



# Toward a systemic analysis of city-agriculture interactions in West Africa: A geography of arrangements between actors



Ophélie Robineau

CIRAD, INRA, UMR Innovation, 2 place Pierre Viala, Bâtiment 27, 34060 Montpellier, France

## ARTICLE INFO

### Article history:

Received 20 January 2015

Received in revised form 12 August 2015

Accepted 20 August 2015

### Keywords:

Urban agriculture

Arrangements

Interactions

Systems approach

Urban planning

West Africa

## ABSTRACT

Despite the importance of urban agriculture in developing countries, urban agriculture is not well understood by public authorities. This lack of knowledge impedes its inclusion in public policies of urban planning. A substantial body of literature deals with urban agriculture but little research has analyzed the multidimensional city-agriculture interactions facilitating its enduring presence within the city. We suggest the hypothesis that informal processes are at the core of the persistence of urban agriculture and propose the concept of socio-spatial arrangements (SSAs) between the actors. To study urban agriculture in Bobo-Dioulasso, a West African city, we propose to develop a geography of arrangements to understand the social and spatial characteristics of SSAs and the way they influence urban agriculture development. Taking the example of market gardeners and pig breeders, we highlight how farmers overcome urban constraints through localized social networks. Results show that arrangements between the actors are at the core of the persistence of urban agriculture. We underline two different socio-spatial morphologies (SSMs) of urban agriculture according to differences in urban agriculture characteristics. These SSMs illustrate how market gardeners and pig breeders integrate differently into the urban space. The systemic approach of studying arrangements between actors helps us understand how urban farming activities function, and how they are connected to each other and to the urban and regional system, thus building a picture of an agri-urban system. We discuss the policy and theoretical implications of this research. This study is aimed at providing a better understanding of urban agriculture that can enhance its consideration as a viable component of the city.

© 2015 Elsevier Ltd. All rights reserved.

## 1. Introduction

Urban agriculture is a worldwide phenomenon that is particularly relevant in developing countries (FAO 2012; Hamilton et al., 2014). Inherent to its location within cities, urban agriculture faces many constraints. First, since agricultural land is often viewed as a prime area for urban expansion, it is threatened by land pressure (Lovell, 2010; Nkambwe and Arnberg, 1996). Second, urban agriculture is often marginalized as being in opposition to the vision of modernity that prevails in cities of developing countries (Diop Guèye et al., 2009; Olahan, 2010). Finally, urban agriculture is disparaged for reasons of sanitation (re-use of grey water and urban wastes, rearing of livestock in residential areas etc.) (Asomani-Boateng and Haight, 1999; Danso et al., 2008). Despite these problems, urban agriculture continues to expand and adjust to the urban dynamics in cities of developing countries. How can we explain the persistence of urban agriculture?

Many studies on urban agriculture have been conducted in developing countries since the 1980s, when the United Nations recognized its importance and pointed to its potential role in the alleviation of poverty (Smit et al., 1996). Since then much research has been conducted globally to find ways to support urban agriculture in developing countries. In Sub-Saharan African, most authors have underlined the fact that public urban planning policies do not include references to urban agriculture (Dubbeling et al., 2011; Prain et al., 2010; Smith, 1999); the policy dialogue is beginning, but the lack of knowledge regarding urban agriculture is still a problem in proposing appropriate policies (Aubry et al., 2012). An analysis of the literature to date reveals that research has taken three main approaches to understand and describe urban agriculture and its enduring presence. First, there are investigations that analyze the diversity of actors involved and the spatial location of urban agriculture (Dabat et al., 2006; Dossa et al., 2011; Schilter, 1991). In these studies, typologies of production systems or activity systems are drawn according to the socio-economic specificities of urban agriculture or to its spatial location. They underline that urban agriculture involves many actors (from poor

E-mail address: [robineauophelie@gmail.com](mailto:robineauophelie@gmail.com)

urban dwellers to rich investors), covers a wide range of activities (from livestock production to market vegetable production), and utilizes many different spaces (public and private land, courtyards, streets, roundabout, river banks etc.) (Drechsel and Dongus, 2010; Robineau et al., 2014). A second type of approach seeks to describe urban agriculture through environmental and technical aspects, by describing farming practices linked to the use of waste water and solid urban wastes in urban agriculture (N'Dienor, 2006; Njenga et al., 2010; Suman et al., 2010). These studies emphasize the fact that urban agriculture takes advantage of its localization by reusing urban wastes, despite the sanitation and health problems it can cause. Thirdly, some investigations focus more specifically on food chains and describe urban agriculture through its market interactions with the city (Crush et al., 2011; Mawois et al., 2011; Moustier and Danso, 2006). These investigations demonstrate how urban agriculture provides fresh food for urban centers and how urban farmers develop strategies to take advantage of urban marketing opportunities.

