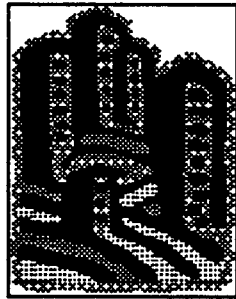


**Urban Agriculture Research in
East & Southern Africa I:
Record, Capacities and
Opportunities**

by
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University of Zimbabwe
1993



**Cities Feeding People Series
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URBAN AGRICULTURE RESEARCH IN EAST & SOUTHERN AFRICA I: RECORD, CAPACITIES AND OPPORTUNITIES

1. REGIONAL RESEARCH RECORD: STRENGTHS AND WEAKNESSES

1.1. Urban agriculture in Eastern and Southern Africa.

In Eastern and Southern Africa, urban agriculture is a relatively new topic for research. The 'Pioneer' study¹ was done by the Mazingira Institute in 1985, and it highlighted urban food production and cooking fuel situation in urban Kenya. Subsequent studies in Zambia, Uganda and Zimbabwe have been less extensive, but follow the same themes. On the whole, research has focused on describing the phenomenon of urban agriculture and its importance for urban food production.

In many countries, the starting point has been that urban agriculture is an illegal activity. Therefore researchers have aimed to demonstrate its economic importance, particularly for the urban poor. The official views have emphasized the environmental/health risks of urban agriculture, the violation of town planning zoning and the encroaching on public health.

Most researchers have therefore aimed to inform policy makers of the positive features of agriculture, giving accurate figures on productivity and improved self-sufficiency of households. They have highlighted the importance of urban agriculture as a survival strategy of the poor. In terms of the URB Program's aspects and specific objectives, the following have been best researched:

- General food production and nutrition systems (Mazingira, 1985; Little 1992; Berg van den (ed) 1982; Sanyal, 1985, 1986,; Rakodi, 1988; Mascarenhas, 1986; Baker, 1990; Mbiba, 1992, 1993).
- Economic and policy aspects (same as above).

In our opinion, little scientific work has been done on health risks, access to land, crop security, credit, and equity aspects. There is some ongoing work on gender issues, but most outputs have been on access to shelter and land (Schlyter, in Zambia, Botswana and Zimbabwe).

In general, there are no outstanding results for science, technology and policy making for urban agriculture. Most research findings are of a baseline nature, telling us of the incidence of and actions in urban agriculture. For policy makers an important result is that urban agriculture cannot be dismissed as an illegal activity —it has become an integral part of the urban economy for the poor. Urban agriculture in African cities is widespread but in most cases it is subsistence agriculture with limited capital inputs and legitimacy to facilitate for more intensive operations. Usually the scale is significant where the operators have legal access to land and therefore access to credit. In most African cities, urban agriculture is a transfer of rural subsistence agriculture to urban areas, particularly as whole families migrate and settle in urban areas.

Whereas the starting point for most researchers has been to inform policy makers of the existence and extent of urban agriculture, there is a need to contextualize the phenomenon within the overall context of urban economy. Firstly, is urban agriculture a spontaneous activity? Should it be a planned activity, incorporated in the urban areas? Secondly, what are the consequences of making agriculture a major land use for the African city? Is it not better to make more "efficient" use of the land by building more housing, industry or commerce? Thirdly, is urban agriculture an activity for the poor? Should it not be promoted and elevated in terms of self-sufficiency in food for urban centres (cf. Chinese cities)? What would be the implications of all this for the urban poor and urban economy in terms of employment and local authority finance ?

In Southern and Eastern Africa, urbanization is a major process which will transform the economies by the turn of the century. Most urban centres were planned for much smaller population and they lack adequate formal sector employment for the growing workforce. As a result most urban environments are characterized by informal sector activities, of which urban agriculture is increasingly an important feature.

In our opinion, the issues which deserve future research in the region are:

(a) Rural-urban relationships and how they influence urban economic activity, including agriculture. The rural-urban migration trends and in particular the increasing urbanization

of families have to be properly contextualized. Most studies are very superficial and lack the framework in which urban agriculture is occurring. Understanding the rural-urban dynamics will help in the understanding of access to land, crop, crop security and credit. Is urban agriculture simply a survival strategy or a response to economic opportunities?

