chweya J. A., Imungi, J. K., & Seme E. N. (1999). The Kenyan case study. In: Chweya J. A., & Eyzaguirre P. B. (Eds.). *The Biodiversity of Traditional Leafy Vegetables, Rome, IPGRI,* (pp. 51-84). Retrieved on 14th August 2015 from http://www.freefullpdf.com

McCulloch, N., & Ota, M. (2002). Export horticulture and poverty in Kenya. Institute of Development Studies, University of Sussex, Brighton. *Working Paper No. 174*. Retrieved on 13th August 2015 from http://www.freefullpdf.com

Minot, N., & Ngigi, M. (2004). Are horticultural exports a replicable success story? Evidence from Kenya and Côte d'Ivoire. *EPTD Discussion Paper 120 IFPRI.* Washington. Retrieved on 14th August 2015 from http://www.freefullpdf.com

Mumma, O. (1995). *Drama and theatre communication in development*: *Experiences in Western Kenya.* Nairobi.

Mwaura, S. N., Muluvi, A.S. & Mathenge, M. K. (2013). African leafy vegetables and household wellbeing in Kenya: A disaggregation by gender. *2013 Fourth International Conference*, September 22-25, 2013, Hammamet, Tunisia 161641, African Association of Agricultural Economists (AAAE).

National Research Council (NRC). (2006). *Lost Crops of Africa: Volume II: Vegetables.* Washington, DC: The National Academies Press.

Nawabi, K. (2005). *Afghan NGOs Communication Systems: Cooperation for Peace and Unity* (CPAU), (p.5). Afghanistan.

Obel-Lawson, B. (2006). *The efficacy of awareness campaigns by the African Leafy Vegetables Project on nutrition behaviour change among the Kenyan urban population*: The case of Nairobi (Unpublished MSc thesis), Nairobi University: Kenya.

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Omiti J. M., Omolo J. O., & Manyengo J. U. (2004). Policy constraints in vegetable marketing in Kenya. Institute of Policy Analysis and Research (IPAR), Nairobi. *Discussion Paper No. 061/2004*. Retrieved on 14th August 2015 from http://www.freefullpdf.com

Onyango, M.O.A. (2003). Unexploited potential of Indigenous African Vegetables in Western Kenya. *Maseno Journal of Education Arts and Science, 4*(1), 103-122.

Otieno D.J., Omiti, J., Nyanamba T. and McCullough E., 2009. Market participation by vegetable farmers in Kenya: A comparison of rural and peri-urban areas. African Journal of Agricultural Research Vol. 4 (5), pp. 451-460. Retrieved on 14th August 2015 from http://www.freefullpdf.com

Perraton, H. (1978). Radio broadcasting and public education in Africa. *Educational Media International*, 4, 4-10.

Prochaska, J., Johnson, S., & Lee, P. (1998). *The transtheoretical model of behaviour change*. In S. Schumaker, E. Schron, J. Ockene, & W. McBee (Eds.). *The Handbook of Health Behaviour Change* (2nd Ed.). New York, NY: Springer.

Shaheen, A. (2012). *The role of NGO's communication strategies in community mobilisation* (Doctoral dissertation, University of Management and Technology).

Smith, I. F., & Eyzaguirre, P. (2007). African leafy vegetables: Their role in the World Health Organisation's Global Fruit and Vegetable Initiative. *African Journal of Food Agriculture Nutrition and Development* 7, 1684-5374.

Sweeney, W. O., & Parlato, M. B. (1982). *Using radio: For primary health care.* Washington, D.C.: American Public Health Association.

Thiong'o, N. (1996). *Decolonising the mind: The politics of language in African Literature*. Nairobi: EAEP.

Wangari, W. (2012). *Journal of communication and culture*, 3(3), 30.

Yadav, S. K., & Sehgal, S. (2004). Effect of domestic processing and cooking on selected antinutrient contents of some green leafy vegetables. *Plant Foods for Human Nutrition* 58, 1-11.