

GENDER AND URBAN AGRICULTURE: A CASE STUDY OF THREE COMMUNITIES IN GREATER FREETOWN, SIERRA LEONE

By

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Abstract

The study examined Gender and Urban Agriculture in Freetown, the capital of Sierra Leone. Within Freetown, urban and peri-urban locations in the Bormeh/Kingtom dumpsite, New England/George Brook and Regent farming communities were purposively selected for the study. The findings from the study suggest that majority of farmers that are engaged in urban vegetable production are women and that they contribute more to the labour for vegetable production than men. However, the women are less involved in community decision-making thus affecting their access to and control over productive resources. Generally urban farmers face numerous constraints although female farmers tend to be more affected. If urban agriculture is to be improved, policy makers should ensure gender equity in the accessibility to and control over production resources and consider gender role differences and its interrelated issues for all future development policy.

1 Introduction

1.1 Institution implementing the Research Project

The Research Project titled “Food Security in Freetown: The Role of Urban- Peri Urban Agriculture” is principally financed by the International Development Research Centre (IDRC). Since September 2002, Njala University College, under a sub-contract with Cornell University in the United States of America, has been implementing this project in Greater Freetown (GF), Sierra Leone.

1.2 Description of the Study Area

GF, the country’s capital is located in the Western Area of Sierra Leone. Within GF, the Bormeh, Kingtom dumpsite, New England/George Brook and Regent farming communities were purposively selected. They seem, respectively, consistent with the following geographical locations: urban core, urban and peri-urban locations. GF is bounded in: the north by the Sierra Leone River estuary; the west and south by the Atlantic Ocean; and the east by the hinterland of the country. Much of GF is made of hilly to mountainous granite. In between the hills are valleys in which stream water flows in all direction from the hill/mountain top to the outer borders (e.g. the Atlantic Ocean and the estuary).

The area has about the highest rainfall in West Africa and temperature and humidity are not limiting factors for the growth of crops and rearing of animals. The vegetation in the main land used to consist of tall hardwood evergreen trees that provided habitation for a wide variety of animals. Towards the coast, mangroves, which were common, have been degraded.

The area was originally established to settle freed Trans-Atlantic slaves from the late eighteenth century. Most of them were allotted land for farming. Present day rainfall has reduced due to a combination of factors such as deforestation, proliferation of tarmac and concrete surfaces and urbanization related factors. Other land uses, such as commerce, industry, transportation, housing has gradually shifted farming into restricted locations within the GF areas that require the use of high nutrient inputs to enhance sustainable crop production

The main types of farming include leafy traditional variety of vegetable production, particularly within the urban core areas and high nutrient demanding ones about five to six miles from the centre of GF. Tree crop plantations that existed in pre- and colonial days have either been reduced to backyard enterprises (e.g. mangoes, citrus, coconut, etc) or abandoned altogether (e.g. Cocoa and coffee).

Livestock activities are restricted to poultry and piggery production on a small scale for consumption to large scale for cash, particularly in the peripheral areas of the GF areas. Occasionally, people raise, mainly for ritual purposes, small ruminants, such as sheep and goats. Other restricted livestock include rabbits and guinea pigs.

GF has a population of about two million people representing most of the major ethnic groups (e.g. Mende, Temne, Limba, Loko, Limba and Krio) in the country and foreigners (mostly Guineans, Liberians, Lebanese and Western Europeans). There is religious tolerance as Muslims and Christians co-exist with little or no conflict. The

main sources of income of the populations come from the following activities: commerce – petty trading; transportation – head portorage and commercial transport; services – domestic servants and public service work; and manufacturing – small scale industrial activities such as fast food processing.

1.3 Implementation of the Study

The study was designed to compare and characterize the system of farming in three purposively selected communities using cross sectional quantitative and qualitative information obtained from a total sample of 120¹⁰ (at the population level, females constitute an overwhelming majority, about 90%. This was reflected in the sample size as well) simple but randomly selected male and female farmers. Quantitative data on the farmers' socio-economic and demographic characteristics, farm enterprises location and associated planning decisions and farm organization structure, noting gender differences are almost completely collected. They are being processed for presentation. Some of the output of the analysis is incorporated in this paper. Collection of data on assets, shocks and hazards including farmers' responses, non-farm activities and incomes is in progress.

Qualitative data is being collected from groups of farmers through discussions and interviews. Some of this was done in March 2004 and it constitutes part of the data for this paper. Other qualitative data – in depth interviews and participatory observation - are been collected from a subset of farmers, that is about 15% of the total sample of farmers by gender and wealth status.

