

**URBAN AGRICULTURE AND POVERTY ALLEVIATION:  
A CASE STUDY OF TOKHA AREA, KATHMANDU, NEPAL**

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**MASTER OF ARTS IN RURAL DEVELOPMENT  
(M. A. RURAL DEVELOPMENT)**

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**LETTER OF RECOMMENDATION**

This is hereby certified that **MR. FANINDRA RAJ DEVKOTA**, Second Year Student of Master's Degree in Rural Development (ID. NO. 69, 2004), has prepared this thesis entitled “**URBAN AGRICULTURE AND POVERTY ALLEVIATION: A CASE STUDY OF TOKHA, KATHMANDU, NEPAL**”, under my constant supervision for his partial fulfillment of the requirements for the **Master's Degree of Arts in Rural Development (M.A. RURAL DEVELOPMENT)** of the Postgraduate Program in Rural Development, Central Department of Rural Development, Tribhuvan University, in the format as required by the Faculty of Humanities and Social Science, T.U. This thesis, therefore, is recommended for its final evaluation.

The assistance received during the course of this investigation has been acknowledged.

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## **APPROVAL LETTER**

This is to certify that this thesis prepared by **MR. FANINDRA RAJ DEVKOTA** entitled, **“URBAN AGRICULTURE AND POVERTY ALLEVIATION: A CASE STUDY OF TOKHA AREA, KATHMANDU, NEPAL”** has been approved by this Department for the **Master's Degree of Arts in Rural Development**.

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## DEDICATION



The author dedicates this work to his mother Laxmi Devi Devkota in memory of his father  
Late Nanda Prasad Devkota

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## ABSTRACT

*Urban agriculture (UA) is the production and management of crops and livestock/poultry in the urban or periphery area, especially to meet local needs. This study was carried out to assess and analyze the UA in terms of urban food security and employment in Tokha, Kathmandu in February-April, 2006. Primary data and information were collected through sample survey applying snowball sampling technique, considering the households with more than 4 Ropany (0.2 ha) of farmland as sampling units in three urban pockets- one road accessible pocket (Saraswoti), second one less accessible pocket with Chandeshwori settlement, and the last one isolated pocket (Sapnatirtha), followed by observation and key informant discussions which includes total 64/64 household surveys and observations (20 in Saraswoti, 24 in Chandeshwori and 20 in Sapnatirtha) using structured questionnaire and observation sheet.*

*The study reveals that total 51.05%, 52.17% and 42.21% individuals of the farm families were involved in the agricultural occupation in Saraswoti, Chandeshwori and Sapanatirtha pockets respectively. The other sectors of employment and income in Tokha include service sector, trade/business, waged labor (specially construction works) and foreign employment (mainly in Quatar, Saudi Arab and Malaysia). The analysis of farmers' responses to agriculture shows that agriculture was the means of full employment and income for 48.44% of the families surveyed; partial employment for 45.31%; additional income for more than 4.69%; and as the means to use spare time for only 1.56% families. <sup>2</sup> test statistic shows that agricultural occupation pattern (%) in the three selected pockets was not significantly different, but the respondents' attitude with regard to agricultural occupation was significantly different, with higher reliance to agriculture in the inaccessible isolated areas than in accessible urban area. The patterns of nutrition supply to the urban farmers reveals that up to 75.38% food supply occurs by purchasing food from others, followed by consuming own product (up to 68.20%) and selling over surplus agro-food products (up to 33.33%). Significant positive correlations were observed between selling over surplus and landholding ( $r = 0.712$ ); family size and involvement in farm occupation ( $r = 0.819$ ); and farm and non-farm occupation ( $r = 0.278$ ). Whereas, significant negative correlations were observed between cereal production and irrigation problem ( $r = -0.293$ ); urban facility and agricultural production trend ( $r = -0.25$ ); and cereal and vegetable production ( $r = -0.289$ ). Multiple linear regression models of vegetable production was observed significant with location (inaccessibility index) and irrigation problem index ( $p = 0.00$ ).*

