

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

FANINDRA RAJ DEVKOTA

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

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FANINDRA RAJ DEVKOTA

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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.

Prof. Dr. Pushkar K. Pradhan

(Thesis Supervisor)

Central Department of Rural Development

Tribhuvan University, Kirtipur, Kathmandu, Nepal.

Date:

July 10, 2006

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**.

APPROVAL COMMITTEE:

Head of the Department: -----

(Prof. Dr. Pradeep Kumar Khadka)

External Examiner: -----

(Dr. Uma Kanta Silwal)

Supervisor: -----

(Prof. Dr. Pushkar Kumar Pradhan)

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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Author

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. ² 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 ($p=000$).

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
Author

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ABBREVIATIONS

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