To complement the characterization process, biophysical and labor systems data are being collected from about 30% of the total sample of farmers that are mainly engaged in vegetable production, noting gender as a variable in the case of the latter. The latter data is collected on a cost route basis using semi-structured recording forms. The timing of operations using watches and weighing of crop output are recorded weekly. This activity is in its second year while the former is collected at critical times in the crop production cycle – before, at planting and harvest. The processing and analysis of the data is on-going. In the case of the later, analysis by gender is pending.

In addition to this, secondary data is been accessed to analyze the historical changes in agriculture in the GF. It is expected that aerial and GIS related data will be accessed as well as primary data from residents by age and gender. **The final output of the entire research work will be in a year's time.**

The limitations in terms of data for this paper are implied from the presentation above. The study area has been limited to the purposively selected communities due to cash constrained to cover more. Also, the determined sample size reflects this constraint but is consistent with the statistical rules for study's that have the objective of explaining phenomenon. The same reason has restricted the study to the Western Area (administrative region) of the country only.

¹⁰ This amounts to an average of about 30% of the area listed farmers in all study area.

1.4 Socioeconomic characteristics of respondents

Most of the sampled farmers are females (80.3%) and Christians (65%). They are mainly adults with the oldest ones being at the New Engl/ George Brook site. Table 1 shows that farmers in the New England/George Brook sites are mostly widowed (perhaps because they are older women) whereas those elsewhere are married. Household size is about 8 persons on the average with Regent having the least. Most of the farmers in all the sites have no formal level of education (59.6%), the majority of whom are in the New England/ George Brook and Bormeh/Kingtom research sites in descending order.

Table 1: Summary of farmers' socio-economic characteristics

Socio-economic characteristic	Study Community		
	Bormeh Kingtom	New England/George Brook	Regent
Average age (years)	47.6	54.8	44.8
% Married	30	5	55
% Widowed		20	15
Mean Household size	9.0	8.7	6.9
Main type of farm enterprise ownership	Family	Individual	Family
Perceived size of crop land	Smaller	Small	Medium
Amount of income from crops	Smaller	Small	Medium
% of farmers rearing local chickens	10	12.5	40
% of farmers rearing goats	0	0	5
% of farmers rearing ducks	5	5	2.5
% of farmers rearing pigs	5	0	5

Apart from vegetable gardening that is the occupation of the majority (75.2%), most of the farmers (58.8%), particularly those in New England/ George Brook and Bormeh/Kingtom, do not engage in part-time work. Most of the farmers (54.9%) in Bormeh/Kingtom and Regent are Lokos whereas for New England/ George Brook, they are Limbas (58.8%).

Majority of the farmers have lived in their current residence for slightly over half a generation (an average of 16.4 years) with those in Regent having lived there for the shortest time. Farmers in the Bormeh/Kingtom and New England/ George Brook sites

have been cultivating at their current sites for a relatively longer period (an average of 16 years) compared to those in Regent (an average of 9 years). Farmers in the Regent area have relatively longer years of farming experience near towns compared to those in the other sites.

In the Bormeh/Kingtom and New England/ George Brook sites, most farmers cultivate rainy season crops in public solid waste dump sites (about 68%) and privately (about 70.5%) owned uplands respectively, whereas those in Regent do so on privately owned (about 51%) steep slopes (about 71%). Very few farmers in the former sites reported cultivating crops on roadsides and abandoned areas in the rainy season. In the case of Regent, some farmers reported growing crops around their houses and on roadsides. In the dry season, most farmers in the sites cultivate similarly owned but irrigated wetlands. In Bormeh/Kingtom, about 31.5% of the farmers do not grow crops during this season. However, very few of the farmers in all the sites reported growing crops around their houses, on roadsides, abandoned areas and school compounds.

In all sites, most farmers access land for crop cultivation in the rainy and dry seasons through a moderately secured (48.8% of them) rental (57.4% of them) system. **Land is not a limiting factor during the rainy (because rain-fed agriculture is practised) but there is competition for land during the dry season (especially land near water for irrigation purposes).** Outright ownership of land for crop cultivation was observed among about 11% of the farmers in the Regent site in both seasons. Other forms of land tenure observed among few farmers in all site and seasons include informal agreements, official permit and squatting.

Most farmers (83.2%) in all sites engage in crop cultivation in uplands and lowlands in the rainy and dry seasons for both subsistence and cash. Most farmers in Bormeh/Kingtom and New England/ George Brook sites grow spinach greens and sweet potato in descending order whereas in Regent spinach greens is replaced by Lettuce in the same order. Other crops grown by some farmers in the Bormeh/Kingtom site are krain krain and okra whereas for New England/ George Brook it is krain krain. At the Regent site, some farmers proportionately grow runner beans, spring onions, pepper, spinach greens and cabbage in descending order.

