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Socio-economic determinants of urban household livestock keeping in semi-arid Western Africa

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Abstract

Livestock keeping may have an important environmental impact. Therefore, there is a crucial need for understanding where and why livestock is kept in an urban context. In that frame, a survey was carried out in Ouagadougou (Burkina Faso) in 2002. The study documents the socio-economic determinants of urban livestock keeping in a semi-arid environment, its constraints and the underlying driving forces for keeping livestock in the city and the perception of the future by livestock keepers.

The results show that 26.3% of the households in Ouagadougou are currently keeping livestock, including all major domestic animal species. The main motivation for keeping livestock in an urban setting is its' generation of income. Main identified constraints are animal health problems, feed supply, theft, and manure management. A comparison with crop production highlights that the latter is practised by even poorer urban dwellers compared to pure livestock keepers. Technical, environmental and public health issues have to be resolved to secure sustainable urban development.

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1. Introduction

The environmental impact of livestock is nowadays an important issue in both developed and developing countries (Arend, 1998). Urban livestock keeping is especially related to environmental issues, although crop production also induces environmental problems in town, i.e. waste recycling (Deelstra and Girardet, 2000), and favours some diseases (McMichael, 2000). Urban livestock results in pollution due to the generation of urine, excrements and dead animals, which may attract flies and contaminate both soil and ground-water. Indirectly, the animal derived industries, such as slaughterhouses and dairies, have polluting effluents (Scialabba, 1995). Disease transmission from animal to man is another potential hazard (Lock and Van Veenhuizen, 2001). In addition, livestock in town faces a wide range of specific technical constraints, e.g. feed problems, lack of space, and lack of animal health and production services. Poor housing of animals results in animals roaming in the streets, increasing the risk of theft, problems with neighbours and pollution (Waters-Bayer, 1995; Drescher et al., 2001). Despite of these constraints, livestock continues to be kept in town and the number of animals in African cities is considerable in Western (Centres, 1996), Central (Thys and Ekembe, 1992) as well as in Eastern Africa (Lee-Smith and Memon, 1994 cited by Waters-Bayer, 1995). In these cultures the incentives of animal keeping are often socio-cultural or religious, e.g. the Muslim Sheep Festival. Furthermore, keeping animals at urban household level may also be related to social security and economic reasons (Nugent, 2000).

Owing to the dramatic demographic growth of most cities in Africa (UNCHS, 2001), urban food security is becoming an important issue for urban planners in the developing world (Koc et al., 1999). In addition, the economic crises and the implementation of Structural Adjustment Programs in the nineties have had a major impact on the economic development in urban areas, inducing lower wages and higher food prices (Club du Sahel, 1999). Livelihoods were jeopardised and food and nutrition security severely diminished in most of the towns (Haddad et al., 1998; Maxwell et al., 2000). Alternative food supply sources such as home production of crops and livestock, participation in public and household-to-household transfers, are therefore increasingly important as survival strategies for poor urban dwellers (Mougeot, 2000b). The link between urban poverty and the informal sector is overwhelming (Sethuraman, 1997).

Hence, the socio-economic determinants of households involved in these productions are intimately related to urban environmental issues. Our study focuses on these aspects in the city of Ouagadougou, located in the semi-arid climate zone of Burkina Faso (Fig. 1).

2. Materials and methods

2.1. Context analysis and problem formulation

Ouagadougou experienced a huge increase in its population since 1960 due to a series of events, such as severe droughts and famines between 1976 and 1983,

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