

URBAN AGRICULTURE AND FOOD SECURITY IN THE CITY OF LUBUMBASHI (DRC)

by

Nyumbaiza Tambwe

**A thesis submitted for the degree of Doctor of Philosophy (PhD)
Faculty of Humanities, School of Social Sciences,
Department of Sociology,
University of the Witwatersrand,**

Johannesburg 2010

Abstract

The aim of this study is to find out whether or not urban farming is a response to food insecurity in the post-Gécamines era at the household level. This period is characterized by acute economic crisis at a time of rapid population growth and increasing urban poverty.

Data was collected by means of semi-structured interviews, in-depth questions, observation and informal conversation, as well as primary and secondary sources. One hundred Lubumbashi farming households were selected and interviewed between November 2004 and March 2005. The data was analyzed within a sustainable livelihood approach based on the alternative theories of development, and using SPSS and thematic content analysis. Because of its potential in food supply and income generation, the focus on urban agriculture gives in-depth insights about categories of people involved, types of food crops grown and livestock kept, relations within the household members, and so on.

The key findings of the study are that urban agriculture is more of a survival-entrepreneurial strategy than a survival or an entrepreneurial strategy for the majority of farming households. Less than a quarter of the selected farmers were able to move out of food insecurity and poverty. However, the majority of farmers were food secure for a short period of time (three to four months, particularly at the harvest period). The study also shows that though the living conditions of the majority of farmers (75%) declined despite the practice of food production, these conditions might have worsened without it.

Poverty, competition for land and rapid population growth constitute the factors that threaten the expansion of agricultural activities within and around the city. The sustainability of urban agriculture is linked to its capacity to cope with and recover from stresses and shocks as well as its adaptability to the dynamism of the city, and the nature of support received from state and non-state institutions. However, food production and income generation remain the central functions of urban agriculture in Lubumbashi.

Keywords: urban agriculture, food security, urban livelihood strategy, sustainable livelihoods approach, sustainability, entrepreneurial urban agriculture, survival urban agriculture, alternative theories of development, household economy, parallel economy.

Declaration

I declare that this thesis is my own unaided work. It is submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any other degree or examination in any other university.

.....
Nyumbaiza Tambwe

.....day of....., 2010.

To my family
with sincere thanks
for their love, support and encouragement
during the writing of this thesis

Acknowledgements

I would like to thank a number of people who, in one way or the other have contributed to the completion of this thesis.

First of all, I would like to thank Professor Ran Greenstein, my supervisor. I am greatly indebted to him for his guidance, encouragement and particularly the intellectual impetus he provided to this thesis. His patience is deeply appreciated. It was an honour to have worked with him.

I wish to extend my thanks to all the lecturers of the Department of Sociology, University of the Witwatersrand for their intellectual enlightenment. In particular, I wish to thank Dr. Lucien Van Der Walt, Dr. Samuel Kariuki, Louise Hagemeyer and Lauren Graham. I am also thankful to Professor Clifford Odimegwu of Demography and Population Programme (University of the Witwatersrand) for his assistance in data analysis and Professor Vwakyankazi Mukohya of the University of Lubumbashi for his comments and advice on earlier drafts of this thesis.

I wish to acknowledge financial support from the University of the Witwatersrand, in particular for the Postgraduate Merit Award of which I was grateful recipient from 2003 to 2006. Without this support, the completion of this thesis would have been rendered impossible.

I wish to express my appreciation to all the farming households of the city of Lubumbashi who agreed to be interviewed and shared their experiences with me, and particularly my field assistant Nyembo Kalume for his commitment.

I would like to express my gratitude to the following families: Rene Lusambya, Israel Kunkuzya, Sony Mihali, Sylvain Musinde, Ambroise Walembe, Jacques Kalabo, Daniel Kazadi, Bernard Obotela, Kilanga Musinde, and Adrien Luanga for their moral and financial support.

My gratitude is extended to my friends and colleagues in South Africa as well as in the Democratic Republic of Congo. The gratitude goes to Mvusy Songelwa, Alfred Kamwangu, Jean-Rene Tshisekedi, Arthur Mukenge and Daudet Tshikele. A special mention is due to my wife Julie Faide Kitembo and Jacinta Ndambuki for layout and editing.

Last but not the least, I am thankful to my wife Julie Faide Kitembo, my sons Victor and Justin Nyumbaiza, my daughters Getou Kitembo, Peace and Joy Nyumbaiza, my brother Justin Nyumbaiza and his family, and my sister Tulizani Nyumbaiza for their love, encouragement and support.