Table 1 shows that most farmers in the Bormeh/Kingtom and Regent sites operate family crop enterprises compared to individually own ones in the New England/ George Brook site. In terms of crop plot size and incomes, most farmers in Bormeh/Kingtom and New England/ George Brook operate and accrue small plot sizes and incomes respectively compared to medium plot sizes and incomes in the Regent sites.

An average of about 25% of farmers in the Bormeh/Kingtom and New England/ George Brook sites do not engage in any form of animal/livestock rearing/raising compared to about 34% in the Regent site. Majority of those engaged in the activity produce mainly local chicken as shown in table 1. The table shows that very few farmers are engaged in small ruminant production (i.e. goats).

As in the case of crops, animals/livestock production in the Bormeh/Kingtom and Regent sites is a family enterprise for most farmers (57.2%) compared to the New

England/ George Brook site, where most farmers (about 85%) operate as individuals. The quantity and amount of income obtained from the production of the animals/livestock are perceived to be small and low respectively by farmers in the Regent and New England/ George Brook sites compared to medium by the farmers in Bormeh/Kingtom.

Majority of the farmers in the Regent and Bormeh/Kingtom sites produce animals/livestock for both subsistence and cash (an average of 51.5%) compared to the subsistence ones (about 57.1%) in New England/ George Brook. Nevertheless, there are those farmers who produce animals/livestock in the former sites for subsistence and both subsistence and cash in the latter site. On the average, about 52% of the animal/livestock farmers in all the research sites have built houses to shelter them. Other modes of sheltering the animals includes keeping them in their kitchen (particularly at Regent), in cartoons and kept either under stair cases or inside houses and in cages (particularly in Regent and Bormeh/Kingtom).

2 Gender Division of Labour in the Households Studied

2.1 Division of Labour and Responsibilities in the Farming Related Activities

The gender division of labour and responsibilities for some of the crop production activities in the Bormeh/Kingtom, New England/George Brook and Regent communities is summarized in table 2 below. This data has been compiled for 30% of the total sample of farmers (the sample for the input/output data collection for the first year) of which only 8.3% were men. Data collection is going on.

The table indicates that both sexes participate in crop production in all the sites with females performing more task It is evident from the table that male input is more evident in the Regent area (peri-urban) compared to the Bormeh, Kingtom and New England/George Brook areas (urban core). This difference might likely be due to more non farm income earning opportunities for males in the urban as compared to the peri-urban areas. **These results are highlights and not definitive.**

Table 2 Gender Division of Labor and Responsibilities in Crop Production Activities (Percentage distribution)

Crop Production Activity	Study Communities by Gender						All Study Communities by Gender	
	Bormeh Kingtom		New England/George Brook		Regent		Male	Female
	Male	Female	Male	Female	Male	Female		
Brushing					83.3	16.6		
Clearing	16.6	83.3	33.3	66.6	66.6	33.3	38.8	61.1
Digging/Seed bed Preparation	100		33.3	66.6	75	25	69.4	30.5
Planting/Transplanting	50	50	-	100	50	50	16.6	83.3
Watering	n.a*	n.a	n.a	n.a	66.6	33.3		
Weeding	-	100	-	100	41.6	58.3	13.9	86.1
Fertilizer application	-	100	-	100	41.6	58.3	13.9	86.1
Harvesting	-	100	-	100	8.3	91.7	2.8	97.2
Marketing	-	100	-	100	8.3	91.7	2.8	97.2

* Not applicable as data collection was done during the rainy season

From field observations, it appears as if males perform most tasks for piggery production whereas females do so for poultry production in all study communities. Data on gender division of labour and responsibilities in animal production is being collected and will be reported elsewhere.

2.2 Division of Labour and Responsibilities Regarding Other Income Earning Opportunities

The division of labour and responsibilities by gender regarding other income earning opportunities for the three communities is also being investigated and will be reported elsewhere.

2.3 Division of Labour and Responsibilities in Reproductive Activities

The division of labour and responsibilities in reproductive activities for the three communities is not investigated in this work because of time and financial constraints. However, field observations indicate that women are normally responsible for most reproductive activities (these include baby sitting, cooking, bathing infants and pre-school children, feeding and putting them to bed) in the households under investigation.

