

SOCIAL PERSPECTIVE OF DAIRY GOATS FARMING AS A TOOL TO MITIGATE IMPACT OF POOR URBAN HIV/AIDS AFFECTED HOUSEHOLDS IN NAKURU MUNICIPALITY, KENYA

Muriithi, G.M¹, M .Wokabi¹, K. Ngetich¹ and N. Karanja²

Kenya Agricultural Research Institute-Lanet, P. Box 3840, Nakuru

ABSTRACT

Apart from medical treatment a HIV/AIDS individual should have an access to quality food. Poor urban HIV/AIDS affected households in Nakuru Municipality are living in limited resource settings in the informal settlement and frequently experience shortage of quality food, inadequate income, and unsecured livelihood and others are on antiretroviral drugs. The study objective was to examine the relationship between sociological factors and uptake (acceptance) of dairy goat farming as a tool to mitigate impact of HIV/AIDS on the poor urban HIV/AIDS affected households. A combination of cross sectional survey and in-depth case studies research designs were employed. Stratified random sampling was used to draw a sample size of 62 households and 6 households for survey and in-depth case studies respectively. Results from qualitative data helped in the explanation on complex social phenomenon in the quantitative data from the survey. Although majority (50%) of the sixty two households respondents exhibited a high uptake level were kikuyu ethnic community, there was not significant ($P>0.05$) relationship between the ethnic affiliation of the household respondent and uptake of dairy goat farming. Majority (81%) of the house respondents their religious belief allowed them to practice dairy goat farming. Among the household respondents interviewed majority (97%) had no cultural barriers in dairy goats farming and their culture allow drinking of goats' milk. The relationship was reported to be significant ($P<0.05$) relationship between culture and the uptake levels of the intervention. Households which had a previous experience in chicken farming had significant relationship with uptake of the

intervention unlike those who had experience in dairy cow Farming. The study contributed knowledge to urban sociology, urban agriculture and to the current debate of integrating nutritional support clinical for people living with aids (PLWA).

Key words: Intervention, sociological, uptake, dairy goat, household

INTRODUCTION

It appears that HIV/AIDS prevalence in sub-Saharan Africa (SSA) is linked to the inability of part of the population to keep up an unsustainable livelihood (Verheijen *et al.*, 2007). In SSA people living with HIV/AIDS live in resource limited settings like the informal urban slums and are often unable to follow optimal foods and nutritional recommendations for antiretroviral therapy because of lack of food required (Castleman *et al.*, 2007). Poverty and food insecurity are key drivers to HIV/AIDS pandemic in SSA, it follows that this need to be addressed in order to bring the pandemic under control and mitigate its devastating impacts (Verjvein *et al.*, 2007). However, SSA is hosting the highest number of HIV/AIDS affected persons and they are frequently coupled by food shortage (Swindale, 2004).

Kenya is one of the countries worst affected by the HIV/AIDS Pandemic (National Aids Control Council, 2001). According to Ministry of health annual report (2009) indicates that Nakuru municipality hosts 22,564 people living with aids (PLWA). Most of them are poor and living in the urban informal settlement (slums) and unable to link nutritional support to aids treatment. At community level, most of them have come together to seek emotional and financial support through formation of support groups. Nakuru Constituency Aids Control Committee report (2009) show that there are ten support groups in Nakuru Municipality and 60% are on urban agriculture where they grow crops and keep livestock whilst 40% have organized merry go round (Micro finance activity). This

¹ Egerton University, Dept of Peace, Security and Social Studies P O. Box 536 Njoro, ²Urban Harvest the CGIAR System-wide Initiative on Urban and Peri-urban Agriculture Convened by International Potato Centre, Nairobi Office

involves each member contributing specified amount money which has been agreed upon and give one person per turn. Each member acts as collateral to each other. These types of interventions are practiced to mitigate the impact of HIV/AIDS. Agriculture has been used widely as intervention in rural and urban settlings in many countries in the world as a positive coping mechanism among the HIV/AIDS affected households.

