Chapter 6

Participation and Land Access of Urban Smallholder Farmers: Implications for Food Production

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Introduction

Urban agriculture (UA) is motivated by a wide range of factors, including the desire for high-quality food, improved health, environmental considerations, economic incentives including social and individual factors, which may transcend food security and economic gains (Food and Agricultural Organisation [FAO] 2019). Urban farming, often operated by subsistence and smallholder farmers and community groups, play a crucial role in promoting local food production and environmental renewal, thus enhancing food security, well-being and fostering resilience in the face of climate-related disruptions (Eigenbrod and Gruda 2015). These benefits encompass building communities and fostering social capital, reclaiming a sense of belonging, enhancing psychological well-being and cultivating a sense of purpose and self-worth (Battersby and Haysom 2018). Upreti et al. (2018) emphasises UA's role in supplying sustenance and social support in urban areas. Participation in UA is driven by a range of factors, with social and personal benefits frequently surpassing concerns about food security and economic advantages (De Swardt et al. 2005; Nzimande 2017). Although food sovereignty and food security are often seen as antagonistic, participation in subsistence and profitable smallholder farming by citizens may dispel this anatomy. Hence, the recent advocacy by researchers and policy-makers to include agency and sustainability in the definition and pillars of food security is important (Chitja et al. 2016; Clapp et al. 2022). In the context of urban smallholder farming, food sovereignty entails ensuring that farmers have the autonomy and agency to participate in decision-making processes that affect their food production activities. It can be said that food sovereignty entails to "guard and invigilate" the process and power dynamics in the process and value chain of ensuring food security for all. By participating in collaborative initiatives and partnerships, farmers can leverage their collective strength to address common challenges, such as access to land, water and inputs, while also promoting social cohesion and solidarity within urban farming. Participation is defined by the Food and Agricultural

Organisation as the involvement of individuals interested in a particular intervention to respond to their needs or obstacles (FAO 2016). Participation is critically viewed as a form of power due to its potential to empower people and transform their lives through knowledge and skill exchange as well as shared experiences from other actors (FAO 2019; United Nations Development Programme [UNDP] 2012). The idea of food sovereignty in urban food farming embodies principles of self-determination, autonomy and equity in food production and distribution, enabling communities to exercise control over their own food systems.

Farmers in South Africa face numerous challenges which include, but are not limited to: access to agricultural land due to competition for land use for housing development, poor extension services and lack of access to agricultural inputs (Bisaga, Parikh and Loggia 2019; FAO 2019). Land access for farmers has been a challenge for years, especially for women accessing fertile farming land (Asiama 2005; Jacobs and Xaba 2008). Land, often considered a natural resource, is frequently in short supply in Africa, especially in urban areas. This is particularly important for the African population, both economically and socially, since it shapes their identity, cultural practices and social relations (Pattnaik et al. 2018). Land access is a critical determinant of the viability and sustainability of urban smallholder farming. Limited availability of land, high land prices, insecure land tenure and competing land uses, pose significant barriers to sustainable urban food production. Ensuring equitable access to land for smallholder farmers is essential for expanding UA, increasing local food production, environmental renewal and promoting food sovereignty (Blessing 2019). For South Africans, especially farmers, land ownership and accessibility give identity and add-on opportunities to tap in for social and financial opportunities, that is, to use the land as collateral for credit, and to participate in initiatives because of land access and ownership privilege (Bisaga et al. 2019). Despite advancements in South Africa, urbanisation, land ownership and access remain a pervasive challenge, with women smallholder farmers being disproportionately affected due to the pervasive patriarchal land access practices and socially embedded practices even in urban households (Glazebrook, Noll and Opoku 2020). The gender disparity in property access is a critical factor contributing to the broader gender gap in economic well-being and social standing (Hadebe and Mpofu 2013).By prioritising local and appropriate food production, urban food gardens, through land access, could contribute to food sovereignty by reducing dependence on external food sources and promoting food security at the local level (Modibedi, Masakoameng and Maake 2021).

The primary aim of this study is to delve into the participation aspect of smallholder farmers in UA and food production. Additionally, the research examines the access to land for urban farming for both genders as well as the obstacles they confront. This framework centres on the key elements that shape livelihoods within a specific region and highlights both the constraints and facilitators that influence the utilisation of other resources (Morton 2007). In UA, most farmers usually own smaller individual agricultural plots, primarily intended for household consumption and seasonal produce (Kanosvamhira 2019; Kanosvamhira and Tevera 2020).

Most farmers in UA usually have access to smaller individual agricultural plots, mainly for household consumption and seasonal produce (Kanosvamhira 2019; Kanosvamhira and Tevera 2020). Currently, there is a growing trend of women actively participating in social associations and cooperatives to gain access to resources and information and to acquire power (Woolcock 2001). Additionally, both women and men are actively participating in registered cooperatives and new, unregistered farmer's groups, all with a similar objective of gaining access to resources (Gamhewage et al. 2015). Studies have shown that cooperatives that are female-dominated have access to nearby land, compared to those that are male-dominated or equal, and that they are able to acquire larger fields of land (FAO 2016).

