

AN ANALYSIS OF THE IMPACT OF
IDRC FUNDED RESEARCH PROJECTS
ON URBAN AGRICULTURE IN UGANDA

BY

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INTRODUCTION

This paper analyses the areas of impact attributable to International Development Research Centre (IDRC) funded research projects on urban agriculture in Uganda. The two research projects were done in Kampala City.

Kampala doubles as a district and capital city of Uganda. With a population of 774,241 (1991 census) and covering an area of approximately 201 km², Kampala inhabits a gross density of 39 persons per hectare. At a population growth rate of 5.7%, the district population is expected to double by the year 2000, resulting in an estimated total population of 1.5 million people.

Kampala is characterised by a hills and valley topography giving rise to step slopes and swamp

filled wide valleys. Rainfall averages 50 mm per month. The varied vegetation is influenced by the existing relief and rainfall patterns ranging between 1500-2000 mm per year, distributed in two peaks of March-May and August to September - November/December separated by two short dry spells. This pattern provides a varied habitat for both flora and fauna. While most of the district may be termed rural, the more central locations have shed their natural vegetation and given way to urban based economic activities.

Land and Urban Agriculture in Kampala

Land tenure constitutes the institutional arrangements (economic, social and political) through which individuals and groups gain access to land. Kampala exhibits a multiplicity of land tenure systems. These include: Mailo, freehold, leasehold and customary tenure which have evolved mainly with the British influence during colonialism.

Farming in Kampala is carried out on all the above land tenure categories. However, categories of land access for agriculture do not correspond directly to categories of land tenure in Kampala. They vary from formal, legal occupancy to a range of informal and technically illegal forms of occupancy. Land used for agriculture may be accessed through owning (titled or leasehold) "tenancy at sufferance", renting, borrowing or squatting.

Urban Agriculture research Projects in Uganda

International Development Research Centre (IDRC) has supported one research project and a seminar on urban agriculture in Kampala City, Uganda.

The research was carried out between 1988 and 1989 by Daniel Maxwell and Samuel Zziwa. The study resulted in a publication titled *Urban Farming in Africa: The case of Kampala, Uganda*. The purpose of the study was to learn about the practice of agricultural production within Kampala.

Data collection included in-depth case study interviews with men and women involved in crop and or livestock production for commercial or subsistence, hired agricultural labourers, and non producing households. A survey was also conducted among 150 producer households. Key informant interviews were conducted with urban officials and local elected authorities. Relevant legal documents were also reviewed. The study resulted into two publications (Maxwell and Zziwa, 1992 and 1993).

Results of the study by Maxwell and Zziwa (1992) indicate that 36% of all households in Kampala were engaged in some sort of agricultural production in the city with women largely carrying out the activities. The majority of the respondents (69.3%) were found to be subsistence agricultural producers i.e. production was for direct household consumption. Only 7.3% of the respondents were engaged in commercial production, and the remaining 23.3% produced primarily for household consumption but also sold a significant amount of the produce to supplement income.

Data collection methods included a two round Survey among 348 randomly selected households (121 farming households and 227 non- farming households), and Household Case Studies of 44 households selected according to farming status, reasons for farming, land tenure of the area, household composition, income level, age and education of adult members, employment, and means of access to land for farming . Other methods used were Focus Group Discussions in each of the enumeration areas and other parts of the city , and key informant interviews (78 in number) conducted with a variety of individuals on a broad range of topics related to urban agriculture. These individuals included a wide range of stakeholders such as farmers, non-farmers, urban planners, nutritionists, city council authorities and local council leaders at various levels. A search for documents about the legal status of urban agriculture was unsuccessful but interviews with relevant officials plus a review of broaden legislation on urban administration and land management provided the information.

The study found out that just over one third of the households (34.8%) in the sample had someone engaged in farming. Four major categories of household engagement in urban agriculture were identified:

- * urban agriculture as a commercial activity;
- * urban agriculture as a household food self-sufficiency measure;
- * urban agriculture as a measure of food security;
- * urban agriculture practiced because no other means of daily survival are available to the household.