(b) In countries where policy frameworks have been positive about urban agriculture (Mozambique, Malawi, Lesotho etc.), what have been the underlying policy and political reasons? How much is it a factor of prevailing land tenure and zoning systems. We have to ask again, should urban agriculture be a key urban activity? That it is found in all urban centres does not mean it should be promoted —we have to ask the reasons much more systematically.

(c) It is important to research urban agriculture not just from the perspective of the urban poor, but to examine a whole range of activities including capital-intensive horticulture and dairying. There is a need for a typology or typologies which are inclusive of the phenomena as a whole. For too often, researchers focus on the peripheral/marginal urban agricultural activities simply to demonstrate that the poor are included. In Kenya, Zimbabwe and Tanzania, evidence suggests that high and middle-income households constitute a significant proportion of urban agriculturalists.

The interrelations between agriculture, water, waste and disaster in the cities of the region are many and varied. With respect to urban agriculture's use of water, it is noted that in most cities of the region, urban agriculture is a seasonal activity following the annual cropping patterns. This also determines the types of crops and levels of intensity of cropping. For most urban cultivators utilizing 'vacant' pieces of land in the city, there is no investment in water supply.

The middle and upper-income groups operating on authorized land usually invest in boreholes or even small dams for certain sizes of landholding. In Harare, Zimbabwe and Nairobi, Kenya there are areas of the city which are zoned for small agriculture (horticulture, chicken production) where the original developers created boreholes and wells. In most cases the areas do not have reticulated water systems and therefore have to be sufficient in terms of waste supply.

The use of wastewater tends to be restricted in most centres although increasingly the breakdown of sewers and water mains provide an opportunity for residents to tap on the supplies. In Zimbabwe the municipalities have the monopoly use of wastewater and

treated sewage for 'municipal farms'. Evidence from the other cities does not suggest that urban residents have much access to the city's wastes. It is also likely that most of the urban poor live in unserviced areas and therefore the disposal of wastes is not formally organized.

With respect to agriculture and waste, the interrelationships are not as clear-cut in African cities as is the case in Asian cities. This is probably a legacy of peasant agriculture which tends to rely on animal and other organic manure but does not utilize human wastes. Urban agriculture has therefore tended to follow the same established patterns. The production- nutrition systems tend to be influenced by the lack of both capital and crop intensity.

On urban agriculture and disaster, except for conservation and related problems (soil erosion, siltation, deforestation), there is no direct association with disaster. There also have been public health consequences documented but nothing of a disaster magnitude.

1.2. Urban agriculture in Zimbabwe: Harare vs other African cities

How prevalent and significant is the issue of urban agriculture in Southern Africa? Is the issue of urban agriculture unique to specific countries and towns? In a pioneering study in Zimbabwe, Mazamabani (1982) looked at the activity of urban agriculture, wood fuel collection and energy in the city of Harare. These were seen to create rural landscapes within the urban environment; sometimes described as ruralization of urban areas. Coverages of African cities in that study unfortunately cited West African experiences. Although the activity is also very prevalent there, these cities have a different historical development and different morphological outlook compared to Harare and cities of Southern Africa in general. This point has merit when one attempts to distil a theory of urban agriculture which is circumscribed by a general theory of urban development.

In Kenya (the Mazingira study). it is reported that 29% of urban households grow crops in town, 17% keep livestock in and that US\$17 million worth of livestock were kept in Kenyan towns in 1985 (Diana-Lee Smith, 1991:3) In Lilongwe, Malawi, goats are a prevalent feature in towns. The growing of trees is promoted and the trees are latter used for fuel by urban residents (Mbiba B., personal observations and discussions with officials, October 1991).

Freeman (1992), also working on Nairobi utilized and extended the Mazingira studies. The focus was on the spatial distribution, the practices, the motives of cultivators and the problems they faced in urban Nairobi. The value of urban agriculture products for low-income households was again emphatically documented.

Rakodi (1987) reported similar occurrences for cities in Zambia and drew parallels with Indian cities where cows are prevalent in the cities. In a more detailed study, Sanyal (1987) highlights the financial and economical value of urban agriculture to the urban poor in Zambia, dismissing both the Modernization and Neo-Classical theories propagated against urban agriculture. Also from Zambia in an earlier period were studies of a medical nature (Watts et al., 1987) focusing on the link between mosquito breeding (and hence malaria) and flora typologies in the city. It was scientifically observed that mosquito breeding on maize plants or any other crops is not significantly different from that of other plants growing naturally.