Conceptual framework

It has been revealed that individuals' needs and desires are driven by extrinsic and intrinsic motivations. Maslow's theory of needs points out that a person remains at a certain level until their needs are satisfied before stepping up to a higher level (Trivedi and Mehta 2019). The theory consists of five levels, namely psychological needs; security needs; social needs; appreciation needs and the need for self-actualisation. When applied to the context of food security and food sovereignty, Maslow's hierarchy provides a useful lens for understanding the complex interplay between physical nourishment, socio-economic empowerment and cultural identity. At the base of Maslow's hierarchy lies physiological needs which include food, water and shelter (Poston 2009). Food security, defined as the consistent access to sufficient, safe and nutritious food to meet dietary needs and preferences for an active and healthy life, is foundational to fulfilling these physiological needs (Herforth et al. 2020). Without adequate food security, individuals and communities are unable to satisfy their most basic requirements for survival and physical well-being. Thus, addressing food insecurity is essential for promoting human health and resilience.

Moving up Maslow's hierarchy, food sovereignty emerges as a concept that transcends mere access to food and encompasses broader notions of autonomy, self-determination and cultural identity (Trivedi and Mehta 2019). Food sovereignty asserts the rights of individuals and communities to define their own food systems, including the production, distribution and consumption of food, in such ways that are ecologically sustainable (Herforth et al. 2020), socially just and culturally appropriate. By prioritising local and traditional food systems, food sovereignty empowers communities to reclaim control over their food. Food sovereignty entails empowering farmers, particularly marginalised groups such as women, with the autonomy to control their food production, distribution and consumption. This encompasses ensuring equitable access to resources and fostering collaboration within farming communities.

Moving up Maslow's hierarchy, issues of safety and security become increasingly salient (Trivedi and Mehta 2019). In urban areas, where space is limited and land is often scarce, women's access to land for agricultural purposes may be constrained by various social, economic and institutional factors. Limited access to land undermines women's ability to grow food for themselves and their families. Secure access to land and resources is essential for ensuring the safety and well-being of women engaged in food production. Beyond safety concerns, issues of belongingness and esteem are also implicated in women's access to land and their participation in food production in urban areas (Chitja et al. 2016; Herforth et al. 2020). Engaging in agricultural activities provides women with a sense of belonging to their communities and contributes to their social identity and status (Pattnaik et al. 2018). However, social norms and cultural stereotypes may limit women's opportunities for meaningful participation in UA. Participation can be motivated by several factors which are driven by individuals' needs and desires. The current study focussed on the participation and land access of smallholder farmers engaged in UA for food production. To explain the motivations underlying participation, the study draws upon Maslow's theory of needs. This theory suggests that individuals start with fulfilling fundamental physiological needs, such as sustenance, shelter, water and security, and then progress to social interaction needs like self-esteem and personal growth.

Despite ongoing discussions about issues such as gender inequality and resource accessibility, smallholder farmers continue to play pivotal roles in agriculture, despite facing multiple challenges (Ndinda et al. 2021). According to Chitja and Mkhize (2019), gender is part of peoples' communities and their existence which reflect on their role in social structure. When applied to the issue of food security, the Gender and Development framework (GAD) highlights the need to tackle the root

causes of gender inequality, such as unequal access to land, water and other productive resources. Employing this framework in the context of UA necessitates acknowledging and addressing the challenges faced by female farmers, promoting gender-sensitive policies and tackling cultural impediments to women's participation. The GAD approach not only focusses on unequal power relations between men and women, but also on how social roles, reproductive roles and economic roles connect to gender inequalities in households and communities (Voleníková and Opršal 2016). The GAD theory argues that unequal relations limit women from tapping into opportunities and benefits, such as agricultural extension services and leadership opportunities in the development processes, among others (UNDP 2012; UN Women 2018). Moreover, the GAD theory further recognises that patriarchy operates, that is, societal structures that institutionalise male physical, social and economic power over women within and across classes to oppress women (Mwije 2014; UNDP 2012). The current study is grounded based on the GAD theory, since the theory focusses on the socially constructed basis of differences between men and women, furthermore, emphasising the need to challenge existing gender roles and relations to identify the inequalities that constrain women from participating in development (Ragasa, Aberman and Mingote 2019) that is, UA.