Table 2: Farming Category by income group.

Household Category ^a	Income Group ^b				Total
	VL	L	LM	UM/H	
Comm	0	0	3	0	3
SS	0	5	0	2	7
MFS	11	62	19	6	98
NOM	9	4	0	0	13
N/F	35	148	31	13	227
Total	55	219	53	21	348

- a Comm = Commercial
- SS = Self - sufficiency
- MFS = Measure of food security
- NOM = No-other-means
- N/F = Non- farming (Household not engaged in urban agriculture)

b VL = Very low
 L = Low
 LM = Lower Middle
 UM/H = Upper middle/ High.

Source: Maxwell (1995)

Access to food was reported as the most prevalent reason for farming by almost all non-commercial farming respondents, and the majority of agricultural activities were carried out by women. The majority of the farmers did so for some measure of food security. Income from urban farming was mostly in the form of subsistence or income-in-kind, though in some cases, urban farming could be an important source of cash income as well.

Assessing the means of access to land for farming was among the goals of the study. Inquiries into the land tenure systems and occupancy rights revealed that there was a confusing array of tenure and occupancy rights in contemporary Kampala. The inquiries revealed that land under virtually all combinations of tenure and occupancy rights was being farmed in Kampala but the majority of farmers' parcels had been accessed through sub-division, borrowing, "squatting" or the informal purchase of use rights.

Access to land was the major problem faced by farmers. Next on the list of problems was security of tenure to land due to evictions for development. Harassment by authorities was not the biggest problem faced by farmers.

Another aspect which the study analysed was the impact of urban farming on the household food security and nutrition status of children. As earlier said it was found out that the largest group of farmers in the city did so for some measure of food security. But the relationship between farming and improvements in either nutrition status or food security was strongest among low and very low income groups.

Table 3: Height for Age by Income Group and Farming
 (round I: unadjusted HAZ. confirmed birth dates only)

	Income Groupa		Farming		Diff	T-test	P-Value
	Non-	Farming	n	HAZb N			
Means	n	HAZb n	HAZb N				
VL	29	-0.561 26	-1.918 55	1.357	0.001	-1.202	
L	71	-0.468 100	-0.900 171	0.432	0.010	-0.721	
LM	21	-0.161 23	-0.727 44	0.565	0.079	-0.457	
UM/H	7	0.549 16	0.962 23	-0.413	0.548	-0.836	
GROUP MEANS		128	-0.383 165	-0.856	0.473	0.002	-0.650

ANOVA	F = 1,980 p= 0. 119 df=3	F= 20.697 p<0.001 df=3	F= 15.692 p<0.001 df=3
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aVL = Very low

L = Low

LM = Lower Middle

UMH = Upper Middle and High

bHAZ refers to Height for Age Z- scores (standard deviations above or below a reference median)

source: Maxwell (1995).

As table 3 indicates, bivariate analysis of nutrition status indicates that children in farming households had significantly lower levels of stunting 2 (low-height for-age), particularly in the two-lowest income groups during both rounds of the survey.

Further investigation of the level of malnutrition by comparing actual members of malnourished children among farming and non farming households in all income groups was done. Results of this analysis of data from both rounds showed a statistically significant difference in rates of stunting between farming and non farming households in the lowest income group and for the entire sample.

On the whole, the study found a clear relationship between urban farming and nutritional status, particularly more long- term measure of nutritional status.

The two research activities were carried out under the auspices of Makerere Institute of Social Research (MISR), Makerere University.

AREAS OF IMPACT BY THE RESEARCH PROJECTS.

1. Human Resource Development :

A team of nine people(7 women and two men) including the principal researcher worked on the project. One full time research assistant and seven enumerators were recruited and trained in general interviewing principles (although all had previous survey interviewing experience), in anthropometric measurement of children and in estimating land area using basic geometric principles and pacing methods. A day - long training and practice in anthropometric measurement was provided through the child nutrition clinic at Mulago Hospital.

