Land Tenure Security and Urban Agriculture: Focusing on the Vegetable Cultivation in Morogoro Municipality, Tanzania

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ABSTRACT
Land tenure insecurity is one of the challenges facing urban dwellers given the increasing demand on land as the population increases in Tanzania. The main objective of this study was to examine the tenure security within urban agriculture on access to land. Specifically, it assessed different ways farmers' access land for cultivation, the extent of land security among farmers, and implications of land tenure insecurity on vegetable cultivation. The study employed a cross-sectional design whereby snowball sampling was used to select 69 male and female vegetable farmers at the open space in Morogoro Municipality. Data was collected through household survey, in-depth interviews, observation and informal conversation. Results indicated that farmers access land through informal means by renting from the landlords who have legal land rights. Hence, social relationships have become important to access land while close relationship with the landlord determine the extent of land security a farmer has. Lastly, land tenure insecurity not only affects gardener's vegetable cultivation but also creates uncertainty and hatred between farmers and their landlords. It is therefore imperative to integrate urban agriculture into urban development planning to enhance land tenure security of farmers since it has become permanent economic activity.

Keywords: *Land, Access, Tenure security, Urban agriculture, Vegetable cultivation, Informal land rights*

INTRODUCTION

Globally, there are more people in urban areas than in the rural areas (United Nations, 2019), urban areas are expected to add 2.5-3 billion people, 90% of whom will be in Asia and Africa (UNDESA, 2018). In Tanzania, the percentage of people living in urban areas has increased from 18.8% in 1990 to 33% in 2016 (MoHCDGEC, 2016). It is also expected that by 2050 half of the country's population will reside in urban areas (Wolf et al., 2018). There is also significant population increase in

Morogoro Municipality from 74,114 in 1978 to 117,760 in 1988, 227,921 in 2002, 315,866 in 2012 (URT, 2012; NBS, 2015).

The increasing population in urban areas does not match with the demand of food supply of urban people and more land is consumed for urban development (World Bank, 2013; Wenban-Smith et al., 2016; UN-HABITAT, 2020). For example, in Morogoro Municipality, the built-up areas have expanded (Ernest at al., 2017; Sumari et al., 2019) from 2.85% in 2000 to 4.14% in 2010 and 9.45% in 2018 (Sumari et al., 2019). However, with the increasing population, access to urban land for agricultural activities is becoming complex (Pauleit et al, 2019), this left urban farmers land insecure. Tanzania is no exception of this, non-agricultural economic activities are progressing in urban areas while urban agriculture is also growing (World Bank, 2015).

Urban Agriculture (UA) in Tanzania entails cultivation of crops, vegetables, herbs, flowers and keeping livestock in urban areas (Foeken et al., 2004). Studies have indicated economic (FAO, 2012; Mntambo, 2017), food security and nutrition (Pillai, A et al., 2016.; Malekela et al., 2018) as well as social (Slater, 2001; Mntambo, 2021, 2017) benefits of UA. Urban agriculture is within informal sector activities and has a conflicting interest with the Local Government Authorities (LGAs) over land use for cultivation (for instance limited space for UA, cultivation close to water sources-below 60 metres as well as environmental degradation). Currently UA displays the characteristics of shifting cultivation, that is, due to land insecurity, when evicted from one location, they tend to shift to another location and continue with the cultivation (see Halloran & Magid, 2013). Despite the land insecurity, UA is expanding as the cities grow and has become an integral part of the urban food system (FAO, 2012). For example, it is estimated that in Dar es Salaam over 650 hectares of land is used for agriculture activities (Ibid). Adding to that, UA in Morogoro Municipality employs 32% of the population (URT, 2012).