3 Gender Division of Access to and Control Over Resources

3.1 Access to and Control over Productive Resources

3.1.1 Access to Productive Resources

Women farmers generally tend to have more difficulty than men in their access to production resources. The extent of gender differences of access to and control over productive resources in the three communities selected for the study is summarized below:

Land

Provided the cash is available for renting and one has the right type of social relationship (e.g. long standing relationship and good will using produce from farming), access to land is not a major constraint for both male and female farmers in all three communities. Land ownership however, is a problem. In the Regent site, most farmers (both male and female) cultivate privately owned land on rental basis and only a very small percentage are land owners. The Bormeh/Kingtom site is state land and individual farmers are normally at the mercy of caretakers. The New England/George Brook farmers cultivate both privately owned land on rental basis and state owned land.

Labour

In all the sites, male and female farmers have both access and control over family labour. Female farmers are disadvantaged however when they sometimes have to hire labour (mostly male) for heavier tasks like brushing, clearing, ploughing seedbed preparation stone bunding, terracing and its repair (if male family labour is not available).

Agricultural inputs

In all three communities, agricultural inputs such as planting materials and agro-chemicals are normally purchased by male and female farmers from the market. Financial constraints may be the limiting factor in deciding access and control. The lower financial status of female farmers as compared to their male counterparts may be a problem

Technical and Market Information

In the three communities studied, gender differences in access and control over technical and market information are absent. For both male and female farmers, access to technical information is difficult in the New England/George Brook and Bormeh/Kingtom sites because of poorly developed extension services. Farmers in the Regent site have informal extension access because an extension agent happens to live and farm in that community. Male and females in all communities have equal access to market information.

Credit

Lack of access to credit is a major constraint for most farmers in Sierra Leone although women tend to have more difficulties in accessing credit. There is currently a micro credit scheme as a poverty alleviation strategy by Government for women. However only a small group have benefited so far and the female farmers in the

communities have not benefited as of now from this scheme. The women however form “Osusu” clubs as alternatives to their credit problems.

Benefits from production

Generally for married women, it is the husbands that may control the benefits from production whereas widows and single women have more control over the proceeds from their farms.

3.2 Access to and Control over Decision Making in the Community

3.2.1 Farm Planning Decision Making

3.2.1.1 Gender Relations in Crop Planning Decisions

In the Bormeh/Kingtom and Regent sites where most of the farmers were in some form of on-going marital union, planning decisions with respect to type of crops to grow, number of seed beds to construct, timing and site to plant crops was taken by most farmers (either male or female) in consultation with their spouses. At the end, it is mostly the farmer that had the greatest say (that is mostly female farmers). However, in the New England/ George Brook area, where most of the farmers are widowed, participation in the planning decisions is the sole responsibility of the farmers (for types of crops to grow and number of seedbeds to construct mostly widows), in concert with their colleague farmers (for time of planting) and land owners/caretakers (for site to grow crops). With the exception of the site to grow crops in which most farmers reported that the land owners/caretakers have the greatest say, the farmers normally have the greatest say in taking decisions.

3.2.1.2 Gender Relations in Animals/Livestock Planning Decisions

In the Regent sites, most of the farmers are sole decision makers in all the planning decision concerns for animals/livestock (that is, type of animals/livestock to produce, number of animals/livestock to produce, time of producing them and site to produce them). However, in some cases spouses and children, particularly boys, participated in the decision making process. In the New England/ George Brook and Bormeh/Kingtom sites, children seem to be important participants in decisions concerning type of animals/livestock to produce; whereas spouses, particularly males, appear to be important in deciding where to produce the animals/livestock. As in the case of crops, the farmers (mostly females) have the greatest say.

3.2.2 Decision Making in Community Affairs

In Sierra Leone, women are generally less involved in decision making in the communities as compared to men. In the urban and periurban communities covered by the study, more men participate in making important community decisions such as

land tenure, labour use, water management,. etc. This might be due to the fact that men are generally regarded as household heads and they also hold more positions of responsibility in the community.

4 Gender Related Issues

4.1 Gender Differentiation of Constraints and Opportunities

4.1.1 Constraints in Farming

In all of the communities, vegetable production was limited by several factors but limited cash (for both farm and non farm activities) was considered to be a major constraint by the majority of farmers. For example female farmers are constrained with cash to hire labour for land preparation in all sites (in Bormeh for the removal of bottles, stones injection needles, nails, etc; in New England for stone bunding terracing and its repair). Cash is required by all farmers in all the areas to provide school fees, books and uniforms for children, food for the family, medicine and to pay rent (particularly for farmers in New England and Bormeh). Other constraints include pest damage (including thieves) mostly in Kingtom, illness (pneumonia, rheumatism), accidents (mostly piercing of hands and feet, particularly in the Bormeh Dumpsite as a result of exposure to injection needles, bottles, inadequate and poor quality tools, and security of land tenure (encroachment on land for house construction in the New England area, shift in management of dumpsite in the Kingtom/Bormeh site and too many demands by landlords for farm produce in the Regent area). Although both men and women are affected by the farming constraints, women (since most are poor full time farmers) tend to be more affected.