*The analysis of variance (ANOVA), correlation and regression analysis of observed data and information indicate that if there is access to road, market and other facilities, agriculture will also become commercialized and people will search for alternatives to agricultural occupation. The analysis of farmers' priority to development functions shows that most of the people in the urban area emphasized to industrial and educational development followed by drinking water, road, trade/business and agricultural integration for overall development of the location. Agricultural problem ranking shows that lack of irrigation facilities was the most crucial problem for the development of agriculture in Tokha. Other major problems include the lack of modern inputs and technologies, decreased interest of youth in agriculture occupation, inadequate road network and financial problems. The organizations supporting agricultural activities and the potentials of integrated development of agriculture in Tokha has been assessed and analyzed with suggestions and recommendations for reducing urban poverty and food insecurity. The major suggestions include promoting irrigation facilities; market oriented organic vegetable production; in-depth study for fruit growing and beekeeping promotion; and strengthening agricultural extension services with proper sustainable urban farming policies for promoting urban food security and employment.*

Fanindra Raj Devkota  
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## TABLE OF CONTENTS

<b>Title</b>	<b>Page</b>
ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
LIST OF TABLES	vi
LIST OF FIGURES	vii
ABBREVIATIONS	viii
EQUIVALENTS	ix
ABSTRACT	x
<b>1 INTRODUCTION</b>	<b>1</b>
1.1 Background	1
1.2 Agriculture in Nepalese economy	2
1.3 Urban agriculture	2
1.4 Statement of the problem	3
1.5 Rationale of the study	3
1.6 Objectives of the study	4
1.7 Major assumptions	4
1.8 Scope and limitations of the study	5
<b>2 REVIEW OF LITERATURE</b>	<b>6</b>
2.1 Theoretical issues and concepts	6
2.2 Scenario of Nepalese agriculture	8
2.3 Poverty, agriculture and rural-urban development interrelations	9
2.4 Urbanization and agriculture	10
2.5 Urban agriculture, food security, health and nutrient supply	10
2.6 Urban agriculture and employment generation	13
2.7 Urban agriculture and environment	13
2.8 Urban agriculture and sustainability	14
2.9 Institutional aspects of urban agriculture	15
2.10 Urban agriculture on policy agenda	16
<b>3 METHODOLOGY</b>	<b>19</b>
3.1 Study area	19
3.2 Methods of collection of primary data and information	19
3.3 Techniques of data collection and methods of analysis	23
3.4 Conceptual framework of the study	24
3.5 Data processing and analysis	30
3.6 Organization of the study	30
<b>4 RESULTS AND DISCUSSIONS</b>	<b>31</b>
4.1 Analysis of the sample households	31
4.2 Attitude of urban people towards agricultural occupation	34
4.3 Major crops and cropping pattern	35
4.4 Livestock and poultry production pattern	37
4.5 Supply of nutrition to the urban farmers	38



<b>Title</b>	<b>Page</b>
4.6 Resource recycling pattern	40
4.7 Crop pest management practices	40
4.8 production trend in agriculture	41
4.9 Agricultural development service and facilities	42
4.10 Organizations supporting to agriculture	43
4.11 Agricultural integration potentials	45
4.12 Relation between different agricultural components	46
4.13 Analysis of surrounding environment	49
4.14 Agricultural problem intensity and development priority	52
<b>5 CONCLUSIONS AND RECOMMENDATIONS</b>	<b>56</b>
5.1 Conclusions	56
5.2 Recommendations for further studies	57
<b>6 REFERENCES CITED</b>	<b>59</b>
<b>7 APPENDICES</b>	
1. Questionnaire used for the sample survey	65
2. Observation-sheet used in the observation	67
3. Inquiry checklist used for key informant/focus group discussion	68
4. Chi square analysis of variations in employment pattern	69
5. Analysis of variance (ANOVA) for different agricultural variables.	70
6. Chi square analysis of farmers' responses to agriculture as employment	78
7. Computer output on relations between agricultural parameters	79
8. Analysis of variance (ANOVA) for some variables related to agricultural production and commercialization trends.	80
9. Relationship between some agricultural development parameters	81
10. Correlation between agricultural factors and components	82
11. Some feature of different categories of urban agriculture	83
12. Potential environmental implication of urban agriculture	84
13. Updated information on agriculture development in Kathmandu district	85
14. Regression of irrigation problem index, number of animals domesticated and paddy production	86
15. Regression of location (inaccessibility index), irrigation problem index and vegetable production	87
16. Statistical tools used in the study	88