Land tenure security and Urban Agriculture

Scholars have documented land tenure security and urban agriculture in sub-Saharan Africa (Simiyu, 2013; Gore, 2018; Sucha et al., 2020). For example, Sucha et al., (2020) argued that in South Africa the concept of land tenure security in UA is focused on legal status rather than other factors such as perceived and de facto tenure security. The later factors

are important in influencing investments in urban agriculture. Simiyu (2013) researched access to and utilization of land by food producers in Urban Kenya. He stated that social connections and informal use of the land around the neighbourhood are one of the ways farmers access lands. Based on urban farmers in Kenya and Zambia, Davies et al., (2021) state that land tenure insecurity is one of the barriers that impact the ability of farmers to expand production. Moreover, in Nigeria land tenure insecurity that prevails among urban farmers cause stress and inability to invest more (Lynch et al., 2001). From the ongoing argument land tenure security in urban agriculture is important just like in rural agriculture. This is because, secured land tenure improves the ability to invest in the land, access to credit, sustainable management of the land and others (World Bank, 2003; Sucha et al., 2020; Furaha, 2021).

In Tanzania, UA is mentioned in different policies papers as the contributor of food, income and employment but also the conflicting interest on land is noted. For example, URT (1997: 30) states that 'urban agriculture has the potential to provide employment, income and supplementary source of food supply [and] in their present form agricultural activities often conflict with the proper planning of urban land uses'. The 1997 National Land Policy states that 'UA is not a principal function of towns [and] the government will continue to regulate its practice and ensure that it does not disrupt planned urban development' (URT,1997: 30-31). The 1992 Town and Country Planning (Urban Farming) regulations, restricts urban farmers to occupy or use more than three acres of land. From these policy statements, the intention is to regulate UA so that it does not disrupt the urban development planning. Priorities on land use is given to other development activities such as (housing, industries, school projects just to mention a few) neglecting agriculture (Foeken et al., 2004). Contradictions and inconsistency of policies at national and municipal levels have left urban farmers land insecure. For example, in Dar es Salaam about 5% out of 36,551 of the urban farmers have certificate of land ownership (URT, 2007). This means that, 95% of the urban farmers are land insecure thus they access land through renting, borrowing or encroaching. However limited tenure security affects their agricultural production since they cannot expand their cultivation and also affect the choice of crops, mostly preferred is horticultural crops (leafy vegetables) which are short term (see McLees, 2011), they cannot access credit and limit their ability to

protect the environment. FAO, (2011) indicates that unsecured land tenure is one of the constraints in achieving sustainable urban agriculture while demand for food increases areas for agricultural land diminishes.

The issues of land tenure security are well documented in Tanzania but focus is on rural agriculture, property rights (housing), commerce and others, little attention is paid to UA. Missing out land tenure analysis in UA limits the understanding of the dynamics of informal arrangement as well as the survival of urban farmers. The current study fills the knowledge gap by examining the concept of tenure security within UA. I draw on the informal arrangement of the farmers on access to land and explore how it affects vegetable cultivation. Different ways of how farmers access land for cultivation, the extent of land security among farmers and the implications of land insecurity on vegetable cultivation are explored.

Theoretical Framework

To understand the land tenure security in urban agriculture land tenure, land tenure security, and access are the concepts explored in the study. On one hand, tenure security is the land rights occupied by a person which creates self-assurance for the use of the land and enjoying the benefits of the land (UN-HABITAT, 2004; 2011). On the other hand, land tenure is the relationship between people and land, whether legally or customarily defined (FAO, 2020). It determines who can use what resources, for how long and under what conditions and guarantees a person from any form of eviction. Land tenure can also be regarded as the social relations comprising rules and regulations about land use, control and transfer of rights to others (UN-HABITAT, 2011). Other scholars see land security as a relative concept and the matter of how people perceive land rights (FAO, 2002; UN-HABITAT, 2004, 2008; Payne, et al., 2009). From these perspectives, land tenure is relational and multidimensional which comprises social, economic, legal and political dimensions. In Tanzania legal and customary laws oversee the land tenure system, that is access and other rights to land falls within either of the tenures (NBS, 2019). In this context, land tenure security is guaranteed by formal rights as well as customary rules. However, there is no clear distinction between the two as both may coexist within the same land tenure arrangement (Tsikata, 2003). In this case, exploring land tenure security within legal lens is likely to misses out other informal arrangement and how it produces security over land which is important for urban farmers who are land insecure.