Work has also been done in Tanzania in the 1980s² whose major objectives were to investigate the nature and origin of food production activities within the urban centres and their peripheries. Six towns were surveyed: Dar es Salaam, Morogoro, Dodoma, Mbeya, Kilosa and Makumbako. In these centres, local authorities were reported to have 'initiated' some form of structures to accommodate urban agriculture. The poor were identified as needing a more positive environment to engage in urban agriculture; including such resources as more access to land and credit.

The town of Maseru, capital of Lesotho, is even more diverse in its urban agriculture. Dairy cows, maize cultivation, sheep and pig rearing, vegetable and fruit production are dominant and conspicuous activities (personal observations, 2-6 Dec., 1991).

In view of the above observations, a few salient features need comment vis-à-vis the situation in the region:

Alienation of urban agriculture

In addition to being considered illegal those involved in off-plot urban agriculture are subject to sporadic harassment by urban local authorities (Kenya and Zimbabwe). Maseru is unique in that it takes an enabling approach where urban agriculture is accommodated and supported. The town provides special veterinary services through

the Ministry of Agriculture's Livestock Division (Maseru ..., 1987:27).

Urban agriculture and the urban poor

In all cases, it is noted that urban agriculture is an important sector in the urban economies particularly for the urban low-income families, women and children. In Maseru, the estimates available indicate a value of urban agricultural production to be Maloti 6,705,000.00 maloti at 1990 (one maloti = one rand) (Maseru..., 1987).

Urban vs rural agriculture

Studies in Kenya and Lesotho point to higher yields per unit area for urban agriculture when compared to rural rain-fed grain production which may have existed before urbanization of the areas. The implication is that "urbanisation does not necessarily mean the end of agricultural production" (ibid.) African cities in the precolonial era are seen to have taken urban agriculture as part of the urban way of life. Rakodi (1987) underlines this point and indicates that at a later stage, some colonial governments did promote the activity.

In summary therefore, the issue of urban agriculture is common in most cities in Africa. The differences seen in the different countries are in magnitude, typologies and, more important, the institutional responses. Responses can be either prohibitive or accommodative/enabling. That of Zimbabwe seems to fall in the prohibitive category. Urban agriculture, particularly 'off-plot peripheral' is fundamentally part of the urban system and has formed the basis of long-standing European land use theory, particularly that of Von Thunen (1926).

Current and on-going work: B. Mbiba (University of Zimbabwe)

Since late 1991, B. Mbiba has rejuvenated research on urban agriculture. The research has so far confirmed the role of urban agriculture for household food supplies, employment of women and children and use of otherwise underutilized land. For the first time, evidence has been provided to show that urban agriculture does not benefit the poorest of the poor; indeed these have no access to the land as a result of both formal and informal gate-keeping processes in the city.

Mbiba's work is also very significant in that it attempts to place urban agriculture within the context of urban economy, urban management and urban development. This is necessary if we have to provide planners with a more usable strategy. A number of papers have been produced focusing on:

- urban agriculture and the poor;
- the gender dimension in urban agriculture;
- institutional responses to urban agriculture;
- images of urban agriculture;
- urban agriculture as a counterproductive activity.

The gender dimension, the institutional concerns and the quest to link urban agriculture to broader issues of housing supply and the fiscal base of local authorities are a significant new contribution of this work.

2. APPRAISAL OF RESEARCH CAPACITY: The RUPSEA³ Framework

University of Zimbabwe

- Department of Rural & Urban Planning: Mr. B. Mbiba
- Department of Geography: Dr. D. S. Tevera
- Department of Land Management: Dr. M. Rukuni
- Department of Agriculture Economics: Mr. G. Mudimu and Solomon Chigume

University of Botswana

- Department of Environmental Sciences: Dr. Moshale
- Department of Town and Country Planning, Ministry of Local Government: Mr. R. Segodi

University of Malawi

- Department of Geography: Dr. B. Kaluwa
- Lilongwe City Council: Mr. A.J.C. Kawonga

University of Zambia

- Institute of African Studies: Mr. Mulenga
- Lusaka City Council: Mr. Peter Lubambo

University of Swaziland

- Department of Geography: Dr. Kalapula

Makerere University

- Institute of Social and Economic Research: Mr. Wahire Jossy Bibambanga; Samuel Zziwa and Daniel Maxwell.