After the data collection exercise, the research assistant was trained by the researcher in elementary Epi- information computer package and was therefore able to assist in data entry and cleaning.

2. Institutional capacity strengthening - Literature and Dissemination

One of the Cities Feeding People (CFP) programme areas of impact in relation to the research

projects mentioned above is institutional capacity strengthening. A new research area was opened at MISR and this availed the Institute, other institutions and individuals with literature that resulted from the research activities.

Results of the preliminary study were disseminated to MISR researchers and other academicians in the University during a MISR research seminar where the proposal for the main study of 1995 was also presented for discussion.

Dissemination of findings of the main study was also done. On completion of the main study, the findings were disseminated amongst residents of each of the enumeration areas where the survey was conducted. This was done during one of the monthly general Local Council (village) meetings. The residents expressed their appreciation for the researchers' concern about their plight and asked them (the researchers) to act as one of their voices on the issue of prohibition of urban agriculture by Kampala City Council (KCC) authorities.

Another significant forum where the study findings were disseminated and discussed was a one day seminar organised by MISR and National Agricultural Research Organisation (NARO) with financial support from IDRC. About 100 people attended the seminar at National Conference Centre. Among the participants were various members of the research community, policy makers from both KCC and a number of Government Ministries including Lands, Housing and Urban Development (MLHUD), Local Government (MOLG), Agriculture, Animal Industry and Fisheries (MAAF) and Health (MoH), NGOs and International Organisations, Kampala Political Leaders, Local Council executives in the areas where the research had been carried out, and people who had participated in the research itself including respondents. Among the issues discussed were implications of the study for the understanding of urban agriculture and how existing policies attack it and the kind of information needed for policy formulation.

3. Local Partnership with other Institutions

Another area of impact by the research projects is creation of local partnerships with other institutions or organisations. The preliminary study was carried out together with an agro-economist in the faculty of Agriculture, Makerere University. The collaboration was not at institutional but individual level. The main study was largely an academic piece, so it did not involve other individuals or institutions apart from MISR which hosted the research project. However, relevant institutions and persons were consulted on a number of issues, pertaining to the study. For example, the Child Nutrition Unit of Mulago Hospital which is the main referral hospital in the country was approached to teach the field research team basic child nutrition and the right methods of gathering anthropometric data which was needed to assess the relationship between farming and child nutrition. The Nutrition unit and Child Health and Development Centre (CHDC) of Makerere University Medical School also availed the research team with the measuring boards and the weighing equipment. Nutrition specialists in both places became interested in the study and were eager to know the nutrition status of children in the study sample.

There was close collaboration with the Kampala Urban Study (KUS) group in Kampala City

Council which was conducting several studies, that were to provide information to be used in the new city's structure plan. The KUS group was part of the World Bank Funded First Urban Project. Although the group had utilized information of the preliminary study on urban agriculture to show that the practice was productive, necessary and inevitable, the group felt that the information from the main study would shed more light on what the situation was since 1988 when fieldwork for the preliminary study was done. Therefore they suggested that the sample for the main study on urban agriculture be drawn from that used by the KUS group to enable comparison of the information with other baseline studies that were being carried out. The group had selected seven parishes that were deemed representative of the city at large in several important dimensions, including population density, wealth, land use, services and economic activities. Due to financial and other logistical problems, the main study on urban agriculture could not be carried out in all the seven parishes. Thus three parishes were randomly selected from the seven parishes that the KUS group had used for their studies.

4. Gender Sensitive Analysis

The studies included both male headed and female headed households and both female and male respondents. The preferred respondent was that person in the household who was responsible for the provision and preparation of food and who was engaged in agriculture. In the majority of cases this person was a woman (71% of the respondents in the survey of the main study were women). A total of eight focus group discussions were held and of these, four consisted of only women while the other four were mixed.

The gender balanced interviews and discussions enabled clear understanding of opportunities, benefits and constraints related to urban farming. It also revealed the gender division of income, labour, control over resources and responsibilities within the urban households.