Access is related to property, which implies a person's right to claim the use of things such as resources (Ribot, 1998). In this context a claim is enforced in society either through law or custom, and a right is a fixed concept. Ribot and Peluso's (2003:153) theory of access states that 'access is the ability to benefit from things including material objects, persons, institutions and symbols. While the first definition of access focuses on the *right* to use resources (Ribot, 1998), the latter shifts the focus from the *right* to the *ability* to benefit from things (Ribot and Peluso, 2003). The term 'ability' is broader than 'right' because the later involves a range of social relations (Ibid). Understanding access as ability provides a useful framework for examining how power relations shape the ways farmers access resources, and calls for the analysis of different ways farmers access land.

Given the informal nature of UA I analyzed access to land in the lens of Ribot and Peluso's theory of access (2003) to understand the farmers' ability and the different ways they access land rather than focusing on land right. The theory argues that negotiations within social relationships to access resources are important rather than the legal rights. Within informality social relations is one of the determinants to access resources. Kabeer (1999) argues that social relations determine what rights and control of resources are available to people. Urban agriculture is considered among the informal sector activities (Howorth et al, 2000) thus it lacks formal allocation of resources such as land. Hence informal arrangement in accessing resources for agricultural activities (such as land) prevails. The theory of access is relevant to my study because farmers at the study area do not have formal land rights. Therefore, the theory provides the lens beyond legal rights to understand the dynamics of access to land within the informal tenure.

METHODOLOGY

Study Area

This study was conducted in Morogoro Municipality at the open space where male and female cultivate leafy vegetables. Morogoro Municipality is in Morogoro Urban District, one of the eighty districts in Morogoro Region. The study was conducted in Kichangani ward one of the most urbanized wards of the Morogoro Municipality (Sumari et al., 2019), out of 29 wards of the municipality. Agricultural activities is common in the municipality, for example there is an increase of 428.9 hectares in 2005/06 to 641.9 hectares in 2009/10 of land which is used for

agricultural activities in the municipality (URT, 2012). The study was conducted at the open space namely: Fungafunga Elderly Centre (FEC) in Kichangani Ward. Different leafy vegetables are cultivated such as Amaranthus sp (Mchicha), Swiss chard (Figiri), Chinese cabbage, Pumpkin leaves (Majani ya maboga) and Solanum nigrum (Mnafu).

Design and Data Collection

The study employed a cross-sectional design for data collection, this design was the appropriate as data were collected at single point in time. There was no sampling frame of urban farmers in Kichangani Ward given the informality of UA. Therefore, I used snowball sampling method to make initial contact with few farmers who were relevant to the topic and then established contacts with others (Bryman, 2012). Through this procedure I identified 69 male and female farmers in FEC.

Primary data was collected through household survey, in-depth interviews, observation and informal conversation that addressed the land tenure security in gardening activities. The latter method was relevant given the land insecurity farmers has which ultimately affected how they welcome a researcher. Within this, informal conversation was used to establish friendly connection with the farmers before household survey and interviews. Key informants' interviews were conducted to Municipal Officer, Ward Agricultural Officer, Ward Counsellor and NGO staff. Secondary data including articles, reports and policies related to land tenure and urban agriculture in Tanzania were used.

After the household survey, the questionnaires were checked for errors. I used the Statistical Package for Social Sciences (SPSS) Version 20 to enter and analyse the quantitative data to produce frequencies and percentages of different ways of accessing plots. This study is mainly qualitative thus recorded interviews were analysed under the main themes of this study: access to land, security of land, effect of land insecurity, and social relationship.