Table of Contents

Abstract	ii
Declaration	iii
Acknowledgements	vi
List of Tables	vii
List of Figures	ix
List of Abbreviations	x
List of symbols	xi
Map	xii
Chapter 1	1
Introduction	
1.1 Objectives of the study	6
1.2 Structure of the thesis	8
Chapter 2	12
The Macro and Micro Context: the Democratic Republic of Congo and the city of Lubumbashi	
Introduction	12
2.1 Historical Context: political and socio-economic background of DRC	14
2.1.1 The Belgian administration in Congo	16
2.1.2 The Church	18
2.1.3 The Economy in Belgian Congo: Agriculture and Mineral resources	20
2.2 The Democratic Republic of Congo (DRC)	26
2.2.1 The Mobutu regime	29
2.2.2 The Kabila regime	32
2.2.3 The Mining sector in the new era	34
2.2.4 The Agricultural sector in the new era	39
2.3 Historical and Socio-economic background of Lubumbashi City	43
2.4 Conclusion	48

Chapter 3	50
Literature Review and Theoretical Framework	
Introduction	50
3.1 From large-to small-scale theories	51
3.1.1 African states and economies	54
3.2 Alternative theories of development	60
3.2.1 Parallel economy	63
3.2.2 Household as a polity and economy	67
3.2 The Sustainable Livelihoods Approach: Definition, Framework and Principles	70
3.3 The Sustainable livelihoods approach: definition, framework and principles	71
3.3.1 Defining the sustainable livelihoods approach	71
3.3.2 The sustainable livelihoods approach	73
3.3.3 Principles of the sustainable livelihoods approach	80
3.3.4 The Vulnerability context	83
3.3.5 The sustainability of urban agriculture	85
3.3.6 Policies, institutions and processes	86
3.4 Urban agriculture	88
3.4.1 Defining the concept of urban agriculture	88
3.4.2 Background to urban agriculture	90
3.4.3 Push and pull factors	96
3.4.4 Urban agriculture as a survival household livelihood strategy	104
3.4.5 Urban agriculture: an entrepreneurial household livelihood strategy	108
3.5 The growing importance of urban agriculture	110
3.5.1 Proportion of urban farmers	112
3.5.2 Proportion of foods produced	113
3.5.3 Proportion of land under cultivation	114
3.5 Conclusion	115
 Chapter 4	 117
Methodology	
Introduction	117
4.1 Research site: Lubumbashi	118

4.2 Informants selection	121
4.3 Limit of the sampling method	126
4.4 Methods Used	127
4.4.1 Semi-structured interview	128
4.4.2 In-depth questions	134
4.4.3 Observation	139
4.4.4 Informal conversation	141
4.5 Data Analysis	143
4.6 Conclusion	144
 Chapter 5	 145
Urban Agriculture in Lubumbashi city	
Introduction	145
5.1 Demographic characteristics of Lubumbashi farmers	146
5.1.1 Division of labour within farming households	151
5.1.2 Professional background of farmers	154
5.1.3 Geographical distribution of farming households	156
5.2 Practice of Cultivation	158
5.2.1 Spaces of cultivation	158
5.2.2 Main food crops and livestock raised	161
5.2.3 Maize production	168
5.2.4 Quantity of maize produced, consumed and sold (2004)	173
5.3 Income, diet and expenditures on food	177
5.3.1 Farming households' income	178
5.3.2 Farmers' diet	179
5.3.3 Daily expenditure on food per household	182
5.4 Habitation	183
5.5 Constraints	184
5.6 Conclusion	186

Chapter 6	188
Urban Agriculture: A response to Food Insecurity	

Introduction	188
6.1 Push and pull factors	189
6.1.1 Push factors	189
6.1.2 Pull factors	190
6.2 Categories of Lubumbashi farming households	192
6.2.1 The Kilambe household	192
6.2.2 The Ngoy household	196
6.2.3 The Kadony household	200
6.3 Household strategies to food insecurity	203
6.3.1 Nutrition	206
6.4 The predominance of women in food supply and income generation	209
6.5 Conclusion	214

Chapter 7	217
Sustainability of Urban Agriculture	

Introduction	217
7.1 Typology of urban agriculture	217
7.1.1 Survival urban agriculture	218
7.1.2 Entrepreneurial urban agriculture	222
7.1.3 Survival-entrepreneurial urban agriculture	226
7.2 Vulnerability of urban agriculture	229
7.2.1 Stresses	230
7.2.2 Shocks	233
7.3 Sustainability of urban agriculture	237
7.3.1 Adaptability of urban agriculture	238
7.3.2 Multi-functionality of urban agriculture	239
7.4 Conclusion	243

Chapter 8	245
Micro to Macro: Institutional support to urban agriculture	
Introduction	245
8.1 Levels of support and action	246
8.1.1 Are urban people active and involved in managing their own development?	246
8.1.2 Is there a dispersed and active network of local service providers?	247
8.1.3 Are district services effective, coordinated and responsive?	248
8.1.4 Is the province (upper meso-level) supportive and supervising the ward?	249
8.1.5 Is the centre providing strategic direction and redistribution and oversight?	252
8.2 Types of organization	255
8.2.1 Government	255
8.2.2 Private sector	257
8.2.3 NGOs and development agencies	257
8.2.4 Policy issues	265
8.3 Conclusion	266
 Chapter9	
Conclusion: household, NGOs and state	268
Introduction	268
9.1 Household as a refuge for the poor	269
9.2 NGOs	270
9.3 The state	272
9.4 Key theoretical findings	275
9.5 Conclusion	277