5. Scientific and Methodological Advances:

Basing on the commonly held view by urban planners that urban agriculture poses a public health risk (e.g. that crops harbour rodents and the leaves are breeding grounds for mosquitoes), the main study sought to establish whether there is a public health benefit from urban agriculture. Maxwell (1995), explains that the main practical reason for the inclusion of food security and anthropometric measurement in a study of urban agriculture was that when questioned about the legality of farming in the city, urban authorities often cite public health risks

The study thus assessed the relationship between urban agriculture and improved household food security and nutrition status of children in farming households, particularly those in the lowest income groups.

After reviewing studies on urban malnutrition, Maxwell notes that while urban agriculture had not been completely ignored in some previous studies, it had not

been systematically considered. At the same time, while previous studies on urban agriculture had presumed that increased nutrition benefits results from the practice, none measured them, or undertook a comparative analysis of farming an non farming urban residents.

Maxwell's study used study used scientific and methodological techniques to empirically show that there is a health benefit from urban farming.

6. Result utilisation by non-research entities

Officials from KCC and RC leaders were among those who attended the seminar where research findings from field work of the main study were presented and discussed. The consensus arising out the seminar was that the legal status of urban agriculture was unfair and should therefore be changed. The final report of the KUS group indicates recognition of urban agriculture and cautions that as the city grows, and if uncontrolled development is allowed to continue, terrain destabilization and erosion are likely to escalate causing decreases in productivity.

According to an environmentalist in KCC the research seminar recommended that urban agriculture should be promoted, but at the same time be subjected to regulation like other economic activities. He also commented that the research findings of both studies prompted his office to reflect on the impact of urban agriculture on the urban environment. On interventions to regulate urban agriculture, he said that it would be meaningful and effectively carried out after a thorough investigation into all urban agriculture related problems such as environmental degradation, nuisance in form of smell of animal waste and tall crops on road verges that may be a nuisance to traffic. He further noted that the Kampala District Environment Office ought to work hand in hand with the agriculture office in addressing environmental problems associated with urban agriculture. He also suggested that opportunities such as use of urban wastes in urban agriculture could also be assessed. He reiterated that these issues were not handled by the urban agriculture studies so far carried out (Personal communication, May 1998).

DISCUSSION OF SPECIFIC IMPACTS OF AREAS SELECTED

Human Resource Development:

Although the project did not specifically develop human resource capacity at MISR to carry on research in urban agriculture, the then Research Assistant (author of this paper) on the project benefited from the knowledge and skills acquired. She has maintained an interest in the subject and is part of the MISR team that is preparing to implement an action research project on gender and urban agriculture. She has also written papers and participated in regional workshops on urban related issues. (E.g. much of the information presented at the regional workshop in Nairobi on Urban Food Production which was organised by Regional Land Management Unit (RELMA) Nairobi Mazingira Institute - Nairobi and Programme on population and Development (PROP) -University of Lund, Sweden was drawn from these IDRC funded projects).

Two of the former enumerators on the project have continued to do research work in different fields in other organisations. As for the others, it is not clear as to where they are employed.

Institutional Capacity Strengthening- Literature and Dissemination:

One of the positive changes of the Institutional capacity strengthening is the additional research area of urban agriculture which falls within the research interests the overall vision of MISR. It is the goal of MISR to attract researchers of various disciplines to promote the work of the institution and at the same time facilitate social researchers to carry out research.

During dissemination of the results of the preliminary study and presentation of the proposal for the main study, the MISR community and the University community at large were availed a chance to know about the study and to deliberate on a number of issues that were proposed for the next study. This was the first opportunity where people were brought together into one forum to talk about urban agriculture in Kampala and since then, there has been a noticeable growing interest in the issue of urban agriculture.

One of the broad goals of MISR is to collect, store, avail and disseminate information. A published copy of the study by Maxwell and Zziwa (1992) was availed to the library. The book has been a major source of information on urban agriculture and a famous point of reference by various scholars. Some publications that resulted from the main study are also available in the MISR library. They include Maxwell and Atukunda 1993; Maxwell, 1993a; Egziabher, et. al., 1994; and Maxwell, 1995).

