

# Mountain Farming Systems



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## Draught Animal Power in Mountain Agriculture

A Study of Perspectives and Issues in the  
Central Himalayas, India

Vir Singh

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# Draught Animal Power in Mountain Agriculture

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Vir Singh

*MFS Series No. 98/1*

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# Preface

This discussion paper in the Mountain Farming Systems' series of ICIMOD looks at an often ignored aspect of mountain farming systems — draught animal power.

The author has taken pains to examine and assess draught animal power in the light of the transitions taking place in mountain agriculture in three agro-ecological zones. He has also assessed the perspectives and attitudes towards this neglected factor.

The Paper was written as a the result of an ICIMOD Research Fellowship; a programme implemented by ICIMOD through which the Centre invites proposals for research from scholars throughout the region. On behalf of ICIMOD, Dr. Tej Partap carried out the technical editing of this document.

Special thanks are due to Dr. N.S. Jodha who has been a great source of inspiration for me in my work in the mountains. When I was working on this project, he provided me with volumes of very useful literature. Shri Sunderlal Bahuguna has always encouraged my efforts to work for the Himalayas.

Thanks are due to my co-workers in the field investigations: Navin Prasad, Vijay Arora, Dr. G.C.S. Negi, Basha Singh Bhandari, Tachha Negi, and Ajay and Mahesh Chandra Raturi. Dr. Jagdish Kumar, Senior Economist at Ranichauri, helped me to select the study villages. Cattle breed characterisation was the joint effort of Dr. R.L. Sharma and Dr. C.B. Singh. Dr. M.L. Sharma, Dr. C. Das, and A.K. Singh provided me with information from secondary sources. Dr. Anil Kumar, Assistant Professor at the Animal Breeding Department, Patna, provided me with information on draught animal power in the plains.

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I should like to record my gratefulness to Dr. N.S. Jodha who has been a great source of inspiration for me in my work in the mountains. When I was working on this project, he provided me with volumes of very useful literature. Shri Sunderlal Bahuguna has always encouraged my efforts to work for the Himalayas.

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I feel pride in the help, trust, and cooperation I have received from the farmers of the region, especially those from the study villages who are a wonderfully rich repository of traditional knowledge.

Finally, thanks are due to Gita, Silvi and Pravesh Singh for their moral support and patience. Much of the time I have devoted to this project, in fact, was meant for them.

Vir Singh

# Abstract

This discussion paper discusses several important issues relating to the role of draught animal power (DAP) in sustainable agricultural development in the Central Himalayas of India and gives recommendations for policy changes and technology development.

The nature and intensity of problems related to DAP are different for different ecological areas – Shivalik Hills, Middle Himalayas (traditional), Middle Himalayas (transformed), and Greater Himalayas, and the policy measures to overcome these specific problems also have to be different. Even within the transformed Middle Himalayas, three principal types of transformation have been included in the study: vegetable-based, modern cereal crop-based, and fruit tree-based. These areas vary greatly in terms of demand for and supply of DAP, accessibility, adoption of new technologies, and so on. These all have important implications for the potential for mechanization, animal breeding strategy, and feed and fodder supply.

Also discussed in the paper is the commercialisation of agriculture as an important strategy in the hills and mountains of the Hindu Kush-Himalayan Region promoted in recent years to achieve the multiple objectives of increasing farm employment and incomes and protecting the environment. Commercialisation of agriculture has increased the demand for DAP relative to its supply. The author asserts that this may lead to the adoption of mechanical technology in the hills and mountains with negative environmental impacts. These issues are discussed and analysed in the paper.

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