Peacock (1996) argues that dairy goat is a simple and cheap micro-livestock enterprise. It has good returns. Unlike a cow it requires less feed, labour and small area to produce milk and meat. The farmer can dispose it for immediate cash need. He proceeds further and argues that, goats' milk is more nutritive with valuable source of protein (including essential amino acids), fat, calcium, iron, phosphorous, and vitamins (including the important vitamin A). With proper milking and handling practices, goats' milk can be a highly nutritious food than cow milk. It is especially valuable for growing children, old and sick. The small size of the fat globules in goat's milk makes it easier to digest goats' milk than cow's milk. Some children who are unable to digest cow's milk can happily drink goat's milk and it is recommended for the sick and the old. Peacock's arguments on the cheapness in production of dairy goat turned to be an easy option for poor urban HIV/AIDS affected households, since they are living in limited resource settings. At the same time they require less labour intensive agricultural intervention which is compatible to their health status. This was confirmed by the current study findings, where majority of the poor urban HIV/AIDS affected households exhibited a high level of uptake of dairy goat an agricultural intervention. Majority of the households interviewed embraced the two interventions, dairy goat and vegetable growing never sourced labour beyond self.

In 2006, collaborators in the sustainable environment and health through urban agriculture (SETHUA) project assessed the health, food, and nutrition needs of poor urban HIV/AIDS affected household in Nakuru Municipality. They implemented an urban dairy goat farming project with eight HIV/AIDS households through a support group to achieve improved food, health, nutrition and livelihood.

METHODOLOGY

A combination of cross sectional survey and in-depth case studies research designs were employed. This was to generate quantitative and qualitative data respectively. The former used a sample size of 62 households stratified random sampling and 6 households through non-probability sampling where purposive was employed for the later. These samples were drawn from poor urban HIV/AIDS affected households who were members of a support group in Nakuru Municipality calling itself *Badili Mawazo* (BM) and the members were people living with aids (PLWA)

Interview schedules and guides tools were used for data collection in the survey and in-depth case studies respectively. For the later; interviews were tape-recorded and transcribed into transcripts which assisted the researcher in compiling individual narratives. This agrees with Mack *et al.*, (2005) states that in qualitative research the investigator capture respondents' response through tape-recording. For the survey, data collected was subjected to computer software Statistic Package for Social Scientists (SPSS) version 17 for descriptive and inferential statistics. According to Neuman 2006 Sociologist have to ensure that confidential information is protected, for the current study the researcher sought out oral consent from the respondent before administration of the interview.

RESULTS

Ethnic and religious affiliation for the household respondents

This sub-section presents results for ethnic and religious affiliations and their relationship to uptake (acceptance) of the intervention.

Table I above shows composition of four ethnic groups in the urban poor population affected by HIV/AIDS in the study area. The majority (40%) were Luo followed by (34%) Kikuyu. Third position in composition was 11% held by luyha. Fourth was held by Kalenjin at 8% and the least were Kisii at 7%.

TABLE I- ETHNIC AFFILIATIONS OF THE HOUSEHOLD RESPONDENTS

	Frequency	Percent
Kikuyu	21	34
Luhya	7	11
Luo	25	40
Kisii	4	7
Kalenjin	5	8
Total	62	100.

Source: Household Survey data (2009)

TABLE II-THE RELATIONSHIP BETWEEN ETHNIC AFFILIATION OF THE RESPONDENT AND UPTAKE LEVEL

Rate of uptake level	Ethnic Community%				
	Kikuyu	Luhya	Luo	Kisii	Kalenjin
High	50	6	25	6	13
Medium	33	10	45	8	5
Low	0	33	50	0	17
Total(N)	21	7	25	4	5

$\chi^2 = 9.435$, NS, $P > 0.05$

Source: Household Survey data (2009)

between the ethnic affiliation and uptake of dairy goat farming as an intervention to mitigate the impact of HIV/AIDS in the population of the study.

Figure 1 shows that majority (81%) of the respondents expressed their religious believes allows them to practice dairy goat farming.