Geography

This study was conducted in the KwaZulu-Natal Province, South Africa, focussing on the township of Sobantu, located to the east of the city of Pietermaritzburg. Most of the population in this township found employment as wage workers, with women predominantly engaged in domestic services, while men are involved in urban industry and construction. Agricultural resources, including income derived from small gardens, were primarily supplementary for many households. In the IDP (2020/21) report, it states that elderly retirees with limited educational backgrounds were among the farmers cultivating horticultural crops in Sobantu township (Msunduzi Government 2020/2021). These farmers, predominantly women, tended to possess small plots of agricultural land that they both owned and worked on. However, women often struggled to obtain agricultural inputs. Despite these challenges, urban farmers in Sobantu township demonstrated collective unity and engaged in social groups within their respective wards to address their community and farming-related issues. Collective action is a common practice in many developing countries, particularly in agricultural activities. Overall, this study highlights the importance of collective action in addressing challenges faced by urban farmers in Sobantu township, KwaZulu-Natal Province, South Africa.

Generated narratives

A mixed technique approach to collect data was utilised to ensure the goals of this research could be achieved.The participants in this research were urban farmers who operated community gardens in Sobantu township, Pietermaritzburg. Both primary and secondary sources were used to gather data for this study, with the study area chosen based on local authority community garden activities. A total of 98 urban farmers who responded to a questionnaire survey were used for data collection (Mthuli 2021), and focus group discussions were conducted. These individuals were selected based on their engagement in local authority community garden activities, ensuring that they were representative of the target population. The questionnaire investigated current urban farming practices, understanding of urban farming and resource availability.

Findings and discussions

Participation dimension of Sobantu farmers

The study's results provided insightful information on the patterns of farmers' participation and their utilisation of social organisations and networks to obtain land for farming. With regards to the participation dimension, the study disclosed that a small percentage of farmers (17 per cent) were members of formal groups. A high portion of farmers (68 per cent) indicated their involvement in UA as individuals. This trend could be attributed to their limited access to land, which was confined to the community-designated areas, often encompassing household development zones. A smaller percentage (15 per cent) belonged to informal cooperative groups. Notably, both men and women were actively engaged in registered cooperative groups and newly formed, unregistered farmers' groups. These groups shared common objectives, such as access to land and agricultural resources. By actively participating in agricultural activities, farmers from Sobantu township assert control over their food production activities and promote self-reliance, autonomy and their agency.

The study's outcomes indicated that urban farmers effectively utilised their social organisations and networks to gain access to plots for their agricultural food production. These findings align with a past study conducted by Gamhewage et al. (2015), which observed a similar trend among urban farmers, especially women. Farmers from the Sobantu township have formed farmers' groups to overcome barriers and secure access to urban farming land. These social systems do

not only facilitate land access, they also enable knowledge and skill sharing, contributing to skills development and empowerment among farmers. The establishment of farmers' cooperatives and groups serves as a means of pooling resources and tackling challenges collectively. From the group discussions, farmers indicated that they initially began farming as individual entities. However, over time, a shift occurred and the importance of unity and collective effort among community farmers became evident. Gradually, the farmers started coming together and established farmers' groups that embodied the principles of community engagement and shared resources. Although their reasons for forming and joining these groups varied, they were united by a common desire to achieve sustainable food production in their community. The farmers expressed a deep yearning to be actively involved in their society and to feel connected to the thriving pulse of their community. Within these groups, they discovered not only networks of fellow farmers, but also a collaborative approach to accessing government resources and essential inputs that could enhance their food production.

Despite the formidable obstacles posed by the COVID-19 pandemic, which disrupted the established systems of interaction and compelled several farmers to abandon their participation in farmers' groups while continuing with individual farming practices, the participants in these social farming groups were driven by a shared commitment to community engagement, social cohesion and household food security. These farmers, mostly retired pensioners who rely on government support, found strength and resilience in the bonds they formed through their participation in these groups. They were passionate about ensuring household food security, sharing knowledge, pooling resources and adopting improved practices. The level of participation among these farmers varied based on the scale of their farming operations, as depicted in the accompanying figure. Some farmers engaged in individual farming activities, tending to their plots, while others participated in both individual and group farming endeavours. This diversity begs the question: what motivates urban farming participation?

