

full of interesting aspects of animal welfare' and 'an excellent guide to the academic study of animal welfare science'. The primary readership will be animal scientists and especially animal welfare scientists. It will be particularly suited to animal welfare researchers and students wanting to broaden their views within the discipline.

The strengths of the book are as follows. It provides a scholarly historical analysis of attitudes towards animals and thinking within animal welfare science. It examines in a reflective way the role that animal welfare science has in modern society. It covers a wide body of literature on attitudes to animals, animal sentience and animal behaviour, and includes a large number of references for further reading. It discusses many forms of animal abuse that have been performed by different cultures in the past. There are interesting analyses of associations between productivity in livestock farming and animal welfare, and how standards can be formulated to satisfy animal welfare criteria. There are authoritative accounts on innate and abnormal behaviour patterns and behaviour responses in livestock and poultry.

In common with many other academic works that discuss ethical issues in animal welfare, it does not give a clear analysis of the distinctions between moral aspirations and moral duties. The moral aspirations that are described are those expressed by others, and the author avoids imposing his views on the reader.

This book is recommended as a library acquisition for any university or college that specializes in animal biology, and it will probably become recognized as a primary source on historical and cultural attitudes, behaviour and beliefs on animal welfare.

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Farmer First Revisited, eds I. SCOONES & J. THOMPSON. xxv + 357 pp. Rugby, UK: Practical Action Publishing (2009). £12.95, €19.95, US\$25.95 ISBN 9781 85339 682 3

This volume resulted from a workshop of the same name held in December 2007 at the Institute of Development Studies, University of Sussex, UK. It followed two previous workshops on the 'Farmer First' theme, initially in 1987 when this approach was developed, and then again in 1992 to review progress. The 2007 workshop focused on how farmer involvement in research and development had expanded over 20 years, against the background of major changes in the infrastructure and external factors impinging on agriculture in developing countries.

The book includes 60 separate papers, mainly case study applications of Farmer First principles, but the volume is much more than a set of workshop proceedings. It includes opening chapters by the authors and others which examine the history of the Farmer First movement and its challenges and opportunities in agricultural research and innovation systems. There is also an analytical Foreword by Robert Chambers which sets the scene for the main text, and an end piece by the authors on future prospects for the movement. The book is well-referenced and indexed with appropriate use of tables, figures and boxed examples.

The Farmer First concept came from a recognition that top-down, linear research and extension had failed to meet the needs of literally billions of small farmers, pastoralists, fisherfolk and others involved in food production. The Green Revolution of the 1970s and 1980s had hardly affected poorer farmers in marginal areas who practised complex, diverse and risk-prone systems (acronymed CDR in the book) particularly those in Africa, and frequently women. Mainstream R & D programmes and top-down extension systems (such as T & V) were considered to have passed by many of the rural poor, and were irrelevant to their needs.

Against this background, Farmer First was conceived in the mid-1980s and has continued to expand through to the 2007 workshop which forms the basis of this book. The movement includes diverse groups of people and organizations committed to 'bottom-up', farmer-centred approaches to the development of appropriate technologies for agriculture. It has achieved many successes, well-documented in the book, such as participatory plant breeding, Farmer Field Schools for IPM, and the System of Rice Intensification (SRI).

Farmer First is ambitious. It aims to reverse the hierarchy and power of traditional agricultural research institutions. The movement is not content with lip service or mere add-ons of a participatory label to the old technology transfer model. It believes that farmers and their needs should be in the forefront of research and dissemination – as its name suggests. This has led to wider issues such as farmer representation, the need for a 'learning alliance' between scientists and farmers, and the whole 'innovation system', which includes many players and sources of information, often location-specific. Farmer First also ventures into other more political fields of social justice, gender equality and poverty reduction, as well as relationships with the growing private sector in research, input supplies and marketing. Such topics are covered in the text, either in general terms or through the particular circumstances of the many case examples described.

For those interested in the Farmer First approach, in theory or in practice, this book is essential reading.

For others involved in rural development work which includes the empowering of farmers generally, it would be an important source of ideas and case examples. Such readers might be students, scientists, the donor community or, of course, farmers themselves – with appropriate interpretation. It is particularly aimed at those working in the oft-neglected, resource-poor farming areas of Africa and other

diverse regions. But the principles and practice of farmer involvement discussed here are applicable more widely. The case studies bring the general issues to life and indicate how challenges were met (or unmet) and the results achieved in a variety of real situations across the developing world.

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