TABLE III - CULTURE OF THE HOUSEHOLD RESPONDENTS

Cultural norm	Frequency	Percent
Culture allows dairy goat keeping	62	100
Culture allows handling of dairy goat milk and products	62	100
Culture allows drinking of goats' milk	62	100

Source: Household Survey data (2009)

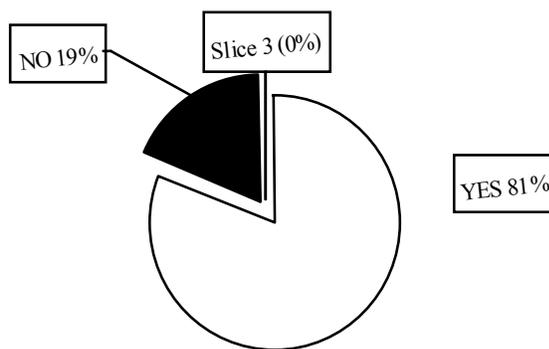


Figure 1: Household respondent's religious belief on acceptance status on dairy goat farming. Source: Household Survey data (2009)

Table 2 above indicates that majority (50%) of the households exhibited a high uptake (acceptance) level belonged to Kikuyu ethnic group. This implied that kikuyu are considerably more likely to take up the intervention than those others. The χ^2 value is 9.435 with eight degrees of freedom and significance level of 0.307. For that case, it is indicating there is no significant relationship

Table 3 above showed that (100%) of the household respondents reported that their cultural norms allow dairy goat farming, handling of goats milk and its products and drinking of the milk. This implies that the diversified culture of the different ethnic groups participating in the urban agriculture intervention

project did not barrier them from embracing the intervention.

Background experience of chicken and dairy cows farming

Households which had a background of keeping dairy cows showed a correlation (r) of -0.310, P<0.05) had a significant negative effect on the uptake of dairy goat farming unlike of the chicken who had (r=0.210, P<0.05) a significant positive effect.

Impact of Dairy goat farming on household income

The table 4 below shows that majority 81% of the respondents increased their household income since they embraced dairy goat intervention to mitigate the effects of HIV/AIDS on their households.

TABLE IV- STATUS OF HOUSEHOLD INCOME SINCE JOINING THE URBAN DAIRY GOAT INTERVENTION PROJECT

Status of Household income	Frequency	Percent
Increased	50	81
Remained stagnant	12	19
Total	62	100

Source: Household Survey data (2009)

The research findings figure2 demonstrated that, majority (63%) of the participants expressed to have taken up the intervention highly. The χ^2 value is 10.587 with two degrees of freedom and the significance level is 0.005. Indicated that, there is a relationship between the two variables and is significant at P<0.05.

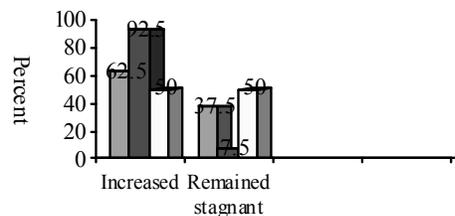
DISCUSSION

Ethnicity affiliation, Religion and Culture of respondents

The study revealed that, there were four ethnic groups represented in the urban poor population affected by HIV/AIDS in the study area. Majority were Luos followed by Kikuyu community. The findings also indicated that the *Badili Mawazo* support group has multi-ethnic composition. Majority (50%) of the household respondents exhibited a high uptake level on dairy goat farming belonged to Kikuyu ethnic community. This implied that kikuyu are considerably more likely to take up the intervention than those others although there was no significant relationship between ethnic affiliations of the households and uptake of dairy goat farming.

In my life history, our culture as Luo ethnic community, we do not drink goats' milk, and dairy goats are taken as livestock for women. Some vegetables are for specific gender like the "saget" and "mito" is for women, but despite of this I

■ High uptake level ■ Medium uptake level □ Low uptake level



Household income status.
Source: Household Survey data (2009)

am now drinking goat milk for my health since it is a requirement from nutritionist as well I grow and eat those vegetables based on what we had been taught in order to live longer with the HIV virus, said James¹ of 51 years old, belonged to Lou ethnic community, has been living with the virus for the last six years.

Based on the study findings, it implies that religious belief of most of the household respondents did not prevent them accepting the dairy goat farming as an intervention to mitigate the impact of HIV/AIDS.

The study showed that, majority of the respondents' culture allowed the keeping of dairy goats. Further, the results suggested that cultural factors were not a barrier to the uptake of dairy goat farming among the HIV/AIDS affected households in the study area. Most certainly; the culture of the five communities involved in this study did not inhibit them from taking up the innovations/interventions because of the urban setting. The HIV/AIDS context and nutritionist persuaded those poor urban HIV/AIDS affected households to feed on dairy goat milk and a variety of vegetables in order to enhance the clinical treatment of these household members who were infected with HIV/AIDS, since some were on antiretroviral drugs.