The above mentioned publications brought out literature on urban agriculture in Kampala which was not available in the existing archives. The literature has been widely utilized by various academicians, University students, researchers, government officials as evidenced in some of their works (see Azuba, 1996; Nuwagaba, 1996; Nuwagaba, and Mwesigwa 1997; UNFA 1997; KUS 1994; Musimenta 1997; Nakijoba 1996; Atukunda, 1998).

Other places where reports of the two research activities were delivered are Kampala City Council (KCC) and Child Health and Development Centre. Since the completion of the main study, some individuals at MISR and from other institutions picked interest, discussed and agreed to carry out a follow-up research. However, due to logistical issues, designing the proposal could not be completed. But the issue has now been revived and an action research concept paper has been submitted to IDRC for consideration for funding.

The project proposes to take a multi-disciplinary and inter-sectoral approach by establishing partnerships and involving various stake holders in urban agriculture such as the Kampala District Agriculture office, the Department of Welfare and Community Development of KCC, Community Based Organisations, Uganda National Farmers Association (UNFA) Kampala District Branch and Local Councils. Other relevant stakeholders in the proposed areas for the study will also be involved. The project intends to assess gender dimensions of urban agriculture. Ideal strategic issues of focus by support networks which include access to productive resources, technology generation, extension services, agricultural skills development, access to information, marketing, export promotion, food and income security and in essence

sustainable livelihood will be assessed for viable intervention which would specifically target women since they are the ones directly involved in agricultural production.

Local Partnerships with other Institutions

MISR's research policy is geared towards promoting policy oriented and academic research. The new mission of MISR is to conduct research, provide knowledge and skills that would enable the public to incorporate relevant cultural parameters and dynamics in all its national or local planning. It is envisaged that through this way, there will be genuine dialogue between donors, policy makers, scientists and local communities (MISR 1998).

It is against this background that MISR intends to directly be involved in the proposed project by implementing it, coordinate the various activities involved and provide institutional support in terms of office space. Although the earlier studies involved other institutions such as the faculty of agriculture, Makerere University, the scope of collaboration was limited. Particularly with the preliminary study, if efforts had been made to involve some key individuals from KCC, urban agriculture would have received recognition and support earlier than has been. Nevertheless as mentioned earlier, the study made a great contribution in providing information regarding urban agriculture that had never been available. Commenting on the preliminary study (Maxwell and Zziwa, 1992) a KCC official in the planning section said the study was the first to document the practice and significance of urban agriculture in Kampala City, and to bring it to the attention of City Council authorities.

As for the main study, it was purely a scholarly work for the award of a Ph.D. degree and so it did not directly involve persons from other institutions. However, as earlier said the members of KUS group within KCC requested the researcher to draw his sample in such a way that his information about urban agriculture would be incorporated in their long range planning exercise. Their suggestion was taken up and as shall be seen later, some of the information was taken into consideration while defining the different activities that may be carried out on the various urban land use zones.

Gender Sensitive Analysis

During the seminar, there was vigorous debate about the reasons why it is primarily women who engage in farming in Kampala. Some men suggested that it is because women are less educated, and or have nothing else to do with their time. This view was vehemently denied by several of the women farmers present who argued that it is because women are responsible for feeding the family, and therefore have to work harder to see to it that the family is provided for.

The study findings had also indicated that some women engage in urban agriculture not only to enable themselves attain some level of food security for their households, but also to earn income by sale of surplus produce.

Discussions I held with the officials from Uganda National Farmers Association, Kampala District Branch and the Kampala District Agriculture Office indicated that their new approach is

not to target large scale commercial farmers who are mainly men but also women engaged in farming for both commercial purposes and subsistence. The officials however mentioned that they still find it easier and convenient to deal with groups and not individual women. During the seminars they hold with farmers, the individual farmers are encouraged to consult group leaders or to attend the special seminars which are conducted at the selected farms of some of the members.