FINDINGS AND DISCUSSION

Socio-demographic characteristics of farmers

This section describes the socio-demographic profile of 69 male and female farmers. It consists education and number of years in agriculture. Education facilitates the production of urban agriculture (Foeken et al, 2004). In this study, majority of the farmers have completed primary

education, few have attained secondary and college while 12.9% have not attained education. The findings are similar to other studies in UA such as Foeken et al, (2004); Zella, (2018). In the study area farmers have practiced vegetable cultivation from 6 months up to 30 years. This shows that not only that they are experienced in the practices of UA but also it is not a transitory rather a permanent activity. Lastly vegetable cultivation is the main source of income among 69 farmers although 62.3% have diversified into other income generating activities.

Different ways farmers access land

This section explores the dynamics on how farmers access land (gardening plots). In this paper, gardening plots is also referred to land. The main finding is that farmers access land through informal means. That is, there is no any formal legal binding over the use of the land between the farmers and the landlords, this corroborates with UA literatures (McLees, 2011; Halloran and Magid, 2013). In this arrangement farmers are granted temporal use rights by the landlords. This implies that they can be evicted from the land at any time, farmers informal tenure security lies at their landlord mercies. Table 1 present different ways of accessing gardening plots:

Table 1 : Mechanisms of accessing plot (N:69)

How plot was accessed	Frequency	Percentage
Through friends or relatives	47	68.1
Direct to the Elderly Centre (Manager)	18	26.1
Being a labourer or food vendor	4	5.8
Total	**69**	**100**

Source: Mntambo, (2017)

Majority of the farmers have used friends or relatives to get introduced to the manager at FEC to get available plots (Table 1). While others used different means as being a labourer or selling food to the farmers. All these are informal means of accessing land. This study argues that, accessing land through friends or relatives, being a labourer and/or food vendor implies the significance of establishing a social relationship with the existed farmers. Through this way, a new comer is being informed by the gardener about the availability of vacant plot and/or get introduced to the landlord. Therefore, establishing a relationship with a gardener is crucial step for accessing gardening plots. This implies that, social relations are important access mechanism within the informal land tenure,

this was also cited in the introduction that land tenure is relational. Table 1 justifies that there is more to legal and economic means of access to resources, that is social relations is emerging as the important entry point for people who do not have formal land rights. The following statements from male and female farmers consolidates the significance of social relationship Mntambo, (2017: 155-157):

> I knew a gardener who was employed at the centre. I asked him how to get plots at FEC and he wanted a small token as motivation to connect me to the officer who was allocating plots. (Peter)
> I was hired as a labourer to do the irrigation. After two years, I rented five plots. (Jamal)
> I had been selling snacks here, I was known to many farmers so one of them helped me to get the plots. (Mwanahamisi, Farida)

The above declarations confirm that farmers access land through informal means while a key starting point is to establish a relationship with the existed gardener as noted earlier. Informal conversations and interviews revealed that over the past six years, access to gardening plots has become more difficult at the FEC. This is because the land is fixed while more people are interested to engage in vegetable cultivation at the centre since FEC is very popular site for leafy vegetable cultivation in the Municipality. Therefore, a lot of customers within the municipality (retail and wholesale) come to buy vegetables and at times buyers from Dar es Salaam. This makes Fungafunga Open Space a strategic location for vegetable cultivation. This has made access to land complex thus new entrants have to employ different strategies to access land. As indicated in the Study Area that Kichangani ward is one of the wards mostly urbanized in the municipality; hence it increases the vulnerabilities of farmers over land use (Halloran and Magid, 2013). Increasing competition over land access at the FEC created new routes to access land, that is subletting arrangements to either increase the number of plots or for newcomer to access plots temporarily. It was found out that about 16 percent of the farmers rent their plots through other farmers 'subletting'. This is a local internal arrangement between farmers, the landlord is unaware of the arrangement. The gardener who sublets the plot(s) uses the arrangement as the additional source of income, while the subletter use this as a way to have access more plots or start vegetable cultivation for a new comer. However, in this kind of arrangement the subletter is more vulnerable because the landlord is not aware of the arrangement. Despite this, it is found out that there are farmers who have

cultivated at the FEC for over 20 years. This implies that, despite the land insecurity farmers continue to cultivate at the centre. Timely payment of the plot rent was mentioned as critical factor for retaining the plots. From the ongoing discussion there are other subtle ways in which land is accessed and retained which ultimately determines the degree of security among farmers. The coming section presents the extent of land security for some of the farmers.