The findings of this study corroborates with Byron *et al.*, 2006 findings where she found that interventions aimed at strengthening the nutrition security of PLWA who are on antiretroviral (ARV) treatment provide an important source of food support and plays an important role in the emotional well-beingness of clients by lowering the stress caused by insufficient access to food.

The current study findings demonstrated that, there is a positive significant relationship between the dairy goat farming as an intervention and uptake levels of the intervention. Household respondents who expressed to have wished to continue keeping dairy goat by their own tend to have taken up this particular intervention highly

Household respondent experience in chicken and dairy cow farming

Most of the households which had previous experience in chicken farming embraced the dairy goat farming highly. This is probably because practicing chicken farming in small magnitude requires lesser inputs/resources unlike dairy cow farming especially so in urban setting. Those who had experience in dairy cow farming demonstrated

negative relationship with uptake of dairy goat. Most probably, they had negative perception to take up dairy goat farming when they assess their scarce resources and dairy cow farming require more inputs that they cannot afford.

Contribution of dairy goat farming to the household income

The study found that, most of the household respondents reported to have increased their household income since they took up dairy goat farming. The findings further revealed that, there is a significant relationship between the impact of income derived from the dairy goat and level of uptake

RECOMMENDATION

Based on the current study findings, especially in the context of urban setting, diversified culture and multi-ethnicity, the poor urban HIV/AIDS affected households can address nutrition, health, food insecurity and unsustainable livelihood through dairy goats farming.

ACKNOWLEDGMENT

I wish to acknowledge the two supervisors Dr. Wokabi and Dr. Ngetich in my Masters programme for the skill they have impacted to me on social science research. Also my thanks to Dr. Mukisira director KARI for granting me study leave and Dr. Muhuyi, the Centre director for encouragement. Last but not least Professor Nancy Karaja Regional Coordinator Urban Harvest the CGIAR System-wide Initiative on Urban and Peri-urban Agriculture Convened by International Potato Centre, Nairobi Office for the research funds.

REFERENCE

- [1] Castleman, T. Seumo-Fosso, E. & Cogill, B. (2003). Food and Nutrition Implications of Antiretroviral Therapy in Resource Limited Settings. Food and Nutrition Technical Assistance Academy for Education Development, Kenya. Paper presented at the XV11 international AIDS conference, Mexico City
- [2] Byron, E., Gillespie, S. & Nangami, M. (2006). Integrating Nutrition Security with Treatment of People Living with HIV: Lessons being Learned in Kenya, International Food Policy Research Institute Report, Washington DC. Retrieved March 25 2011 from <http://www.ifpri.org/renewal>
- [3] Mack, N., Woodsong, C., Macqueen, K.M., Guest, G., & Namey, E. (2005). Qualitative Research

- Methods: A Data Collection Field Guide. USA, Family Health International Press.
- [4] Ministry of Health, (2009). Nakuru District Aids and Sexual Transmitted Diseases Annual Report. Nakuru, NDASCO office.
- [5] National Aids Control Council, (2001). United Nations General Assembly Special Session Report for Kenya, Nairobi, Government Printing Press.
- [6] National Constituency Aids Control Committee, (2009). Nakuru town Constituency Aids Control Committee Annual report, Nakuru CACC Office
- [7] Neuman, W.L. (2006). *Social Research Methods: Qualitative and Quantitative Approaches*, 6th ed., United States, Pearson Education, Inc.
- [8] Peacock, C. (1996). Improving Goat Production in Tropics, a Manual for Development Workers. *UK and Ireland, an Oxfam/Farm-Africa Publication Press.*
- [9] Swindale, A. (2004). Assessing the Potential for Food Aid Interventions in High HIV Prevalence Contexts: HIV and Food Aid. *Entebbe, Uganda: Paper presented at Assessment for Regional Programs and Resources Integration Workshop, Washington DC. Retrieved July 27, 2010 from http://www.new.paho.org/disasters/index.php?option=com_docman&task.*
- [10] Verheijen, J., Minde, I. (2007). *Agricultural Innovations: A Potential Tool to HIV Mitigation*, Journal of SAT Agricultural Research (5).1-11.