

DYNAMICS OF HIGHLAND AGRICULTURE IN LHASA DISTRICT, TIBET

A Case Study



Liu Yanhua

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The imbalance between population and resource availability is a worldwide phenomenon, especially in those countries where the bulk of the population is engaged in agriculture. The problem is more acute in the fragile mountain areas where resources are very limited and population growth is rapid. The pressure on the land is increasing and the population is further concentrated by the migration of people from the rural areas to the towns and cities.

1. Cattle in the country
 2. Highland maize
 3. Small bedding material

The increasing gap between the demand and supply of agricultural inputs has become a major constraint on the development of agriculture in the mountain areas. The International Centre for Integrated Mountain Development (ICIMOD) is working to address this problem through its Mountain Farming Systems (MFS) project.

This constitutes the background to the long-term work programme of the Mountain Farming Systems Division of ICIMOD. The programme is directed towards identification, assessment, and development of sustainable mountain agriculture. Accordingly, through the synthesis of both past and present field studies, the factors and processes contributing to sustainability are being identified to facilitate identification and application of sustainability-promoting options.

As part of Mountain Farming Systems' work, the present paper reports on the results of a study on highland agriculture in Lhasa district of Tibet (China). As part of the study, the authors visited the area and conducted field research. The study was supported by the International Centre for Integrated Mountain Development (ICIMOD) and the Government of Nepal. The authors would like to thank the staff of ICIMOD and the Government of Nepal for their support and assistance during the study.

Dynamics of Highland Agriculture in Lhasa District, Tibet

Liu Yanhua

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Cover photograph: (clockwise from top right)

1. Cattle in the courtyard of a farm house
2. Highland maize
3. Stored bedding material
4. Degraded upland pasture

(All Courtesy of N.S. Jodha)

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Foreword

The imbalance between population and resource availability is a major problem faced by most of the developing countries, especially in those countries where the bulk of the population depends upon agriculture. The problem is more acute in the fragile resource zones where the natural resource base offers very limited intensification possibilities and population pressure grows unabated. The pressure created by the human population is further accentuated by the growing numbers of livestock that compete for land and which contributes to the overexploitation of land resources.

The increasing gap between the demand and supply of land resources and their products is the final consequence of the emerging situation. Remediation of the above crisis calls for a closer examination and understanding of the overall dynamics of resource use in the concerned areas.

This constitutes the background to the long-term work programme of the Mountain Farming Systems' Division at ICIMOD. The programme is directed towards identification, assessment, and adoption of sustainability options for mountain agriculture. Accordingly, through the synthesis of both past studies and fresh field studies, the factors and processes contributing to sustainability and unsustainability are analysed to facilitate identification and application of sustainability-promoting options.

Prepared as part of Mountain Farming Systems' work, the present paper focusses on the dynamics of highland agriculture in Lhasa district of Tibet (China). As per the broad typologies focussed on by ICIMOD studies, Lhasa district represents an area characterised by high mountain agro-pastoral farming systems. The purpose of the paper is to review past experiences, to identify the basic changes, and to raise questions concerning the future development of the region in order to sensitise policy-makers, planners, researchers, and technicians to further considerations of sustainable agricultural development in mountain areas.

This review attempts to answer a number of questions by analysing data collected during the period from 1958 to 1984. The questions are: what have been the changes in the agricultural sector? what have been the changes in the population structure? what factors contributed to these changes? what are the interactions between agriculture and population? what are the constraints to development? and what lessons can be learned from past experiences?

The paper addresses the above questions using time series secondary data as well as information from the author's own studies in the area. The dynamics of the highland agro-pastoral system are studied with a focus on changes over time and interactions among the human population, livestock, and the fragile resource base. The paper alerts policy-makers to the emerging unsustainability of current resource use systems and production patterns in Lhasa district. It may be added that Lhasa is one of several similar agro-ecosystems in the Hindu-Kush Himalayas where the immediate attention of decision-makers is needed in order to reverse the emerging trends of unsustainability.

E.F. Tacke
Director General
ICIMOD

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Years of work, travel, and interaction with people within Lhasa and in Tibet have made it possible for the author to gather information about Lhasa through personal observation and through a number of secondary sources. The author wishes to thank all those people in Tibet and China who helped him to complete his task. However, it was at ICIMOD that this paper was planned as part of the Mountain Farming Systems' long-term programme on Sustainable Mountain Agriculture.

Physical and Environmental Features

Land Use

Economic Situation

II. Agricultural Development

Historical Changes in Agricultural Development

Agricultural Commodities

Development of Crop Production

Development of Animal Husbandry

Labour Force

III. Technological Changes

Systems

IV. Interaction of Agriculture and Population

Agricultural Production and Supply

Handing over of Animals

Changes in Average Livelihoods

Productivity of Labour

V. Lessons from Past Experiences

Indicators of Change and Causes of Change

Sustainability Assessment

Issues in Development

Shortage of Manpower

Lack of Continued Support

Inadequate Communication

Conclusion

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