



Livestock in Mixed Farming Systems of the Hindu Kush-Himalayas

Trends and Sustainability



Pradeep Man Tulachan
Arun Neupane

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Himalayas (Background) - Authors
Lady on a camel in a high mountain valley, Indian Himalayas - Authors
Baby sleeping in a fur rug, Indian Himalayas - Authors
Storage of FYM in the UP Hills, Indian Himalayas - Authors
Use of draught animals in the hills of Nepal - Authors
Feeding cattle and storage of paddy straw in the hills of Nepal - Authors
Cabbage field in the hills, Nepal - Authors

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Preface

This January, ICIMOD embarked on the Second Regional Collaborative Programme for the Sustainable Development of the Hindu Kush-Himalayas (RCP II) that covers the period from 1999 to 2002. During this period, ICIMOD will focus on three programme areas. First, poverty reduction and sustainable livelihoods; second, gender-balanced mountain development; third, sustainable management of the mountain commons.

Within RCP-II, emphasis will be on the overall improvement of the economic situation of marginal farms, which we define as farms that are either too small in size or too low in productivity to produce sufficient food and income for the farmers household. We will address the livestock sector in this context in two ways. First, generating knowledge on the present situation of the livestock sector in the HKH; and second, through developing a better understanding of how livestock can fit into a mountain-specific niche as an income generating option for improving livelihoods.

Perhaps the role of livestock is understood best by those who farm the mixed crop-livestock systems in the Himalayas where the land is often steep and fragile. Land-use planners and policy-makers have tended to neglect this important component of the farming system, despite the fact that livestock contributes in many ways to the sustainable livelihood of mountain households.

For the last 10 to 20 years, considerable changes have been taking place in the livestock population structure and management systems in the mid-mountain areas of the Himalayas where mixed crop-livestock farming is the dominant agricultural system. Many studies have been carried out by different institutions and agencies;

however, these were in different geographical locations and with different objectives related to livestock sector development in the HKH region. Knowledge about how these changes and transformations are affecting the sustainability of livestock production systems has not been brought together to help our understanding of the transitions that are taking place. Furthermore, the constraints and opportunities of sustainable livestock management have not been well documented. It is in this context that ICIMOD and FAO have jointly carried out a state-of-the-art review to fill the gaps in our understanding and to identify further priority areas for research.

I thank all of the participants who attended the one-day workshop on '*Mixed Crop-Livestock Farming Systems in High Pressure Areas of the Himalayan Region*', held jointly by ICIMOD and FAO in February 1999, to draw on their knowledge and experience and thereby sharpen the focus and fill in the gaps in an earlier draft of this study. This activity is another example of the excellent institutional relationship between FAO and ICIMOD. This is a natural alliance, given our common mandate of poverty reduction and environmental conservation, particularly in rural areas. By linking FAO's global mandate, perspective, and specialised expertise; and ICIMOD's mountain focus, regional perspective, and multidisciplinary approach; we have already conducted many successful collaborative activities with different divisions of FAO. I am glad that the present study has now allowed us to establish excellent contacts with FAO's Animal Production and Health Division.

I am grateful to Mr. Juhani Maki Hokkonen, FAO-Rome, for sponsoring this study. I would like to thank my colleagues, Dr. Pradeep M. Tulachan and Arun Neupane, for undertaking this job and Dr. Mahesh Baskota and Dr. Tej Partap for providing support and advice. I hope that this state-of-the-art review will lead to better understanding of the critical issues affecting the livestock sector in the mixed crop-livestock farming areas and contribute to policies and programmes that will improve the livelihoods of farming households in the Hindu Kush-Himalayas.

Egbert Pelinck
Director General

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Pradeep M. Tulachan
Arun Neupane

Abstract

This is a state of the art review paper which analyses the changes taking place in livestock production management in mixed crop-livestock farming systems. It focus on the area of the Hindu-Kush Himalayas that are under pressure. The paper describes the changes taking place in livestock population and composition in the hills and mountains of Nepal and in the Central and Western Indian Himalayas. It examines the increasing trend of smallholder dairy farming in mountain areas and discusses up various issues related to it. In light of the transition taking place in livestock production management, implications on soil fertility, demand for fodder, and changing linkages to the environment are assessed. Gender aspects in livestock management are also explored. Livestock development policies of the past are reviewed and the necessity for renewed focus emphasised. In concluding, based on the changing patterns of livestock production systems and the lack of success of past development experiences, strategies for sustainable management of livestock production in mixed crop-livestock farming systems of the Hindu-Kush Himalayas are outlined.

Acronyms

ADB	Asian Development Bank
APROSC	Agricultural Projects' Services' Centre
CPR	Common Property Resources
DDC	National Dairy Development Corporation
FAO	Food and Agriculture Organization
FYM	Farmyard Manure
HH	Household
HKH	Hindu Kush-Himalayas
HP	Himachal Pradesh
HYV	High-yielding Variety
ICIMOD	International Centre for Integrated Mountain Development
INGO	International Non-government Association
LRMP	Land Resources' Mapping Project
LSU	Livestock Unit
MPA	Milk Producer Association
N	Nitrogen
NDDDB	National Dairy Development Board
NGO	Non-government Association
NRB	Natural Resource Base
TDN	Total Digestible Nutrient
TOR	Terms of Reference

UP Uttar Pradesh
VDC Village Development Committee

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