Gender analysis in the studies on urban agriculture clearly revealed that any interventions in urban agriculture should specifically target women because they are the ones directly engaged in it.

Scientific and Methodological advances

The Researchers' innovation of assessing the impact of farming on the nutrition status of children largely contributed to the overall impact the study made on recognition of the significance of urban agriculture by city authorities.

Care was taken by the researcher to ensure that quality anthropometric data is obtained in both rounds of the survey to enable valid analysis. A two round survey was used for purposes of capturing elements of seasonality. Besides obtaining correct measurements of height and weight of the under-fives, enumerators were cautioned to obtain correct birth dates. The dates reported by mothers were confirmed with birth certificates, baptism certificates or other documentary evidence.

Data were entered into Epi- Info V, 5.0 and analysed . Nutrition measures of height- for-age (stunting) and weight -for-age (wasting) were the main ones used to present the results. The analysis was done for both farming and non-farming households and for all income groups.

The study made a major break through of measuring the impact of urban farming, particularly in terms of food security and nutrition status, including an explicit comparison of the nutritional status in farming and non- farming households. It was found out that there was a clear relationship between urban farming and nutritional status, particularly more long-term measures of nutritional status.

During the seminar where results of the study was presented, it was generally accepted that the preliminary research paper (Maxwell, D and G. Atukunda, 1993) had sufficiently documented the impact of urban farming on food security and nutrition. (Maxwell, 1993 b)

Utilisation by non-research entities

Besides provision of new information and literature that is also gender sensitive, and opening up opportunities for MISR to collaborate and work in partnership with other institutions in the field of urban agriculture, the most significant impact of the urban agriculture research studies has been the usability of the findings by non-research entities especially Kampala City Council.

Kampala City Council had for long regarded urban agriculture as an illegal activity although the practice has been growing regardless of the occasional crackdowns of farmers by city enforcement officers which often led to impounding of livestock and slashing of crops. The same views were confirmed by the head of department, Welfare and Community Development, KCC, who mentioned that the results of the study which were presented in a seminar made a great contribution to the understanding of the importance of urban agriculture by city authorities, which led to stopping of 'unrealistic' enforcement practices such as crop slashing. She however mentioned that unconfined livestock found roaming the streets are still being impounded.

From discussions I held with the Assistant District Agriculture Officer, Kampala, it was noted that urban agriculture is now fully recognised by KCC, and that it features in almost all its departmental meetings³ The major constraint mentioned as hindering the activities of the office now is inadequate financial support by KCC and the Ministry of Agriculture at large.

Following the decentralisation of the District of Kampala, the District Agriculture Office together with officials at division level and grassroot people are now free to initiate activities and projects in urban agriculture which are deemed appropriate with regard to size of land accessible to farmers and environmental health considerations. It is for this reason that the Kampala District Agriculture Office deems it necessary to collaborate with a social research institution like MISR to investigate into issues such as information needs of farmers especially women, farming practices that yield higher production and 'clean' agriculture and environmentally healthy practices in general (personal communication May 1998).

The research seminar where the preliminary findings of the main study were presented in a draft report for discussion (Maxwell and Atukunda, (1993) served as a basis for new thinking and changed attitudes towards urban agriculture by a number of city council officials. An interview I held with the Senior Planner in KCC also revealed that the studies by Maxwell and most especially the seminar on Farming in the City provided evidence that urban agriculture could not be denied because of its benefits, although it is regarded as an undesirable activity in the face of city planners. He further noted that during the seminar, urban agriculture was unanimously accepted and that the District Agriculture Office was charged with ensuring that the practice is regulated so that it does not become a nuisance in the city.