The Extent of Land Security: Close Relationship with the Landlord

Despite the farmers land insecurity, it was noted that, the close relationship with the landlord at the FEC enhance the land security. During the fieldwork I have noted that there was a threat from FEC to evict farmers so that they can utilize the area for the same purpose, vegetable cultivation. Thus, it came to my attention that a close relationship (that is being related to any of the employees at the centre) is a bonus to access more plots and retain them. It was reported that employees of the FEC are being allocated their own plots for cultivation, and thus, they have influence over who access land. I present a case of a female gardener whose mother is working at the FEC:

> [My mother works as a nurse at the centre and we have lived in this vicinity since my childhood. I started helping her in the garden when I was young. Later she helped me to get plots here]. (Irene). (Mntambo, 2017: 163)

Irene has more than 20 gardening plots. She is well-known, successful and respected female gardener at the FEC. Informal conversation revealed that she was not worried about the FEC threat to evict farmers rather the eviction will only reduce her number of plots. This is because her mother is still employed at the centre therefore, she will still have access to her mother's plots. Another case is a male gardener who was employed at the centre and his wife is still the employee at the centre. Although he has retired from FEC, he still retains about 30 plots allocated to him while he was an employee together with his wife's plots. He is also not worried with the threat to be evicted from the land, he said:

> I am the child of the Fungafunga family; no one can evict me here. (Jacob). (Mntambo, 2017: 164)

The above statement utters the sense of security, that is the male gardener still feels he belongs to the FEC. This is because he still has the land use

right given his previous employment at the centre as well as his wife current employment at the centre. The case of male and female gardener presented here suggests that not all farmers have the same land insecurity. The two farmers are secured than other farmers who are more vulnerable. The two farmers are successful in vegetable cultivation primarily because they have more plots than others. For example, they can harvest up to 2000 bunches of vegetables per crop cycle compared to a gardener with 1-5 plots whose harvesting can reach 300 bunches. These two farmers can supply in large scale, a male gardener has a tender to supply vegetables at the factory while the female gardener has a good network of customers from Dar es Salaam especially during the rainy season. This implies that access to FEC authorities has increased their chance of accessing and securing more plots ultimately it has increased their vegetable production. This means that farmers land security led to investing more on inputs such as improved seeds and fertilizers to increase production.

The previous section and the two cases present the dynamics of access to land and security among farmers. It still confirms that social relations are important to access and retaining resources. However, other farmers who do not have close relationships with the landlord they end land insecure and vulnerable hence they cannot expand their vegetable production. It also shows that, although informal networks are the major means of accessing land in UA (see McLees, 2011), there are other ways which can create the possibility of land security within the informal arrangement. The following are the estimates of the plot distribution at the FEC:

Table 2: Plots distribution at the centre

Number of plots	Female	Male
Fewer than 5	7	21
5-10	4	19
11-16	5	11
17-30	1	1
Total	17	52

Source: Mntambo, (2017)

As stated earlier, the two farmers with relationship with FEC employees have more plots while majority of the farmers have between 1 and 10 plots (Table 2). Having more plots is a buffer to vegetable cultivation as the above two cases present. Having secured land is important because farmers can invest more in the cultivation hence increasing vegetable

production. Moreover, vegetable cultivation is lucrative since Morogoro Municipality is closer to Dar es Salaam City which has high demands for fresh horticultural foods during rainy season. This explains that, farmers with less plots are not only land insecure but also cannot increase their production.

