The Role of Livestock in Developing Communities: Enhancing Multifunctionality

Frans Swanepoel, Aldo Stroebel and Siboniso Moyo
The Role of Livestock in Developing Communities: Enhancing Multifunctionality
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Biographies of Editors

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Aldo Stroebel is Director International Affairs, and affiliated as Associate Professor at the Centre for Sustainable Agriculture and Rural Development, at the University of the Free State, Bloemfontein, South Africa. He is currently on secondment to the Vice-Chancellor’s Office directing international academic projects. He holds a Master’s degree in International Agricultural Development from the University of Ghent, Belgium, and a PhD in Sustainable Agriculture from the University of the Free State. He completed graduate course work as part of his PhD programme at Cornell University in the USA. He has successfully supervised more than 15 Masters and Doctoral students, and is the author/co-author of more than 80 journal articles and publications. He has extensive international experience, including as a non-EU evaluator of the EU’s Leadership Plus Programme, and as consultant to the FAO, LuxAid, the World Bank and the WK Kellogg Foundation. He serves on a number of boards and committees, including as Conference President of the International Network of Research Management Societies (INORMS), and on the Board of the South Africa Netherlands Partnership Programme on Alternatives in Development (SANPAD). His fields of specialisation include rural development, human capital development and capacity building, and smallholder farming systems.
Siboniso Moyo is the Regional Representative of the International Livestock Research Institute (ILRI) in southern Africa, based in Maputo, Mozambique. She obtained an MSc in animal husbandry (Zootechnica) from the Patrice Lumumba University in Moscow in 1984, and a PhD in Animal Science (Breeding) from the University of Pretoria in 1997. In the same year, she became a Fellow under a three year Rockefeller Foundation Fellowship on Initiative for Development and Equity in African Agriculture (IDEAA). Before her current position, she conducted livestock research in Zimbabwe and the region for 21 years. She has mentored a number of young researchers and students in her different leadership roles as head of the Matapos Livestock Research Station in Zimbabwe (1997-2002) and as a National Director for Livestock Production and Development in the Ministry of Agriculture, Zimbabwe (2002-2006). Since 2008, she is a Mentor under the programme for African Women in Agricultural Research and Development (AWARD), facilitated by the CGIAR Gender and Diversity Programme. Her fields of specialisation include breed performance evaluation, smallholder livestock-production systems, livestock research and management, and partnership development.
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Acknowledgements and Peer-Review Process

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The chapters in this book have been reviewed by persons chosen for their diverse perspectives and technical expertise in accordance with procedures required by the Department of Higher Education and Training (South Africa) and CTA Wageningen as co-publisher. In order to maintain and ensure the highest quality, a two-stage review process was followed: each chapter was independently blind-reviewed by at least two acknowledged experts to provide candid and critical comments to improve the chapters and ensure scientific soundness, and to warrant international expectations of objectivity, evidence and responsiveness.
Preface

This book is the product of a Satellite Symposium on the Role of Livestock in Developing Communities: Enhancing Multifunctionality, held as part of the 10th World Conference on Animal Production (WCAP) in Cape Town, 22 – 28 November 2008. The Symposium, jointly organised by the University of the Free State (UFS) and the International Livestock Research Institute (ILRI) aimed to stimulate critical thinking on the role of livestock in livelihood strategies for the poor in the developing world as a contribution to address the Millennium Development Goals (MDGs).

The livestock sector in developing countries contributes more than 33% to agricultural Gross Domestic Product (GDP), and is one of the fastest growing agricultural sub-sectors. The livestock sector has been experiencing what has been coined the “Livestock Revolution”. Population growth, urbanisation, and most importantly, increasing income have resulted in a rapid increase in demand for livestock products, which is likely to continue well into the future. This growth of the livestock sector presents both enormous opportunities and challenges. This book therefore comes at an opportune time for both policy makers and practitioners in developing countries, and the international community. Livestock is a major contributor to food and nutritional security, and serves as an important source of livelihood for nearly 1 billion poor people in developing countries. Its importance in attaining the MDGs should therefore not be underestimated.

The book aims to provide critical information and knowledge on the importance of livestock in the global effort to alleviate poverty and promote human health. It describes and evaluates case studies, examines theoretical frameworks, and discusses key global policy development issues, challenges and constraints related to smallholder livestock-production systems around the globe. The book is written for academic professionals, industry experts, government officials and other scholars interested in the facts and issues concerning the contribution of livestock to the social and economic progress of developing countries.