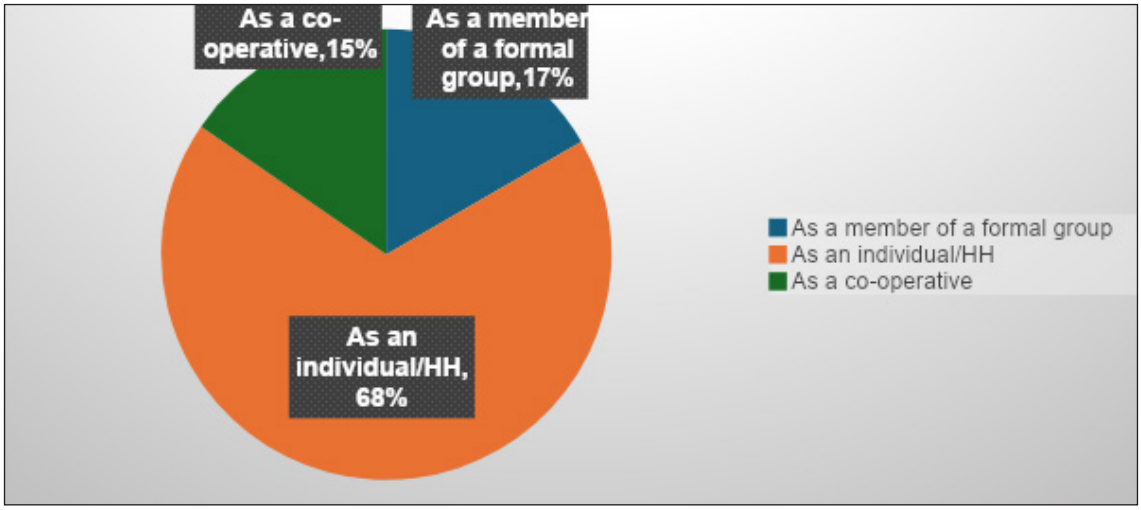

Figure 6.1: Participation of farmers in UA

The following paragraphs will explore the factors that contribute to the engagement of these farmers in the social farming groups. The participation of farmers in social farming groups is influenced by a range of factors that encompass both individual and contextual determinants. Such factors include the socio-economic background of farmers, which may encompass their level of education, farming experience, and financial status.

Diverse motivations behind urban farming participation

In the urban setting, farmers are driven by various motivations and interests when participating in UA. These motivations include financial incentives, social connections and food production. According to the biographies of farmers and township settings, the motivations of Sobantu township farmers are a combination of financial aspirations, social well-being and the timeless act of nourishing through food production. Participation in urban farming empowers individuals and communities to assert control over their food systems, promote food sovereignty and challenge dominant narratives of food production. Despite these motivations, the spirit of ubuntu, which is deeply embedded in the culture, brings forth a sense of social connection and unity. The concept of ubuntu is highly practiced in this township, as illustrated in Figure 5.2 below. The diverse motives behind urban farming participation in Sobantu township each hold their own significance, and a discussion of these motives is provided.

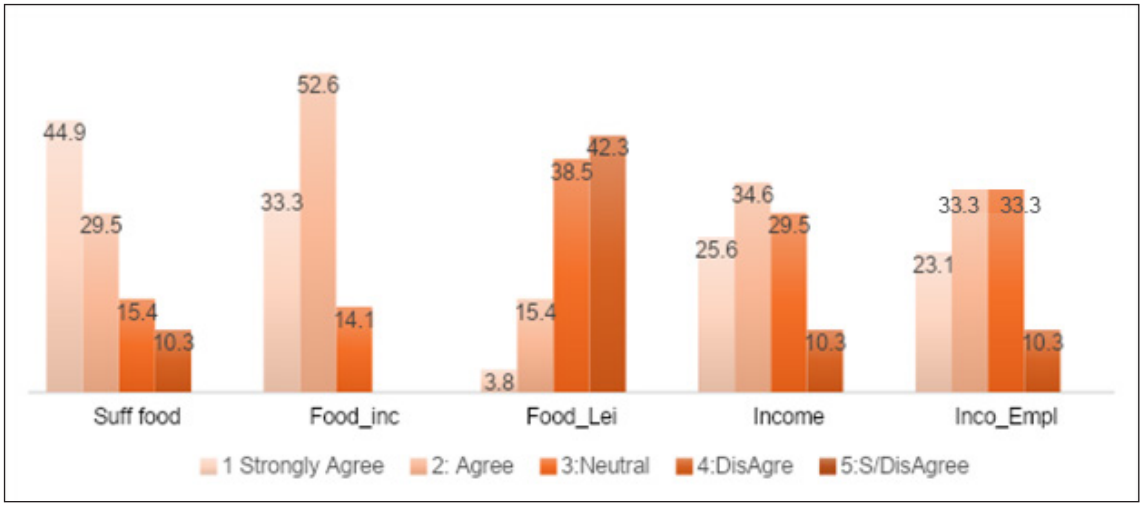

Figure 6.2: Motivations for engaging in UA
Note: Likert scale responses were used where 1=Strongly Agree; 2=Agree, 3=Neutral; 4=Disagree and 5=Strongly Disagree

Household consumption

For most Sub-Saharan African families, smallholder farming is mainly a livelihood survival strategy rather than an occupation. Figure 6.2 above, illustrates the driving force behind smallholder farmer involvement in urban farming. Many of the farmers who participated in the study stated that their primary motivations for farming were to ensure they had sufficient food (44.9 per cent) and to sustain their households' food basket (29.5 per cent). It has been highlighted that smallholder farmers produced crops to make a greater contribution to household food security through small farms, particularly in areas with limited development where populations prefer to eat locally produced food over food that is brought in from elsewhere (FAO 2016). From the focus group discussions, farmers mentioned that:

> Farmer 5: *'Because I'm a pensioner, so I participate to feed my household.'*
> Farmer 3a: *'I engage because I'm a widower who has to feed my family.'*

From the highlighted statements, the farmers' social and financial issues were the drivers to their

participation in urban farming to feed their households. In most African households, elderly and retired women often assume caregiving responsibilities for their families and grandchildren. A caregiving role encompasses various aspects of well-being, including nurturing behaviour, fulfilling roles and ensuring access to food. Moreover, the distinction between households led by a single head and those led by two heads plays a pivotal role in shaping their participation in UA.