The two sections above presented different access mechanisms and the extent of security farmers have. Using the Access Theory (Ribot and Peluso, 2003) lens to explore the land tenure among farmers the study found out different strategies farmers employ to secure temporary access to land and the importance of social relationships. Majority of farmers are aware of their land insecurity but they still employ different ways to gain more plots even if it is for temporary usage. This implies that UA is not a transitory activity and has important contribution to the lives of people. The last section presents what it means to be land insecure in vegetable cultivation.

Implications for Land Tenure Insecurity on Vegetable Cultivation

Limited expansion of vegetable cultivation

UA literature in Tanzania indicates that, urban farmers face the challenges of insecure land tenure (Foeken et al. 2004; McLees, 2011; Halloran & Magid 2013; Mkwela, 2013; Namwata et al. 2015; Mntambo, 2017). They have limited formal rights over the use, control or transfer of land thus they rely on informal land rights with the landlords as stated earlier. For intra-urban cultivation, limited land rights affect their choice of the type of crop, for example farmers opt for short-cycle leafy vegetables (McLees, 2011; Mntambo, 2017). This is because, farmers fear that they might be evicted from the land hence they cannot cultivate long-cycle crops. This study notes that with limited land tenure farmers are facing constant fear from being evicted from the land, Mntambo (2017: 104, 159):

> *Mguu mmoja ndani mwingine nje*, ['one leg inside and the other outside', meaning that life is uncertain so one must be prepared for any outcome]. It's hard to continue investing in cultivating vegetables. (Julius)

> Land insecurity is a big threat. I do not know how I will cope with life if we're evicted from here. My life depends on this garden. (Mwantumu)
> The threat of eviction is a big challenge because we do not know about tomorrow. Once you harvest your vegetables you quickly sow other vegetables so that no plot is left vacant. (Lucy)

UN-HABITAT, (2008: 14) states that 'people who fear the eviction are not likely to operate to their maximum potential, or invest in improving their…farms'. This is similar to the above two statements which indicate the confusion of the farmers and the marked effects of the land insecurity towards farmers. They cannot invest more since their future on the land is precarious. This is similar with McLees, 2011; Halloran & Magid, 2013 who stated that land tenure insecurity affects UA production as it limits farmers ability to invest in the improvement of the land, inputs and infrastructure. For instance, McLees states that water is very limited during the dry season, but farmers cannot invest in dipper wells since they are not certain about their future on the land. During the fieldwork, farmers reported they lack motivation to use improved seed, fertilizers and the alike. So that, in case they are evicted from the land they will not incur huge loss. Some of the farmers explains their uncertainty about the land, Mntambo (2017: 159):

> There is chaos here – we're just waiting for the outcome. You cannot keep other people's property by force when they want it back. We're waiting for the outcome of their decision. (Farida)
> This area belongs to the government, and if they decide to take it back there's nothing we can do. (Rahma)

The above statements confirm that farmers are uncertain and worry about their future on the land as well as their source of livelihoods. In other words, the above statements indicate that farmers have use rights agreement with the landlords to only use land for the meantime. In this case, there is no official agreement rather the agreement results from social negotiations. The current study notes that land insecurity is one of the factors that majority of the farmers have diversified their income generating sources. About 62.3% have diversified into other Income Generating Activities (IGAs) such as cooking and selling snacks, renting out a motorcycle, making soap, running a small shop, and hawking vegetables on the street. Despite this vegetable cultivation is still preferred as evidenced by farmers who argued that it is profitable when you have more plots and land secured. On the contrary, interviews with the key informants revealed the following Mntambo (2017: 107-110):

> I am aware that there are urban farmers. How are we going to get vegetables if they do not cultivate them? But they need to cultivate and follow the [by-laws]. One of them is that cultivation should take place 60 meters from the river. (Municipal Director)

> We do not support farmers who cultivate leafy vegetables because they are for home consumption. There are no leafy vegetable farmers who can invest on a large scale. We support farmers who cultivate 1-3000 acres of land. (NGO staff)
>
> There is no agriculture in town, there are only gardens. Land in town is supposed to be used for residential and commercial purposes. We do not allow crops which can hide bandits such as maize. Farmers are important in town, since they supply food, but we do not allow them to cultivate permanent crops. (Ward Councillor)
>
> Municipal or Ward offices do not give agricultural inputs to urban farmers. We only offer advice to farmers. (Ward Agricultural Officer).

