SUBSIDIARY ENTERPRISES TO EMPOWER WOMEN AND RURAL YOUTHS

EDITORS:
SAROJ TOPPO
TASVINA R. BORAH
NAZRUL HAQUE
ABHIJIT MITRA
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Saroj Toppo
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Preface

Empowerment is defined as the processes by which one takes control and ownership of their lives through the expansion of their choices. Thus, it is the process of acquiring the ability to make strategic life choices in the context where this ability has previously been denied. The realities of rural life in India are difficult to comprehend. While a small minority of people in major cities have benefited from the information revolution of the past decade, the lives of most people in rural India have hardly improved.

Rural youth of the country are the untapped power to revive agriculture as a profitable venture. The educated, unemployed youth, especially from the farming community, can adopt the subsidiary enterprises in agriculture to improve their livelihood status, as well as educate the poor farmers, which can generate and create employment opportunities in the localities. Agriculture in the locality can be diversified and complete the chain from production to consumption with the development of post-harvest technology, value addition, packaging, and marketing. Agriculture-related subsidiary enterprises apart from making it sustainable, provide ample opportunity for the rural youth, farm women and the farming community in general to improve their livelihood status.

There is a need to change the mind-set of the farming community and to encourage for developing entrepreneurship in agricultural and allied sectors. The role of entrepreneurship in improving rural economy and livelihood has long been recognized and presently gaining momentum. Apart from a wide range of product selection, certain factors play a significant role in the success of a business enterprise implementation as location, market, physical infrastructure, operational and personnel support, access to credit, insurance coverage, investment opportunities, etc.

Small farms struggle to get access to the market for both inputs and output and need a level playing field to be able to compete with other market players in equal terms that will not marginalize them. Therefore, the approach to collectivize farmers into Farmers’ Producer Organizations (FPOs) can help in integrating the farmers directly through their institutions to market for both inputs and output.

The richness of nature is bestowed in rural life that needs to be harnessed for the improvement of the livelihood of the farming community. The farm women, the unemployed youth, the small and marginal farmers can take up many of the substitute ventures or enterprises available in the
surrounding that can lead to his/her well being as well as create employment opportunities locally.

Any intervention that improves the livelihood of rural families would likely to have a significant direct or indirect effect on enhancing agriculture production. The book deals with various-agri-allied enterprises for subsidiary income such as mushroom cultivation, apiculture, orchid production, ornamental fish farming, piggery, poultry, duck and goat rearing besides vermicomposting and handicrafts. These subsidiary enterprises involve activities that can be carried out without affecting major farm operations. The capital investments are comparatively low and so becomes a profitable venture for the women and rural youths.

This book is the result of dedicated efforts by many authors. The contributors were invited for their expertise and professional involvement in the topics. The book contains information obtained from authentic and highly regarded sources.

The editors appreciate and acknowledge all contributors for making this book a success. We are thankful for their ungrudging help in this publication.

Saroj Toppo
Tasvina R. Borah
Nazrul Haque
Abhijit Mitra
About the Editors

**Dr. (Ms) Soroj Toppo** is presently working as Principal Scientist in ICAR-National Research Centre on Mithun, Medziphema, Nagaland. She graduated in Veterinary Science and Animal Husbandry and pursued Masters in Veterinary Science (Animal Nutrition) from Birsa Agricultural University, Ranchi, and obtained Ph.D (Animal Nutrition) from ICAR-Indian Veterinary Research Institute (Deemed University), Izatnagar. Dr. Toppo, after serving the Animal Husbandry Department, Government of Bihar for more than three years, joined the Agricultural Research Service in 1994 and served the ICAR Institutes namely ICAR-Central Avian Research Institute, Izatnagar; ICAR-NOFRI, Sikkim; ICAR-Central Institute of Fisheries and Aquaculture, Bhubaneswar in different capacities.

Her broad area of research includes utilization of poultry waste and mineral nutrition in poultry, feed and fodder management in North-Eastern Hilly Region, assessment of locally available feed resources in terms of their nutritive value, anti-nutritional factors, in-vitro greenhouse gas (methane, carbon dioxide) production potential, documentation of fish diversity and assessment of water quality of rivers, fish nutrition, quality assessment of mithun milk. She has been the recipient of several scholarships/fellowship and authored more than 31 peer-reviewed research papers and several popular articles, book chapters, and technical bulletin.

**Dr. (Ms) Tasvina Rahman Borah** is presently working as Scientist (Sr. Scale) Plant Pathology at ICAR Research Complex for North Eastern Hill Region, Umiam, Meghalaya. She graduated in B.Sc. (Agric.) and pursued Masters (Agric.) in Plant Pathology from Assam Agricultural University, Jorhat with distinctions and obtained Ph.D (Agric.) in Plant Pathology from Bidhan Chandra Krishi Viswavidyalaya, West Bengal through ICAR SRF. She has served in several institutes namely Rain Forest Research Institute, Jorhat, Assam, Assam Agricultural University, Jorhat, ICAR KVK, Ranipool, East district, Sikkim, ICAR Research Complex for NEH Region, Nagaland Center, Medziphema, Nagaland. Dr. Borah joined the Agricultural Research Service in 2011 securing the third rank in her subject in the ICAR ARS 2010.