Household consumption and income stream

Several studies (FAO 2016, 2017, 2019) indicate that smallholder farmers, especially women, perform most of the agricultural activities mainly for their households' food security, and may produce a meagre surplus to sell in the informal markets. In urban settings, where access to food can be limited, many farmers, especially women, adopt various livelihood strategies, including UA, to support their families and alleviate poverty and food insecurity (Hlahla and Hill 2018). The participation in UA by farmers from Sobantu township is driven by the dual objectives of providing for household food consumption and generating income to meet essential needs. This aligns with broader livelihood strategies observed among smallholder farmers, where agricultural production serves as a primary means of supporting households, particularly for retired citizens like many Sobantu farmers. These farmers engagement in UA complements social grants received by some households, further contributing to food security and economic stability. These findings are like those of Keil, Saint-Macary and Zeller (2013), finding that smallholder farmers produce a variety of crops on small plots of land for their household consumption, with only a small surplus potentially sold to the local community. From the focus group discussions, Sobantu farmers mentioned that:

> Farmer 1: *'I participated in urban agriculture with the purpose of selling the produce, for household consumption and generating income which in terms used to buy other food items which cannot be produced.'*
> Farmer 1a: *'I joined in urban agriculture in order to sell goods, utilise them for my household, and generate income that might be spent on certain foods that are not producible.'*

Household consumption and healthy lifestyle

Even though some farmers (3.8 per cent) would plant enough for food and leisure, 42.4 per cent disagreed with this statement. From the above-highlighted discussions, household food

consumption is the priority and the major motivation behind participation in UA. Other drivers, such as healthy lifestyles and leisure are additional motivations to household food consumption. Only 25.6 per cent of farmers grew crops to generate income, while 10.3 per cent of farmers produced crops to also ensure their subsistence.

From the focus group discussions, Respondents mentioned that:

> Farmer 3: *'The purpose was to make sure that everyone residing at Sobantu have access to food, food which is produced from the community gardens and be sold to the community. Also, was to supply my household and a way to relieve stress level.'*
> Farmer 2a: *'I needed to find the means to reduce stress and provide for my family. In addition, our cooperative wanted to make sure that everyone living at Sobantu could access food that was grown in communal gardens and sold to the neighbourhood especially older citizens.'*
> Farmer 2: *'Urban farms make it easier to get fresh food. Overall, food produced by urban farmers in their communities helps promote healthy living.'*
> Farmer 3a: *'Group members have increased, not just women, now we also have male active participants in urban food production and food gardens.'*

During the focus group discussion, a significant emphasis was placed on the social motives behind engaging in UA, a sense of belonging within their community. This further connected them to each other and fostered a deeper connection to their community.

Income stream and source of employment

Some of the farmers (23.1 per cent) considered farming as their primary source of employment and income, whilst 10.3 per cent of the farmers saw farming more as a leisure than as their primary income stream. This argument is highly supported by several sources (Robertson 2013; Schmidt, Magigi and Godfrey 2015; UNDP 2012), arguing that the large participation is motivated by economic and food security benefits. Thus, understanding the motivations of farmers and the types of crops produced from the gardeners and the benefits they report, is key to measuring the impacts that UA generates to their households and livelihoods. The study shows that these urban farmers are likely to choose to engage in types of UA that align with their household's needs for food security and to support their livelihoods. Moreover, smallholder farmers effectively manage their farming to make a living,

and many consider their daily farm activities as full-time jobs rather than just hours worked. From the focus group discussions, respondents mentioned that:

> Farmer 2: *'I'm engaged in agriculture because I'm not working, I decided to take part so that my household can have access to fresh vegetables such as cabbages, spinach, etc. and not depend on buying from the markets.'*
> Farmer 4: *'The reason for my participation was motivated by the community kitchen which am part of, the idea was to produce vegetables and supply for it and sell at near hospital such as Northdale. The Northdale Hospital requested farmers who produce spinach to supply the hospital.'*
> Farmer 2a: *'I started working in the community gardens as a labour assistant personal, especially in those gardens owned by elderly women. The farmers would employ us as a group to assist with soil preparation, before the planting stage, then also assist in terms of harvesting the produced crops. In doing so this generated casual income for my household. See the goodness of agriculture, I then joined community food gardens and production.'*