The introductory chapter is followed by a chapter outlining a conceptual framework for the role and contribution of livestock in the livelihoods of developing communities. In the subsequent three chapters, cross-cutting themes are addressed, namely promoting gender equality and empowering women through livestock, livestock-environment interactions, and food, nutrition and health systems focusing on food from animal origin. Thereafter a chapter analysing the interactions between these three components follows. Subsequent chapters address the role of livestock against risk and vulnerability in smallholder communities, sustainable intensification and value chains and innovation in smallholder production systems. The book is
concluded with a chapter on implications and innovative strategies for enhancing the future contribution of livestock to developing communities. All the chapters are well illustrated with case studies from developing countries, focusing on Sub-Saharan Africa, South Asia and Latin-America. We are confident that the book will assist in generating renewed interest in the livestock sector.
Foreword

Animal agriculture is the most widespread use of the world’s land surface. In many areas it is the only means of producing food from inedible vegetation. In almost all farming systems it is essential for converting inedible by-products and waste materials into food and hence it is no coincidence that as crop production intensifies so too does livestock production. For most of the 2.6 billion people depending on smallholder farming systems livestock production is essential for diversifying income sources and maintaining soil fertility and providing draught power and transportation. This is particularly important to women for whom the value adding activities in processing and marketing products such as eggs, butter, cheese, leather goods and wool and woven products make vital contributions to their household budgets. The options for landless production provided by livestock are critical to the livelihoods of millions especially in urban and peri-urban communities. Possibly most important of all is the contribution that animal-source foods make, not just to children’s growth and health, but also to their cognitive development. Healthy and bright children in the classroom are the wellspring of national development.

As in all agricultural systems animal agriculture has its down sides. Too much animal fat in the diet, which is not a problem for the vast majority of poor people, is not healthy. Badly managed livestock can also be ruinous to land and water resources and can result in producing unacceptable amounts of greenhouse gasses and effluence, which can negatively affect people far removed from the offending livestock enterprises. The increasing numbers of both humans and livestock continues to heighten the threats posed by present and emerging zoonotic diseases for which there must be effective detection, monitoring and control systems.

Livestock produce about 30% of the agricultural gross domestic product (AGDP) in the developing world, and about 40% of the global GDP. Due to growing populations, increasing urbanisation, which raised the demand for easily cooked nutritious food, and rising incomes which allow people to express their food preferences, the demand for livestock products is the fastest growing agricultural market, especially for the products in which smallholders can be competitive.

There is no way to reach the goal of doubling of food production by 2050 without making livestock production more efficient, but this must be achieved while at the same time reducing the negative impacts of livestock products on human health and livestock on the environment. In countries such as China, India, Nigeria, South Africa and Uganda there are doubts about the capacities of their animal industries to respond to the rapidly increasing demand for foods of animal origin.
In this context, this publication on The role of livestock in developing communities: enhancing multifunctionality is a very timely and valuable contribution. It is timely because of the urgent need to properly direct the renewed interest in agricultural development that was catalysed by the 2008/9 global food price crisis, which provided vivid warnings of the dire consequences of continuing to neglect agriculture. It is valuable because of the need to find innovative ways of dealing with the contradictions between the legitimate demands of consumers in developing and emerging economies for more animal-source foods and the equally valid concerns of the international community about the negative environmental impacts of animal agriculture. This calls for science-based critical assessments of current trends, the development of innovative strategies and future directions. This book presents the consensus of discussions on these issues that were held in a satellite symposium involving eminent scientists and practitioners from all regions of the world as part of the Tenth World Conference of Animal Production, held in Cape Town, South Africa, November 2008.

The authors recognise that the analyses, assessments and development strategies presented in the book’s 10 key chapters are by no means complete but they do make a compelling case for improving efficiency in the use of production resources, constant monitoring of the dynamics of the systems and of the changes imposed by various externalities. It provides examples of major issues that will need further attention. These include, but are not limited to, the potential for expanding the use of less favoured rainfed lands for productive agriculture, support for small farm systems-based agricultural growth, the role of livestock in reducing poverty and hunger, improved use of natural resources to reach technical potentials, increased investments in agricultural research aimed at achieving sustainable yield increases and improved productivity from animals, and reduced negative impacts on climate change.

I congratulate the editors for their initiative, the authors for their efforts, and recommend this book to researchers, practitioners, development agents, decision makers and planners. I am confident that it will play an important role in improving understanding of the contributions of livestock to developing communities and the opportunities that animal agriculture could, and must, make to enhancing economic growth and prosperity.

Prof Monty Jones

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