Her broad area of research includes forest pathology, disease diagnosis, morphological and molecular characterization of fungal pathogens, integrated disease management, organic management, mass multiplication of bioagents, integrated farming system (IFS) models, mushroom cultivation, spawn production, *jhum* crops disease diagnosis and management, soil microbiota dynamics in different
land-use systems and has sound knowledge of working with the soil-borne fungal pathogens *Rhizoctonia solani* and *Sclerotinia sclerotiorum*. She is the recipient of the University Merit Scholarships and several University Awards and other professional recognitions including Smt. Guman Devi Verma Memorial Best Women Scientist Award by Indian Society of Mycology and Plant Pathology (2018); Dr. R. B. Somani Best Ph. D. Student Award (2019) by Association of Plant Pathologists along with best oral presentation and best poster presentation awards in International and National conferences. She has authored twenty-two research papers and other publications.

**Dr. Nazrul Haque** is presently working as Principal Scientist in ICAR-National Research Centre on Mithun, Medziphema, Nagaland. He graduated in Veterinary Science and Animal Husbandry from Bidhan Chandra Krishi Viswavidyalaya, West Bengal, pursued Masters in Veterinary Science (Animal Nutrition) from Birsa Agricultural University, Ranchi, and obtained Ph. D. (Animal Nutrition) from ICAR-Indian Veterinary Research Institute (Deemed University), Izatnagar. Dr. Haque joined the Agricultural Research Service in 1992 and served several ICAR Institutes namely ICAR-Indian Veterinary Research Institute, Izatnagar; ICAR-NOFRI, Sikkim in different capacities.

His broad area of research includes energy metabolism in ruminants, methane production and evaluation of feeds and fodders in terms of metabolizable energy content using open-circuit respiration calorimeter. He is also having research experience in the nutritional management of ruminants, particularly that of cattle and pashmina bearing Chegdu goats in the hilly ecosystem, development of feeding strategy for mithun (*Bos frontalis*) using agro-industrial by-products. He has been the recipient of several scholarships/fellowships and authored more than 40 peer-reviewed research papers.

**Dr. Abhijit Mitra** is presently serving as Director, ICAR-NRC on Mithun, Nagaland w. c. f. March 2015. After completing schooling at Suri, Birbhum, West Bengal, pursued B.V.Sc. & A.H. (1987; BCKV, West Bengal), Masters in Dairying (1990) and Ph. D (1994) in Animal Genetics & Breeding from ICAR-NDRI (Deemed University), Karnal. Conferred with Gold Medal in both graduate and post-graduate programmes. Persuaded a part of the Doctoral research (1993-94) in Technical University of Munich, Germany as DAAD Fellow, and Post-Doctoral Fellowship in USDA-ARS, Beltsville MD, USA (2000-01) and in Roslin Institute, Edinburgh, UK (2009).

Before taking over the present position, Dr. Mitra served ICAR- IVRI, Izatnagar in the capacity of ICAR-National Fellow (2011-2015), Principal Scientist

Dr. Mitra has research interests in the field of reproductive genomics, genetics of host’s resistance and transgenesis. Authored more than 75 research papers in peer-reviewed journals and several book chapters. He has been involved in PG teaching for the last 20 years in two of the most prestigious ICAR Deemed Universities (viz., ICAR-IVRI and ICAR-NDRI); and guided 6 Ph.D and 7 M. V. Sc students. He has been a Reviewer for many reckoned Journals and a Member, Editorial Board of ICAR-Indian Journal of Animal Science (2010 till date).

Dr. Mitra has the distinction of receiving several awards including ICAR Awards for Outstanding Multidisciplinary Team Research in Agriculture and Allied Sciences for the Biennium 2007-08 as a Team Leader; DST-BOYSCAST Fellow; DST-SERC Visiting Fellow, and DAAD (Germany) Fellow. He has been bestowed with distinguished Fellowships of noted professional societies viz. National Academy of Veterinary Sciences (India); National Academy of Dairy Science of India, IAAVR, Indian Society of Veterinary Biotechnology & Immunology, and Society of Extention education (SEE), and also has been the Life Member of many prestigious professional societies.
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About the book

This Book is useful to agrarian households especially women folk, landless farm laborers, unemployed youths, and economically weaker sections of the society. The book deals with various -agri-allied enterprises for subsidiary income such as mushroom cultivation, apiculture, orchid production, ornamental fish farming, piggery, poultry, duck, and goat rearing. These subsidiary enterprises involve activities that can be carried out without affecting major farm operations. The capital investments are comparatively low and so becomes a profitable venture for the women and rural youths. However, for an enterprise to be successful the involvement of farmers and the development of producers’ organizations are important. These aspects are also dealt with, analyzed, and discussed in the book for appraising budding entrepreneurs. The book can be a resourceful guide for beginners on any of the subsidiary enterprises discussed with overall information from variety/breed/species selection to care and management of the components, economics of production involved. Hence, the book has multipronged use for the different stakeholders be it the farmers, women, rural youths or students undergoing vocational courses to know the importance of subsidiary enterprises.

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