Doing urban farming as a foodscape

Farming has become a pool of social networks and a resourcing platform for poor-resourced farming communities. It has been highlighted that communities have had other social networks, that is, financial- and funeral social networks, however, over the years, there has been a massive growth of farmers' groups, organisations and cooperatives established to source agricultural inputs, credits, skills, capacity and recognition from the government, non-governmental organisations and the societies. However, despite the efforts of farming together, there are still barriers and challenges faced by farmers of both genders, which discourage and reduce their participation in urban farming. The farmers highlighted in the focus group discussion that:

> Farmer 1: *'We received agricultural input from organisations (NGOs), universities and also government agencies.'*
> Farmer 5: *'Urban farming helps people to learn new farming skills and they can also improve other farmers.'*
> Farmer 1a: *'Many people come together, and people form good relationships among members of the community. And we are able to provide food for poor people in the community.'*

Barriers to urban farming by smallholder farmers

Even though there are developments and agricultural initiatives, farmers both in rural and urban areas are still facing social, financial, market access, policy and environmental challenges in South Africa. These challenges impact the gender and age distribution of participating farmers, shape the scale of farming operations and influence the choice of production systems employed and crops selected by the farmers. Among the various barriers faced by smallholder farmers, the reliance on social grants emerges as a prevalent issue. For many farmers, social grants serve as their primary source of income, highlighting the financial vulnerability of this demographic. The heavy reliance on social assistance limits farmers' capacity to allocate additional funds towards agricultural inputs, hindering their ability to invest in essential resources necessary for farming activities. Due to financial constraints, farmers are often forced to prioritise immediate household needs over long-term agricultural investments. The choice often leans towards addressing short-term household requirements, such as purchasing basic food, maize, flour, etcetera, rather than seeds or fertiliser for food production. Despite their ambitions to enhance food security and economic stability through UA, smallholder farmers often grapple with the challenges posed by financial instability. Figure 6.3 below presents a visual depiction of the challenges highlighted by the sampled urban smallholder farmers.

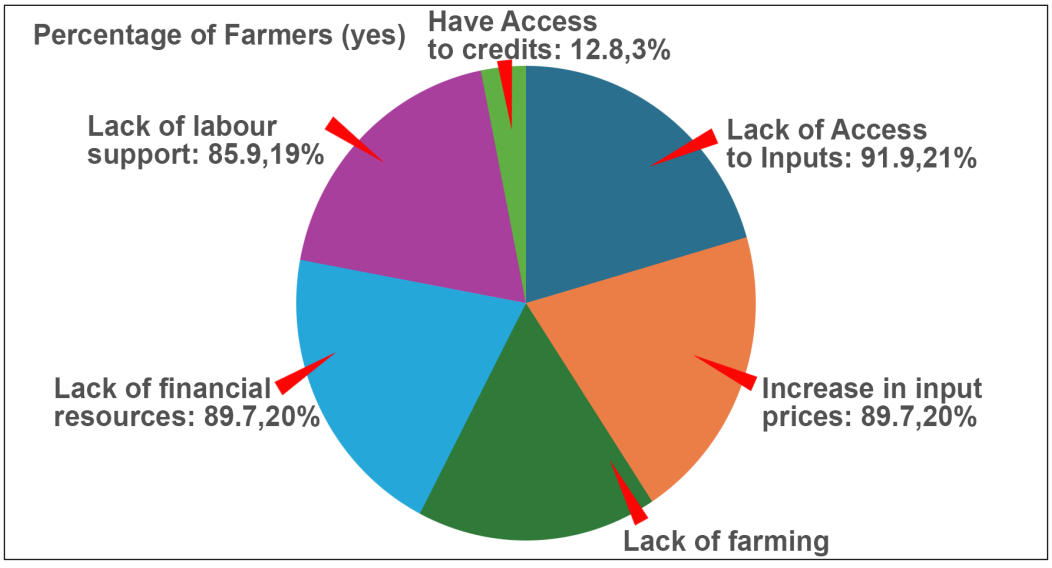

Figure 6.3: Challenges mentioned by farmers in UA
Note: Respondents could select "Yes" or "No". Only "Yes" responses are reported

Figure 6.3 above indicates that the farmers are faced with financial issues, a lack of resources and inputs and a lack of access to knowledge and soft skills in farming, which are necessary to build resilient food production. The results indicate that most of the smallholder farmers (91.9 per cent) are faced with a lack of access to agricultural inputs, that is seeds, fertiliser and chemicals. The selection of seeds and fertiliser are crucial as these inputs influence the quality and quantity of crop yield. Baloyi (2010) highlights that the availability of inputs determines the ability of smallholder farmers to produce adequate crops for both consumption and sales in the markets. From the focus group discussions, respondents further highlighted that:

> Farmer 4: *'We struggle with seedlings and other materials such as fencing, gates, and planting equipment, that is, water pipes, and protective nets for our gardens. Sometimes during the planting seasons, we do not get certain crops we want to produce, and also the prices can be high, and we cannot afford them as we depend on social grants.'*

While it is difficult for smallholder farmers to reach input markets, most (89.7 per cent) face the challenges of price fixing by the input suppliers. According to Jayne, Chamberlin and Headey (2014), the tendency to produce a minimum surplus on small farms leads to problems in buying required inputs. The issue of lacking financial resources was raised by most smallholder farmers (89.7 per cent), as most farmers had to finance their farming activities with their additional source of income, that is, pension, social grants, wages or salary.