The above statements indicate different perception from different stakeholders on UA. Despite the fact that they acknowledge the presence of urban farmers their statements indicate lack of Local Government Authorities (LGAs) support to urban farmers. As a result, farmers are faced with many challenges and land tenure insecurity is one the major challenge.

Uncertainty among farmers

The previous section indicated different impact of insecure land tenure on vegetable cultivation such as limited agricultural investment, diversification into other IGAs, limited support from the LGAs and others. As stated previously FEC was threating to evict farmers from the land so that they can invest in vegetable cultivation. This has created a lot of uncertainty on farmers Mntambo, (2017: 159-160):

> [The centre officials want to take the land after realising that gardening is profitable, this might bring conflict since some of us have cultivated here for many years when it was a forest].
>
> The threat to evict the farmers is based on selfishness. The rent we pay to use the plots helps the elders. The elders live in a good environment, but in the past when this area was forest it was unsafe to pass through here. We have cleared the forest and now they want to evict us.

Farmers who have started cultivation at the centre many years ago feels that they have invested so much labour for clearing the land, now the land is good for any activity hence the value of the land has increased. This indicates sense of informal ownership although farmers do not have the power to hold the land. McLees (2011) argues that the relationship

between landlords and urban farmers is based on unequal power relations; landlords have more power than farmers as they own the land, which gives them the right to take it back at any time. During the fieldwork there was no any physical conflict observed however fear and tension among farmers, and hatred towards the landlords was noted since farmers are worried about their future.

On the whole, this paper has shown that among 69 farmers participated in the study all access land through informal arrangement through social connections. This confirms that informal ways of access to land is part of the land accessibility. Thus farmers only have temporal use rights that make them insecure and vulnerable. UA is not only ignored in policy papers but also stakeholders, this is similar to other studies is Tanzania (Foeken et al. 2004; McLees, 2011; Halloran & Magid 2013; Mkwela, 2013; Namwata et al. 2015; Mntambo, 2017). Within this situation, urban farmers cannot invest on improvement of the land, agricultural inputs or infrastructure (McLees, 2011; Halloran & Magid, 2013; Mntambo, 2017). Insecure land tenure has so many implications on farmers as noted in this section which ultimately the chance to improve their source of livelihood is jeopardized.

CONCLUSION

This paper examined the concept of land tenure security within urban agriculture focusing on vegetable cultivation. It draws on informal arrangement farmers have to understand how they access land, the extent of land security among farmers, and implications of land insecurity to vegetable cultivation. This paper has demonstrated that farmers are land insecure, that is, they rent land from the landlords who have the formal land right. Farmers are only offered the temporary use right ultimately, they become land insecure. Thus, social relationship has become an important mechanism for farmers to access and retain land. Hence, the extent of farmer's land security is determined by their relationships with the landlords. I have also shown that land tenure insecurity creates uncertainty among farmers since they are not certain about their future on the land, which also affects their expansion of vegetable cultivation consequently their production is affected.

The evidence presented suggest that despite the complex access to land among farmers, limited support from the Local Government Authorities, vegetable cultivation continue to thrives. Based on the evidence available

UA in general is not a transitory activity as long as it continues to provide income, employment and food to the farmers and to urban dwellers. This calls for a rethink among LGAs since they have a role to play in supporting urban farmers for instance to include UA within urban land planning to make farmers land secured. Hence, they will be able to increase vegetable production, income and become the frontiers to keep the environment safe for urban sustainability.

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