References	279
Appendices	302
Appendix1 Semi-structured interview	302
Appendix2 Questionnaire on demographic characteristics of respondents	303
Appendix3 Questionnaire on food production	303

List of Tables

Table 2.1 Population displacements 2001-2005	33
Table 2.2 Productions of copper 1986-2003	37
Table 2.3 Evolution of budget affected to agriculture in million of American dollars	40
Table 2.4 Agricultural production in tons (1980)	42
Table 2.5 Food production compared to Lubumbashi population's needs (2003)	47
Table 3.1 Significance of urban food production	112
Table 3.2 Contribution to urban food demands by urban producers	113
Table 3.3 Proportion of land under cultivation	114
Table 4.1 Wards in which informants where selected	125
Table 4.2 Summary of questions	130
Table 5.1 Distribution of urban farmers by age	149
Table 5.2 Distribution of farmers by level of education and gender	151
Table 5.3 Time in farming-scale of Lubumbashi farmers	155
Table 5.4 Distribution of farmers by type of residence and gender	156
Table 5.5 Spaces under cultivation	159
Table 5.6 Dimension of maize farms (2004-05)	171
Table 5.7 Quantity of maize produced (2004)	173
Table 5.8 Quantity of maize monthly consumed in 2004	174
Table 5.9 Quantity of maize sold in 2004	175

Table 5.10	Income of households per month (US\$ 1=FC 500)	178
Table 5.11	Number of maize meals consumed in household per day	179
Table 5.12	Food expenditures (US\$ 1=FC 500)	182
Table 6.1	Push and pull factors in urban agriculture in Lubumbashi	191
Table 6.2	Summary of household strategies to food insecurity	206

List of Figures

Figure 3.1	The sustainable livelihood framework	80
Figure 5.1	Distribution of farmers by sex	147
Figure 5.2	Respondents' number of children	150
Figure 5.3	Professional backgrounds of farmers	154

List of Abbreviations

ADP:	Area of Development Programme
AFDL:	Alliance des Forces Démocratiques pour la libération du Congo-Zaire
CCC:	Church of Christ in Congo
CFCUA:	City farmer-Canada's Office of Urban Agriculture
CIDA:	Canadian International Development Agency
CRAA:	Centre de Recherche Agro-Alimentaire
DFID:	Department for International Development
DRC:	Democratic Republic of Congo
FAO:	Food and Agriculture Organization
FAP:	Financial Assistant Policy, Botswana
FNLC:	Front National de Liberation du Congo
GECAMINES:	Générale des Carrières et des Mines
GNP:	Gross National Product
ICLEI:	International Association of Local Governments
IDP:	Internally Displaced People
IDRC:	International Development Research Centre
IFAD:	International Fund for Agricultural Development
ILO:	International Labour Organization
IMF:	International Monetary Fund
MLC:	Mouvement pour la Liberation du Congo
MNC:	Mouvement National Congolais

MPR: Mouvement Populaire de la Revolution

NGO: Non-Governmental Organization

NIS: National Institute of Statistics

OECD: Organization for Economic Co-operation and Development

PCC: Population Crisis Committee-based in Washington DC, USA

PPRD: Parti du Peuple pour la Reconstruction et la Democratie

PRGSP: Poverty Reduction and Growth Strategy Paper

RCD: Rassemblement Congolais pour la Democratie

RoB: Republic of Botswana

RTNC: Radio-Television Nationale Congolaise

RUAF: International Network of Research Centres on Urban Agriculture and Food Security

SADRI: Service d'Appui au Développement Régional Integral

SENAHUP: Service National d'Horticulture Urbaine et Peri-urbaine

SENASEM: Service National de Semences

SIDA: Swedish International development Cooperation Agency

SMTF: Société Minière de Tenke-Fungurume

SNCC: Société Nationale de Chemin de Fer National du Congo

SODIMIZA: Société de Développement Minier du Zaïre

SPSS: Statistical Package for Social Sciences

UA: Urban Agriculture

UMHK: Union Minière du Haut-Katanga

UNDP: United Nations Development Programme

WHO: World Health Organization

WVI/Congo: World Vision International/Congo

List of Symbols

FC: Franc Congolais (Congolese Currency)

KES: Kenya Shilling (Kenyan currency)

P: Pula (Botswana Currency)

TZS: Tanzania shilling (Tanzanian Currency)

US\$: United States dollar

Z: Zaire (former Congolese Currency)