Nairobi University

- Department of Urban and Regional Planning: Dr. Ndengwa
- Department of Land Economy: Dr. Joyce Malombe
- Mazingira Institute: D. Lamba, D. Lee-Smith

Dar-es-Salaam University, ARDHI Institute, Sokoine University of Agriculture

- Mr. Kironde, Dr. Materu, Mr. S. Mlozi, S. K. Mvena

Lesotho Ministry of Lands and Local Government. Physical, Land Use Planning Division and Institute of Land Use Planning

- Ms. Aaa Sekhesa, Ms. M. Jjabane, Matseliso Morapale-Mphale, Khaliso Matsepe

We have identified some of the key members of RUPSEA Network of which I am the Executive Secretary. There are many other institutions which we associate with in the region and we think it would be possible to organize a regional research network on urban agriculture.

In the institutions identified, there is relevant expertise and research capacity. As a

network, we have produced several texts and there is a journal which has been operational since 1990. We could provide a full profile of the members of the network in due course.

Within the different countries, there are varying capacities depending on the size of the country, the institutions of higher learning and levels of urbanization. Within the region as a whole, nongovernmental organizations have a longer track record in rural development rather than urban development. Except for Kenya, there are very few indigenous nongovernmental agencies on the urban scene. Those which operate on the urban scene tend to be biased towards the provision of shelter and services.

3. FUTURE RESEARCH OPPORTUNITIES

In general, the Centre should support more long-term and primary research as opposed to short-term, consultancy-type research. This would benefit the researchers, most of whom are young and require time to develop their capacities. The Centre should facilitate cooperation between institutions through workshops and seminars held regularly on specific topics and subjects.

3.1. Topic: Urban food production - nutrition systems within the context of rural-urban relations and dynamics.

Most urban centres have a recent colonial origin and have been influenced by political/economic changes which took place at independence. Of significance was the removal of restrictions of the colonial city on rural-urban migration. The postcolonial cities are being shaped by new forces, which raises a whole range of questions on their planning and nature of activities. Urban agriculture, although not new in itself, is an important activity which has grown significantly with high urban growth. It is also part of the reshaping of the postcolonial city whose values are likely to be different from a typical colonial city. There is need for rigorous research on dynamics rather than simply documenting phenomena. Most research on urban agriculture tends to be superficial and is unable to instruct us on new trends or features of African urban development and planning. If cities prospered, would urban agriculture be an issue? If the countryside produced adequate surpluses, would urban agriculture be an issue? Is urban agriculture a response to conjunctural poverty?

We want to suggest that through the RUPSEA Network, a budget be provided by the Centre. There would be a planning workshop at which key researchers in the region would be invited to discuss and elaborate the proposed topic. Researchers would be invited to put forward proposals which reflect priority issues in their specific countries, which would then be considered by the coordinators before funding. A major outcome would be a workshop and a book to disseminate their findings. RUPSEA would provide the Secretariat.

3.2. Topic: City - specific studies on access to land, crop security and credit.

This would also address the economic, legal and policy aspects. The case studies are proposed for the following cities: Nairobi (upgrading Mazingira data), Harare, Gaborone, Maseru, Windhoek, Dar es Salaam, Kampala. For each, there is a need for up-to-date aerial photographs of equivalent data, plus detailed questionnaires. The cases will provide not only contrasting urban agriculture experiences but also different town planning legacies. The research format would be more or less similar to the first proposal (3.1.).

NOTES

1. In Zimbabwe there were other studies before this; the Mazambani D. (1982) study in particular. Incidentally it focused on the issues of peri-urban cultivation, wood fuel collection and energy in Harare; same themes in the Mazingira studies (1985).
2. IDRC sponsored Research (1983) on Urban Agriculture Research in Tanzania.
3. Association of Rural and Urban Planners in Southern and Eastern Africa.

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a) 15th September, 1991, p. 8 Maritu Waga, "Improve the Status of Women



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(b) 29th December, 1991, p. 1 "Uproar Over Maize Slashing".

(c) 29th December, 1991, p. 5. "Critical Year For Harare City Council".

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