> Farmer 1: *'We also struggle with accessing markets that we can supply with our produced crops; seasonal and annually. We are an elderly and retired generation, we struggle with managing the plots especially if it is a bigger size plot, we have to hire people to assist in soil preparation and harvesting stages, meaning that we have to pay money for hiring them.'*

There were smallholder urban farmers (74.4 per cent) that still find it difficult to access farming knowledge and skills. This limits the knowledge the farmers have on farming techniques that are good for the environment, while also achieving maximum productivity. The farmers also mentioned that the lack of financial resources results in their inability to hire additional labour (85.9 per cent) which is related to labour costs. The lack of financial capacity and limited labour assistance significantly results in failure to produce at optimum capacity, since these farmers use time-consuming techniques of land preparation as well as planting, that is, labour-intensive techniques.

Furthermore, Figure 6.3 above, illustrates that 12.8 per cent of the farmers stated that they had access to micro-finance institutions for credit, while 87.2 per cent had no access to credit. This suggests that farming is an essential coping strategy for vulnerable urban dwellers as it offers job creation and sets to achieve food and nutrition security.

All the participating farmers indicated that they do not have access to an agricultural advisor/officer, even though they know their community has been allocated an extension advisor by the government. This adds to the social and political challenges facing urban farmers. Access to extension advisors is a crucial network for farmers, since the partnership provides access to knowledge, government resources and inputs for improved agricultural production.

From the focus group discussions with farmers, they further highlighted that:

> Farmer 2: *'Water is also another issue; we use our household water tap for watering our crops in the gardens.'*
> Farmer 1a: *'Thefts of crops by locals, they steal crops from the gardens, this other time during the harvest period they steal peppers and maize.'*
> Farmer 3: *'Another issue is the lack of a permit for the sites we use as farmers, which also causes conflict with housing development projects because initially, we start this garden by cleaning unoccupied spaces, then when people want sites for new comes in the area, they first look at these garden sites.'*
> Farmer 2a: *'Climate change has been an issue and has resulted in a huge loss of crops and infrastructure in the community, it's been raining heavily the past 2 years, especially during the planting seasons. We have experienced flooding disasters in KZN and in South Africa.'*

Land access in Sobantu farming township

In Sobantu township, as in many parts of South Africa, land access remains a persistent challenge with significant implications for farmers' participation in food production. Urban settings, particularly, face intensified pressures due to growing populations and urbanisation. The increasing demand for urban development, infrastructure and urban planning often conflicts with the need for land for food production.

Despite these challenges, urban farmers in Sobantu township have utilised various mechanisms to access land for farming, both through formal and informal channels. These mechanisms may include engaging with formal institutions such as municipalities or community organisations to secure land for agricultural purposes. Additionally, farmers may leverage informal arrangements or community-led initiatives to access land for farming, demonstrating their resilience and resourcefulness in navigating the complex landscape of land access in urban areas.

However, the continued demand for land for urban development and competing interests present ongoing challenges for urban farmers in Sobantu township. As the population continues to grow and urbanisation accelerates, addressing land access issues will be crucial for ensuring the sustainability of UA and meeting the food security needs of local communities.

Figure 6.4 below, investigates the availability of land for farming among both male and female urban farmers, focusing on the types of land accessible for agricultural purposes. The findings reveal a significant gender disparity in land ownership trends.