All these investigations analyze certain types of city-agriculture relationships. But they are multiform relationships and they are constantly changing in rapidly evolving African cities. Mougeot (2006, p.6) explains that *“urban agriculture is typically opportunistic. Its practitioners have evolved and adapted diverse knowledge and know-how to select and locate, farm, process, and market all manner of plants, trees and livestock. What they have achieved in the very heart of major cities, and dare to pursue despite minimal support, and often in the face of official opposition, is a tribute to human ingenuity.”* In an African urban context where informality is omnipresent (Myers, 2011; Simone, 2004), informal processes appear to play an important role in the persistence of urban agriculture dynamics. However, up to now, little research on urban agriculture has focused specifically on those informal processes. Based on this statement, we hypothesize that the study of informal processes is a way to better understand this “ingenuity”, in other words to better understand how urban farmers produce food in an African city despite the constraints they face. We have thus decided to focus on the analysis of arrangements between the actors.

The aim of this article is to highlight the means by which urban agriculture continues. We have used an analytical framework we have called “geography of arrangements between the actors”, and tested in the representative West African city of Bobo-Dioulasso (population 500,000), the second largest city in Burkina Faso. The analysis of informal processes is central to this systemic approach. By taking into account the different forms of urban agriculture, actors and places involved, this approach enables us to describe the multidimensional interactions between urban and agricultural dynamics.

## 2. Conceptual framework: analyzing arrangements between the actors

Conducting farming activities implies combining different types of resources. In the urban environment, farmers have to find the resources they need to conduct their farming activities. They must adapt to, and “outsmart”, the limitations and restrictions of this environment (De Certeau, 1980), and innovate in order to efficiently manage urban constraints and exploit the opportunities the city offers (Mougeot, 2000). Lévi-Strauss (1962) proposed the notion of “handyman” to refer to a “do it yourself” method, where actors must make do with what their environment offers when conducting their activities. In an African context where links between city and agriculture are constantly reformulated or renegotiated, we hypothesize that urban farmers are not without a margin in which to maneuver. They have negotiating capacities to access the resources they need to conduct their farming activities. We sug-

gest that the marginalization of urban farming activities implies that farmers must create informal alliances with other actors to gain access to these resources. Indeed, beyond physical, financial and human resources, social factors are also of importance (Gafsi, 2006), especially in Sub-Saharan Africa where farmers often lack money to access other resources. The arrangements they develop with other actors facilitate access to other resources, whether economic (loan of money), physical (loan of tools, access to inputs), spatial (access to land, way of transport) or human (mutual aid). This concept of “arrangement” has been used by different research communities.

### 2.1. Arrangements by contracts

The research on arrangements conducted by policy scientists and economists focuses on explicit agreements and contracts. Policy scientists have described arrangements in the implementation process of national and international directives regarding the management of natural resources. Whether they concern water policy in Europe (Beunen et al., 2009; Massardier, 2011) or in Morocco (Kadiri et al., 2011), these arrangements are developed to adapt norms to local contexts. In a slightly different way, economists have used the concept of institutional arrangements to describe explicit arrangements based on rules negotiated and established by the different actors. These arrangements take the form of a system of obligations among actors who decide rules that govern their interactions (Colin, 2003). In some cases the economic approaches use the concept of institutional arrangements to analyze the collective management of natural resources (Ostrom, 1990). At the local level, they underline how these arrangements, based on explicit negotiations, allow communities to regulate the use of natural resources and overcome conflicts (Beuret, 1999; Torre and Caron, 2005). Another economic approach is linked to the analysis of market interactions through contracts among different actors (Glachant and Brousseau, 2000). In terms of agriculture, these arrangements may take the form of contracts for land use (Colin, *ibid.*), or of contracts among actors involved in a commodity chain (Fok, 2010). This first group of studies begins to help us explain how urban farmers adapt norms and negotiate access to the resources they need to develop urban farming activities. However, some existing arrangements do not rely on explicit mechanisms. Urban farmers may negotiate implicit contracts, such as a neighbor's tolerance for their farming activities. In this sense, the previous approaches appear to be insufficient to analyze the complexity of formal and informal interactions that exist between city and agriculture.

### 2.2. Arrangements through informal compromises

A second group of studies has been developed by sociologists, anthropologists and management scientists. They have analyzed informal interactions among actors. Although the term “arrangement” is seldom used explicitly, the processes described correspond to informal agreements, compromises, and adaptations that actors develop. The social aspect of interactions is central, and studies underline the way social relationships affect the success of projects, whatever the type of project. Their findings point to the central role of non-economic factors in development processes (Portes, 1998) and underline the combination of formal and informal mechanisms in the establishment of transactions (Granovetter, 1985; Kale et al., 2000). Tacit agreements, such as gift/counter-gift behaviors, have been identified as an essential part of negotiation processes in certain human societies (Mauss, 1923). In an effort to understand how actors coordinate their activities, Crozier and Friedberg (1977) bring interesting perspectives that focus on the way behaviors and perceptions of individual actors intervene in negotiations and compromises. Blanc (1992) goes farther by devel-

Download English Version:

<https://daneshyari.com/en/article/6547771>

Download Persian Version:

<https://daneshyari.com/article/6547771>

[Daneshyari.com](https://daneshyari.com)