

Access to low-cost water is a key factor affecting farmers



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Access to Land and Water for Urban Vegetable Farming in Accra

There are two major categories of urban crop farming in Accra: *household gardening*, which takes place in and around homes, and *open-space farming*, which takes place on lands some distance away from human dwellings, along drains, stream banks, road sides, abandoned waste dumps, around public buildings, wetlands etc.

Tenure arrangements on urban open spaces vary. In general, no open-space farmer owns the land cultivated, and hardly any of them pays a fee. Most of these lands are owned by the National government, Municipal authorities, or individuals. The situation is different in periurban areas where farmers might own their land or are engaged in 'abusu' and 'abunu' tenancy arrangements (share cropping). In the latter case, farmers give a third and half respectively of the total farm produce to the landowner as payment for the use of the land (Obosu-Mensah, 1999; Asomani-Boateng, 2002).

In urban Accra, farming on open spaces takes place without formal authorisation. Zakaria *et al.* (1998) described the situation as follows: "As the land is not put to any other use, the owners do not bother when farming activities are carried out on such lands until the land is needed to serve some other purpose. Farmers may or may not be given notice to quit the land to make room for any development." Under such insecure tenure conditions, farmers do not invest in farm infrastructure (such as wells or cement ponds), soil conservation or long-term fertility improvement.

in both urban and periurban areas of Accra. These are the *formal* and *informal* access. Though Accra has a formal land delivery system, in the urban areas, this is more or less closed to agricultural uses. In the periurban areas where it is expected to be open to agricultural uses, the procedure is complex, inordinately long, not appropriately efficient or cost effective (Flynn-Dapaah, 2002). In addition, most traditional chiefs in charge of their "stool lands" prefer to sell plots for good prices than to allocate lands for their farming community. For these reasons, farmers in and close to Accra prefer the use of informal arrangements to access land for farming.

A number of informal land arrangements are prominent in Accra. With one arrangement, the land being cultivated is owned or controlled by a government agency that voluntarily gives it out, sometimes through the mediation of a third party, to farmers for temporary use (Obuobie, 2003). In terms of land access from the perspective of property regimes, lands cultivated under such a tenancy arrangement could be called "public, open-space property" (Flynn-Dapaah, 2002) and include undeveloped spaces around public institutions, along drains, banks of streams and rivers, wetlands, etc. Farmers may or may not be given any notice to quit the land to make room for other development.

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ACCESS TO LAND FOR FARMING

There are two main ways by which farmers can gain access to land for farming

The benefit to landowners is that continuous cultivation keeps the land clean of weeds and prevents encroachment as well as urban sprawl as the cultivators provide

Several informal land arrangements are prominent in Accra

the “on-site enforcement against unofficial settlement”(Obuobie, 2003; Flynn-Dapaah, 2002). This is mostly practised by open-space farmers in the low-density areas of the city. These farmers are either engaged in seasonal farming (growing crops such as maize, tomatoes, pepper, okra, groundnut etc), relying entirely on rainfall or are engaged in irrigated vegetable farming (growing crops such as lettuce, cabbage, cucumber, spring



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Wastewater can be used for irrigation of the crops

onion, cauliflower, green pepper) when there is a water source nearby.

There exists another similar informal arrangement, only in this case an individual or a private organisation owns the land. Access to land is either through direct negotiation involving the prospective farmer and the landowner or caretaker, or through the mediation of a third party. This arrangement is used both by urban and periurban farmers. Household farmers are normally tenants of the houses and cultivate the land around it and therefore do not pay for such cultivation. Some open-space farmers pay a token depending on the individual landowner. But more often than

not individual landowners, like government agencies, view farming on their land as a way of preventing encroachment. Periurban farmers engage in share cropping arrangements with individual landowners as a means of payment for cultivating the land.

Access to land could also be obtained through customary land rights. Contrary to other sub-Saharan African countries, this form of land tenure is legally recognised in Ghana according to the National Land Policy and the Land Title Registration Law (PNDCL 152). Customary land right is mostly found in the Eastern part of Accra, between Labadi, the Ghana International Trade Fair Centre, Burma Camp and Teshie. The owner of the land is the *La stool*, which is one of the customary Ga chieftaincies in Accra (Zakariah *et al.*, 1998). The farmers on the *La stool* make a customary claim to their holdings which were acquired through inheritance following a construction of social/political history based upon the rights of first occupation or proving kinship to the first occupier (Flynn-Dapaah, 2002).

For sometime now, there have been a series of land conflicts surrounding the ownership and right of access to some of the *La stool* lands. Although Ga farmers continue to farm on inherited *La stool* lands behind the trade fair centre and adjacent to the Burma camp military base, much of the lands they claim as their own has been officially earmarked for the military, which has recently revoked its interest in the land (Flynn-Dapaah, 2002). Flynn-Dapaah (2002) reported a representative of the Department of Town and Country Planning indicating that most of the land will be re-zoned for housing, which endangers the farmers' livelihood. The Ga farmers are determined to contest any compulsory claim to the land, since they have never been compensated according to the

legal requirements for compulsory acquisition of land. But city officials claim the same land has already been zoned as a green belt (Flynn-Dapaah, 2002; Obuobie, 2003). In fact, parts of the area have a very high groundwater table and are unsuitable for building purposes.