4.1.2 Opportunities in Farming

Opportunities in farming do exist but the focus is normally pro-rural.

- Farmer collectives exist but they are weakly organised and poorly funded.
- Extension service opportunities: Agents are in the sites and farming activities take place in proximity to agency but agents lack capacity. Most policies of the Ministry of Agriculture, Forestry and Food Security (MAFFS) and the offices of many Non Governmental Organisations (NGOs) are normally pro-rural. Farmer to farmer extension exists on an informal basis but it is not part of the farming culture in the urban areas as compared to rural areas
- Government policy: There is a draft urban agricultural policy in the making and is yet to be formalised. During the war, there was a national food security support to farmers in the Western Area in the form of vegetable seeds, improved poultry and extension services by the Department of Agriculture and Forestry. However, except for farmers in the Regent area, Kingtom and New England farmers did not benefit from such programmes.

- The current food security drive focuses more on rural farmers rather than urban farmers and support to urban farmers is mere lip service. The President in his recent address to the reconstituted Municipal Council has requested that urban farming be an integral part of the council's development activity with respect to meeting his food security drive by 2007.

4.2 External and Underlying Factors

Generally agricultural production in Sierra is very low despite the high percentage of the population that is engaged in agriculture. The basic constraints on most food production systems result from scarcity of the classical factors of production (viz. land, labour and capital) and other support. However, development planners sometimes do not consider the gender dimensions of these constraints and the gender differences in access to production resources

- Land tenure system: The land tenure system in the Western Area is free hold. Land for agriculture is in constant competition with commerce, industry, transport and residence. Increasingly, this scenario is responsible for constricting land devoted to farming overall, per household and per individual. Agricultural land use is squeezed out of Freetown in favour of intensification with its attendant increase in the use of agro-chemicals and labour at the expense of sustainable production in the long run (farmers indicate that they continue to farm as a way of life rather than a market oriented activity).
- Lack of skills: Urban agricultural farmers lack the necessary skills to absorb them into the work force. They are left without any choice but to continue with that system (e. g. the urban core widows in New England, young women in Bormeh). Lack of opportunities force them to migrate to peri-urban areas.
- The Influence of policies from the International Monetary Fund (IMF) that recommend removal of subsidies from essential goods also adversely affects agriculture .

5 Suggested Strategies to be applied in Local Policies and Development Projects to enhance Gender Equity

After final data collection, processing and in-depth data analysis, the findings from this study will have a number of policy implications for improving the productivity of both male and female farmers. Since the study results show that an increasing proportion of urban farmers are women, policy should emphasise the provision of facilities that ensure gender equity in the accessibility to and control over production resources. Moreover, gender role differences and its interrelated issues should be properly examined and should provide a firm basis for all future development policy. Suggested strategies to be applied include:

- Land tenure: Government has recently set up a Land Review Committee to review the land tenure system and make recommendations on land availability for investment in all spheres particularly agriculture. The Freetown Infrastructural Plan is also trying to zone land use. In both systems, special

attention should be given to female farmers for not only accessing land but also owning land for farming.

- Although agencies are in place within Freetown with capacity to support urban agriculture to date, there exists the need to advocate the revisiting of their pro-rural activities so that farmers (females in particular) may benefit from the services that they provide.
- The Agricultural Research Stations should put vegetable production in their research agenda particularly those currently produced by farmers. For example, the Institute of Agricultural Research (IAR) in its Root and Tuber programme should in addition to emphasizing tuber production pay more attention to the potential use of the leaves for consumption in the urban areas. This work should be done in collaboration with MAFFS extension service so as to benefit urban farmers, the majority of whom are women and cultivators of sweet potato leaves, particularly those in the New England and Bormeh areas.’
- Pest management: The Research centres should also link up with NGOs in an Integrated Pest Management (IPM) strategy to reduce pest infestation in the high income spinach and krain-krain grown particularly in the Kingtom Dumpsite by mostly female farmers
- The newly constituted Local Government Councils should in addition to creating an enabling environment for agriculture to thrive in urban areas, consider enforcing protection laws against stealing of agricultural products.
- Cost Recovery Programme: Female urban farmers in particular should be classified as vulnerable so as to benefit from the new Primary Health Care policy of giving free treatment to vulnerables.
- Municipal Government together with the National Government should lobby and advocate to organisations (NGOS and research stations operating in the country) to provide assistance to urban farmers