

MINOR MILLETS OF TRIBAL AREA



DR. PALLAVI SHARMA

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Dr. Pallavi Sharma



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A Word of Honour

Words cannot express my deep sense of gratitude, indebtedness and reverence to my esteemed teacher and guide Dr. S.S. Katewa. His valuable guidance, inspiration, innovative ideas and untiring dedication paved my way to success in this work. His benevolent fatherly figure and his devotion to the subject is incomparable. His ocean of ever increasing knowledge, his pragmatism and his power of expression of the subject are simply astounding. His simplicity in everyday life are chapters of philosophy for me. Without his guidance this work could not have taken the present shape.

It is my pride to be a student of such a courageous and venerated teacher. I dedicate this book to him.

Pallavi Sharma
Dr. Pallavi Sharma

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About the Book

Minor Millets of Tribal Area represents a unique biodiversity component in the agriculture and food security system in the tribal area. This book highlights systematic study, ethnobotany and chemical composition of minor millets and related wild grasses.

Book is well illustrated and makes field identification of grasses, easy. Both scientific and local name make identification, further easy. Language is easy to understand. Indexing is extensive and useful to refer things quickly. Botanists, Agriculturists, Biochemists, Forest Department, Tribal Research and Development Department, National and International Educational Institutions may be benefitted by this treatise.

About the Author

Dr. Pallavi Sharma post graduated from M.L. Sukhadia University, Udaipur in 1999 with specialization in environmental biology. She obtained her Ph.D. in 2006. Her Ph.D. work is being published in the form of book with publication grant from MLV Tribal Research Institute, Udaipur.

Preface

The transformation of agriculture to more productive system has often been accompanied by increased production of fewer crop species. Concurrently, the area and production of a great diversity of traditional crops have declined. Yet in many parts of the world, these traditional crops play an important role in maintaining stable and sustainable forms of agriculture.

One such traditional group of cereal crops is the minor-millets. This group includes *Brachiaria ramosa* (Kuri), *Echinochloa crusgalli* (Batt), *Echinochloa frumentacea* (Batti), *Eleusine coracana* (Maal), *Panicum miliaceum* (Cheena), *Panicum miliare* (Samlai), *Paspalum scrobiculatum* (Kodra), *Setaria glauca* (Hamli) and *Setaria italica* (Kangni). Wild millets comprise a diverse range of wild grasses that are related to the cultivated millets. They play important role in the life of tribal people especially during drought and famine conditions and hold promise for future food security.

Tribal area of Southern Rajasthan is home to an enormous diversity of wild grasses. Some of such wild grasses have evolved into the cultivated millets through an extensive process of domestication and crop improvement. Wild millets comprise a diverse range of wild grasses that are related to the cultivated millets including wild millet relatives and wild millet like grasses.

Though largely neglected and even threatened, wild millets play important role in local food security and in agricultural development. Tribals hold knowledge on wild millets, which contribute to their agricultural and livelihood systems, especially in semi-arid ecosystems. On the one hand, some wild millets are sometimes harvested and consumed by rural people, especially during drought and famine periods, thus playing a critical role in food security.

According to 1991 census, the tribal population in Rajasthan is 54,74,881 in which Southern Rajasthan has the maximum tribal concentration. Monsoon in this region has always been unpredictable, leaving the peasantry with the failure of crop and

constant misery. When the famine were frequent and successive, the tribals were compelled to eat anything even if it was not fit for consumption. The inedible became edible. Under such circumstances the minor-millets and wild millets play important role in local food security in tribal areas.

The work reported in this book is the out come of my Ph.D thesis entitled "Studies on the minor-millets and other related wild species of grasses from tribal area of Rajasthan" carried out during 2002-2006. I hope this work will be helpful to prove the role of traditional crops for tribal welfare and also enhancing sustainability, stability as well as the productivity of agriculture system.

This work is just the initiation as there is a good scope for those interested in the subject to add further data on the distribution of minor and wild millets in tribal area all over the world. Planning strategies for cultivation and genetic improvement of the minor and wild millets in non tribal areas need special attention in our developmental plans. In spite of the care exercised, there are bound to be some errors and omission especially for work of this kind. I shall appreciate suggestions for improvement by the users of this book.

Dr. Pallavi Sharma

Foreword

Minor-millet and related wild grasses represent a unique biodiversity component in the agriculture and food security systems of tribals in Southern Rajasthan. However, they suffer large neglect in science, agricultural programmes and policies despite the increasing global awareness on plant genetic resource conservation and the concerns on local food security. Accordingly, innovative and integrative efforts to strengthen the interface between millet biodiversity and food security are required, with a focus on empowering tribals as privileged custodians and primary beneficiaries of such agricultural genetic diversity. In the case of Southern Rajasthan they have received the least recognition and attention, despite their fundamental roles in the agricultural dynamics, food security, and cultural identity of many tribals in marginal rural areas of Southern Rajasthan.

The present work "Minor Millets of tribal area" covers approximately fifty species most of which are illustrated with the help of line diagrams. Apart from systematic study of minor millets and related grasses the author has documented interesting ethnobotanical traditional knowledge of tribals about minor millets and related wild grasses. Similarly she has carried out chemical composition of these plants which significantly contribute to the diet of the tribals.

It is hoped that this book will be useful and serve as valuable reference to foresters, researchers, agrostologist, agronomist, anthropologist, botanists etc.



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A milestone reached in the long quest of search and when I rest for the moment, I remember all those persons who inspired me to move and others who led me through the inspired path till this milestone and for many others to come.

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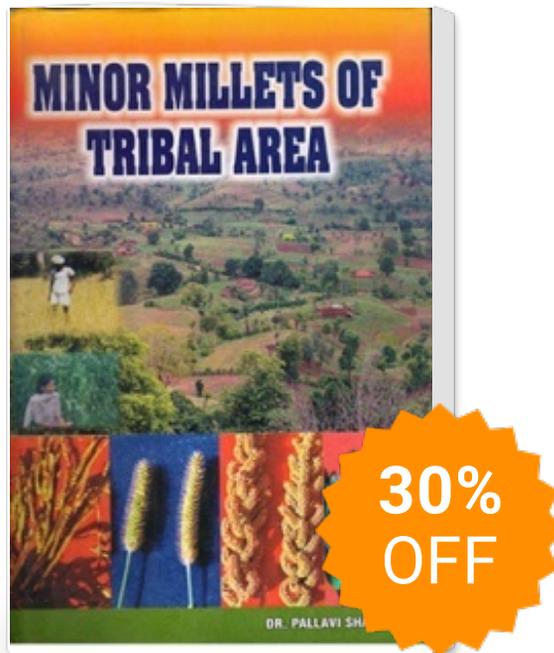
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