With the exception of farmers cultivating on lands under high-tension electrical cables at Dzorwulu (an open-space farming site), and household farmers who have rented the houses and land on which they cultivate, none of the urban farmers in Accra are known to possess any document supporting arrangements on cultivation of the land. The Accra Metropolitan Assembly (AMA), the city authority, and its municipal Food and Agriculture Directorate, which is part of the decentralised Ministry of Food and Agriculture (MoFA-AMA), are currently developing legislation to create green zones specifically for urban and periurban farming. Building permits can be refused in designated green-belt areas to give existing farmers the land security they need. The success of this initiative will depend largely on the value of the land.

ACCESS TO WATER FOR FARMING

Apart from land, availability and access to low-cost water for farming in the urban and periurban areas of Accra is another key factor affecting farmers. Water access allows vegetable production in and for the lean season and is crucial for profit generation. Household farmers use mainly pipe borne water and *greywater* (water from bathrooms and kitchens); open-space farmers use drain water, streams/rivers, pipe borne water and hand-dug wells, in decreasing order; periurban farmers rely mainly on rainfall and streams/rivers.

There are no formal procedures that farmers follow to get water for farming. Pipe-borne water is perceived to have the best quality,

but is expensive and therefore unaffordable to many. For household farmers, the houses in which they live are usually connected to the city water supply system. Though pipe-borne water supply is meant for drinking, cooking and other domestic or industrial uses, household farmers may extend it to watering of perishable crops and pay for it. Maize and other staples are not irrigated. However, due to the difficulty in meeting the increasing domestic and industrial demand, the Ghana Water Company Limited (GWCL), has cautioned the public to put a stop to the use of treated water for irrigation purposes. The alternative can be *greywater*.

Open-space farmers frequently irrigate their crops with polluted surface water. They locate their farms along major drains and streams to access water for irrigation. Each farmer controls, more or less, the portion of the drain or stream that is within the span of his farm and regularly maintains water drawing points within the drain or stream for fetching water effectively with watering cans. But there could be also two or more farmers drawing water from a given point along the drain. In the wet season when there is enough water in streams/rivers or drains, every farmer is free to fetch water from any point along the drain or stream but there are restrictions in the dry season, which sometimes lead to conflicts. Stream/river and major drains have continuous flow and farmers pay no fee for using the water. Farmers hardly use protective clothing, although some of the drains contain pure and untreated wastewater during the dry season. Due to tenure insecurity farmers show little interest in infrastructure to increase consumers' safety (e.g. via on-farm wastewater treatment ponds).

It is envisaged that as soon as tenure security is achieved, farmers would invest in wells or on-farm wastewater treatment, where through sedimentation or filtration the level of faecal contamination of the water could be reduced (Drechsel et al., 2002).

Concerned with consumer safety and the health of the city dwellers, the city authority, AMA, enacted a by-law: "No crops shall be watered or irrigated by the effluent from a drain from any premises or any surface water from a drain which is fed by water from street drainage" (Local

Government Bulletin, 1995). This concerns especially those vegetables and other crops likely to be eaten raw. Compelled largely by lack of affordable and good quality water for irrigation, and sometimes by the nutrient value of wastewater, the farmers continue to grow vegetables with wastewater and the by-laws are not enforced for reasons including lack of sufficient personnel and finance.

Open-space farmers using piped water are in groups and share the bill according to the number of beds each farmer manages. A farmer wanting to join a group has to discuss with the group leader and agree to the approved agreement for sharing water bills. Again, due to increased domestic and industrial demand, the GWCL is in the process of disconnecting farms connected to the pipe-borne water supply system. A personal visit to some urban farming sites (between August and September, 2003) revealed that a number of farmers could cultivate only part of their field mainly due to the lack of sufficient water. In view of the problem of water availability and accessibility for farming, the MoFA-AMA directorate as well as the Council for Scientific and Industrial Research (CSIR) in Ghana suggested exploring the option of ground water use in urban farming.

THE DIMENSION OF GENDER

There are some gender differences in irrigated vegetable farming. It is an established fact that in Accra, and other cities in Ghana, nearly all the farmers are men (Obosu-Mensah, 1999). Women dominate the marketing of the produce with a few men playing the role of wholesalers and very few found as retailers in markets. A focus group discussion and interviews with some key informants (male and female farmers) revealed a number of reasons for this gender division. They include (1) the arduousness of farm work, especially land clearing, land

preparation, carrying watering cans for watering and spraying; (2) general lack of interest in farming and (3) cultural definition of gender roles—men do the farming and women do the selling. The study further revealed that, unlike in rural areas, there is no gender bias in term of access to land and water for urban farming.

RECOMMENDATIONS

The majority of urban and periurban farmers in Accra do not own the land on which they cultivate. Access to land is mostly through an informal arrangement.

Open-space farmers often irrigate their crops with polluted surface water

Almost all household and open-space farmers do not pay any fee for cultivating the land but most periurban farmers do, usually through a traditional arrangement. Equally important for cash generation is water access. However, availability and access to low-cost, good quality water for irrigation purposes raises colossal difficulties.

In the light of this difficult and insecure situation it is reasonable to suggest that the agency responsible for agriculture in the Accra Metropolis teams up with farmer groups to seriously address problems of land tenure. Urban authorities could provide protected user rights to cultivators, especially those who guard the city against urban sprawl and encroachment. One major issue would be to agree on a minimum period (in years) a farmer is allowed to cultivate on a piece of land belonging to the municipal government or a public institution. This could be done through dialogue on a multi-stakeholder platform.

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