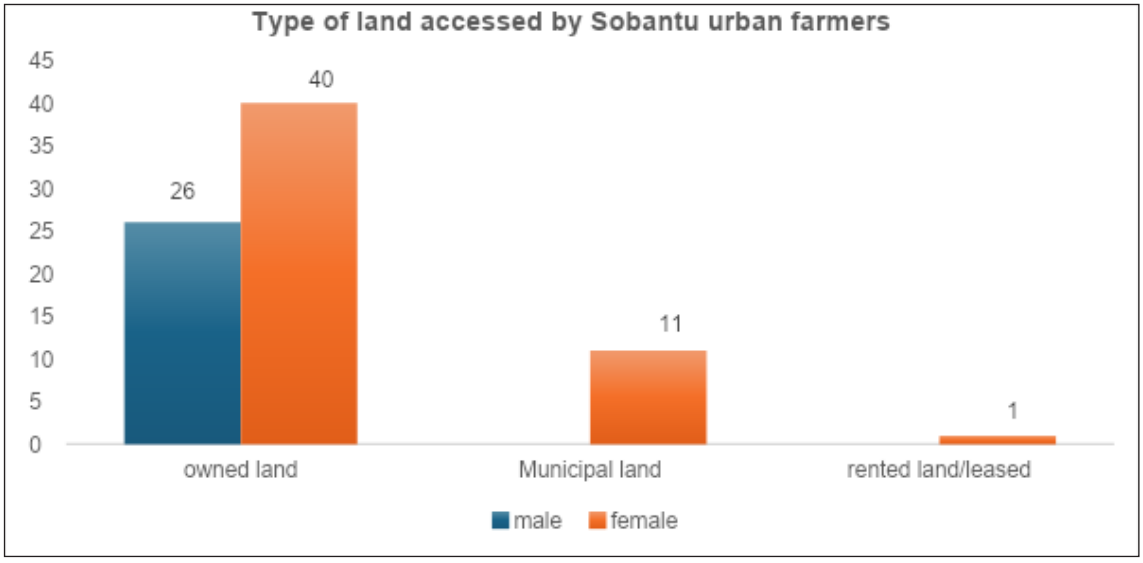

Figure 6.4: Land access by Sobantu urban smallholder farmers

Most efforts aimed at enhancing smallholder farmers' livelihoods and food security may fall short of the desired objectives unless the land ownership and gender-specific barriers that urban smallholder farmers face are addressed. The study further explored the type of land that is accessible to both male and female urban farmers for the purposes of farming. The findings reveal a significant gender disparity in land ownership patterns. Most of the urban women farmers, as opposed to men, cultivated their own land areas. As shown in Figure 6.4, the results indicate that roughly 66 per cent of urban farmers utilise their own land for agricultural production, while only a small percentage rely on municipal or rented land. Despite some access to land, the size of the land plots available to farmers remains an issue. Most of the farmers possess less than a hectare of land, which encompasses the household structure and a small area designated for food gardens. This limitation has notable implications for the pillar of food security, particularly regarding utilisation. The constrained access to land for urban farmers, reduce farmers' capacity to produce crops at a large scale and thus, leaves their crops vulnerable to natural disasters, crop diseases outbreak, flooding, drought, etcetera (FAO 2016). Urban farmers still struggle to find suitable land for UA despite their significant contribution to food production. The unoccupied public and semi-public land (municipal land) is provided to urban farmers for temporary agricultural use and is accessible to urban farmers through cooperative engagement, making it available and accessible to farmers. Access to municipal land is normally supported with a title deed or formal documents as evidence to the allocated user. During the focus group discussions, the respondents highlighted some of the processes they follow to acquire urban land for urban farming (household and community food gardens) stating that:

> Farmer 2: *'Because we had an unoccupied space where people used to dump waste, we decided to clean the space to produce food. However, we do not have a title deed. Initially, the space was reserved for a shopping centre by the community developer.'*
> Farmer 3: *'We bought the site while we were moving from rural areas. So, people were buying from the community committee which were focusing on selling the plots (20 years ago).'*
> Farmer 4: *'The plot of our cooperative that we are using was allocated by the community councillor for the farmers group.'*

Conclusion and recommendations

Engaging in UA is influenced by a multifaceted interplay of factors, with social and personal benefits commonly prioritised over food security and economic advantages. In the context of South Africa, farmers confront various challenges, notably the scarcity of agricultural land due to competing land uses. The study reveals variations in participation levels linked to the scale of farming. Farmers' motivations encompass financial incentives, social well-being, connections and food production.

Significant gender disparities in land ownership are evident, where most urban women farmers are actively cultivating their land, compared to men. However, these women typically have access to limited land, mainly comprising household structures and small-scale food gardens. This restricted land access carries substantial implications for food security, specifically concerning resource availability and utilisation.

The availability of inputs directly impacts smallholder farmers' ability to generate sufficient crops for both domestic consumption and market sales. Despite having access to their own land, issues such as soil fertility, moisture and environmental conditions affect the land's utility, subsequently affecting crop production. Despite the substantial impact on food production, urban farmers still grapple with finding suitable land for UA. Given that organic farming relies on locally available resources, it becomes an accessible and viable option for farmers, particularly those facing resource limitations. Varied UA activities appeal to participants with diverse requirements. Through thoughtful planning and incentives, it is feasible to align specific UA types with the unique needs of the community. Urban planners and garden organisations involved in urban food production must comprehend the broader social impact of UA—going beyond its food value—to substantiate the rationale behind obtaining land access. Gender-sensitive approaches should be integrated into food security and agricultural programmes to address the specific needs and vulnerabilities of women farmers, including access to training, capacity-building and support services. Initiatives that empower farmers, particularly marginalised groups such as women, should be prioritised by providing them with decision-making authority over their food production, distribution and consumption processes.

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