## LIST OF TABLES

<b>Table</b>		<b>Page</b>
1	Interviews, observations and discussions carried out in the study process	23
2	Scoring index followed in agricultural problem ranking in the study	26
3	Scoring index followed in the analysis of farmers' priority to different development functions in the study area	26
4	Housing types (roofing patterns) of the farm households in the study area	31
5	Employment patterns of the farm families in Tokha, 2006	33
6	Analysis of farmers' responses in terms of employment	35
7	Major cropping patterns adopted by the farmers in Tokha	36
8	Patterns of patterns of nutrient supply to the urban farmers in the study area	39
9	Resource recycling practices in agriculture observed in Tokha	40
10	Development Infrastructure Index Observed in Tokha, 2006	42
11	Triangulated Agricultural Facility Function Scalogram	43
12	Triangulated Agricultural Input Use Function Scalogram, Tokha, 2006	43
13	Agricultural integration potentials in the Tokha area	46
14	Correlation Coefficient Matrix among different agricultural parameters.	47
15	Coefficient Matrix of some agricultural factors and production components	48
16	Intensity of problems in agriculture from farmer' perspectives in Tokha	52
17	Farmer' priority to different development functions in Tokha, 2006	53
18	Correlations between some observed agricultural parameters, Tokha, 2006	54

## LIST OF FIGURES

<b>Figure</b>		<b>Page</b>
1	Map showing Nepal, Kathmandu and Tokha, the study area	20
2	Map (Topo-sheet) showing Tokha area, location of the study area	21
3	Overview (photographs) of selected urban agricultural pockets to carry out the survey	22
4	Awareness level of the farm families on improved agricultural technology in Tokha, 2006	32
5	Average landholding patterns in the three pockets of Tokha area	34
6	Major crop types grown in Tokha area.	36
7	Major livestock and birds types domesticated in Tokha area.	38
8	Contribution of farm products in the nutritional supply of urban farmers	39
9	Crop pest management practices in Tokha	41
10	Responses of the farmers' with regard to production trend in agriculture	42
11	Farmers' access to institutions and infrastructures related to agricultural development in Tokha	43
12	Agricultural potentiality indices in Tokha based on farmers' responses	44
13	Agricultural activities in Tokha affecting surrounding urban environment.	50
14	Major environmental components causing crucial influences to the surrounding environment in Tokha	51
15	Respondents' priority for different development functions in Tokha	53

## ABBREVIATIONS

<b>AEC</b>	Agro Enterprises Center
<b>AGDP</b>	Agricultural Gross Domestic Product
<b>APP</b>	Agriculture Perspective Plan
<b>APPROSC</b>	Agriculture Projects Services Center
<b>ASEAN</b>	Association of South East Asian Nations
<b>BDS</b>	Bee Development Section
<b>CBS</b>	Central Bureau of Statistics
<b>DADO</b>	District Agriculture Development Office
<b>Df</b>	Degrees of freedom
<b>DOA</b>	Department of Agriculture
<b>FAO</b>	Food and Agriculture Organization
<b>GDP</b>	Gross Domestic Product
<b>gm</b>	Gram
<b>HK-H</b>	Hindu Kush Himalaya
<b>GON</b>	Government of Nepal
<b>IAAS</b>	Institute of Agriculture and Animal Science
<b>ICIMOD</b>	International Center for Integrated Mountain Development
<b>JMA</b>	John Miller Associates
<b>kg</b>	Kilo gram
<b>NARC</b>	Lumle Agriculture Research Center
<b>MDD</b>	Marketing Development Division
<b>MOAC</b>	Ministry of Agriculture and Cooperative
<b>MOF</b>	Ministry of Finance
<b>masl</b>	Meter Above Sea Level
<b>NARC</b>	Nepal Agriculture Research Council
<b>Rs.</b>	Rupees (Nepali currency)
<b>SAARC</b>	South Asian Association for Regional Cooperation
<b>Sig.</b>	Significant
<b>UNDP</b>	United Nations Development Program
<b>USA</b>	United States of America
<b>VDCs</b>	Village Development Committees