The Kampala Structure Plan which comprises the Kampala District Plan and the Written Provisions is the final outcome of the Kampala Urban Study which recognises urban agriculture. Urban agriculture is now one of the informal activities recognised in the city. This is contained in the Written Provisions whose purpose is to set out a comprehensive code governing administration and enforcement of the Kampala Structure Plan. Drawing from the information presented by the two studies, the Kampala Structure Plan (1994) incorporated urban agriculture. Although no specific by-law has been put in place to legalize urban agriculture, the new KCC structure plan of 1994 indicates urban agriculture as a recognised urban land use. The final report of the Structure Plan promotes urban agriculture but suggests that further studies are required to assess the appropriateness of various crops and to establish some guidelines to ensure the environmental sustainability of the activity.

The written provisions indicate that agricultural activities can be carried out on areas zoned as Residential and Potential Industrial. As for areas zoned as Environmental, limited agricultural activities are allowed, provided that:

- they do not adversely affect natural drainage patterns, soil conservation, or the protected resources;
- they are approved by Kampala City Council and Division and Parish Councils (KUS 1994).

As for other zones (Commercial, Industrial, Institutional) any other land uses apart from those stipulated in the Written Provisions are allowed as long as they are acceptable to the local Parish Council.

Although the studies and the written provisions indicate promotion and regulation of urban agriculture, the Community Development and Welfare Department in KCC has not done much to effect the recommendation, due to limited funds needed to investigate into the issue and map out procedures for the exercise. According to the District Agriculture staff, sensitisation is being carried out among farmers on issues of environmental degradation related to crop production and nuisances resulting from livestock which is not properly kept and cared for. Noticeable changes are taking place in farmers' attitudes and practices, though still in their early stages. With the necessary facilitation in terms of financial logistics to draw up clear guidelines and policies and to reach the concerned farmers, the changes are likely to further develop.

OVERALL EVALUATION OF MAJOR DETERMINANTS

On the whole, the research projects yielded positive results to all concerned stakeholders who include Kampala City Council, more especially the urban farmers themselves. The major determinants for this is that the studies were relevant and timely in that they were carried out before the drawing of the new structure plan for the city. This was a period when KUS group was reviewing the status of the urban legislative framework, urban environment, urban economy and the general urban social and physical infrastructure. So the findings were used together with the KUS findings on various socio- economic issues pertinent to the city.

The two studies were crucial in providing some vital information on the above issues. The urban agriculture studies dealt with an issue that had never been investigated and had for long been contentious between city planners whose ideas of a modern city often clashed with the poor urban farmers struggling to eke out livelihoods. The findings of the studies contributed to resolving these differences.

The fact that the data were collected from relevant sources also led to the findings being relevant and acceptable. Besides, the findings have been disseminated in a variety of ways to an number of concerned individuals and officials. One important forum was the seminar where the findings were presented. The seminar brought together different authorities who participated in the discussions and made them realise the importance of urban farming and thus the need to accept it. It can therefore be mentioned that the studies contributed to the policy debate which led to acceptance of urban agriculture in Kampala City and the subsequent incorporation of the practice

in its physical planning activities.

Needless to mention, the availability of funds for carrying out the studies and particularly for the seminar was most instrumental in creating awareness about the existence and significance of urban agriculture.

CONCLUSION

Kampala's population is rapidly growing leading to competing land uses for development of residential and commercial purposes. This implies that farmers who are to some large extent dependent on urban agriculture may not have enough land to cultivate in future. The current debate on land access and tenure issues in Uganda in general but also specifically in the Central Region may also have negative consequences for the urban farmers. But given the recognition that urban agriculture has assumed, strategies now need to be put in place to find alternative ways so that the urban farmer does not lose hold of his/her survival strategies. Some of these strategies have been proposed in the MISR action research on urban agriculture such as activities which seek to maximally utilize limited land and recycling of urban waste for use in urban agriculture.

Although some farmers still face a problem of insecure land tenure and failure to access sufficient land, they now carry out their farming activities without undue fear of harassment by city enforcement officers. The issue at hand now is establishing and drawing of guidelines for carrying out environmentally friendly agriculture and productive use of limited land. It is hoped that when funds have been secured, concerned institutions such as MISR, KCC, and UNFA together with the urban farmers using participatory techniques will carry out action research to establish appropriate guidelines and assist farmers to follow them.

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