Chapter 9

The Dynamics of Urban and Peri-Urban Agriculture

Diana Lee-Smith

This chapter examines the complex dynamics of food production in areas where urban and peri-urban agriculture (UPA) is practised. Urban food demand is the main driver of UPA as it is of agriculture in Africa in general, but the concept has been expanded to encompass hunger and not only the ability to pay for food. UPA provides opportunities for income generation and a pathway out of poverty but the urban poor lack access to the land that could make this possible and have to resort to farming on open spaces, where available, and suffer food insecurity when they are not. UPA contributes to the nutritional needs of urban populations by providing access to fresh vegetables and dairy products and the children of urban livestock keepers are healthier because they consume animal source foods. African urban areas have a nutrient surplus while soil fertility is generally a major constraint in agriculture. UPA institutions need to coordinate with urban waste management experts. African government policies in the region have mostly restricted UPA but new forms of institutions are emerging although farmers’ engagement will be required for them to function effectively.

Introduction

While various chapters in this volume address aspects of urban food demand as it affects food production in Africa generally, this chapter examines the complex dynamics of food production within urban areas themselves, namely urban and peri-urban agriculture (UPA). Urban food demand is examined first as the main driver of UPA, as it is of agriculture in general, but it is treated as a concept that encompasses the need for food and not only the ability to pay for it, thus linking it to explanations of urban poverty and food insecurity. The next section explores how UPA functions in relation to the nutritional needs of urban populations, which are often not well addressed in approaches to increased agricultural production. The dynamics of nutrient cycling are then examined, looking at the nutrient surplus in urban waste in relation to soil fertility. Finally, the changing dynamics of government policy on UPA in the African region are discussed in relation to the types of institutions that are emerging and are needed.

An explanation of some of the terms used is required first, along with their grounding in the data available. The production of food in urban areas is the
main focus in this chapter, although the term ‘urban agriculture’ also includes food processing and distribution. Mougeot’s widely accepted definition of urban agriculture is:

... agriculture located within (intra-urban) or on the fringe (peri-urban) of a town, a city or a metropolis, that grows or raises, processes and distributes a diversity of food and non-food products, (re-)uses largely human and material resources, products and services found in and around that urban area, and in turn supplies human and material resources, products and services largely to that urban area.

Mougeot (2000: 10).

What distinguishes urban agriculture from other forms of agriculture is that it is an integral part of the urban economic, social and ecological system. About 40% of urban households in Africa are estimated to produce food (Lee-Smith et al. forthcoming). Although the definition specifically subsumes urban and peri-urban agriculture (UPA) in the more general term of ‘urban agriculture’, the two also need to be further differentiated. This is no easy task, however, as UPA is a vulnerable type of land use, and is usually of low priority and frequently illegal.

Peri-urban agricultural production has characteristics similar to any surrounding rural agriculture and merges with it along a rural to urban continuum. At the same time, it tends to verge towards intensification due to urban demands (see Photo 9.1). Intra-urban agriculture is also influenced by urban demand as well as space constraints and other urban conditions such as the availability of waste that can be used as input. Measurements on this continuum have shown that two variables – the proportion of households farming and the size of the enterprise – decrease from peri-urban to urban (David et al. 2010; Dongmo et al. 2010; Drechsel & Dongus 2010; Lee-Smith et al. forthcoming). It has been asserted that the peri-urban zone characterizes an area measuring 15–40 km from an urban centre (Adam 2001; Drechsel et al. 2007), although the term is frequently used for areas bigger than this, especially in the case of large urban agglomerations. Some researchers place the peri-urban zone outside urban administrative boundaries, others within it, to distinguish peri-urban from rural areas (Foeken & Owuor 2008).

Limited data suggest that the two variables – the proportion of households farming and the size (land area) of enterprises – also decrease with the increasing size of the urban area, although this has not yet been proven. However, the sets of data on spatial variation and the size of the urban area suggest that urban density and land availability are important variables that influence UPA