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BOOK REVIEWS

Handbook of Vegetable Science and Technology. Edited by D. K. Salunkhe and S. S. Kadam. New York: Marcel Dekker Inc. (1998), pp. 721, US\$195.00. ISBN 0-8247-0105-4.

The main objective of this publication is to amalgamate much of the existing information on vegetable production and postharvest technology. The editors have been very successful in accomplishing this and a wide range of crops has been treated in a thorough and highly competent manner, emphasising the scientific principles related to practical operations, particularly those contributing to a reduction in postharvest losses.

The crops selected are mainly those which are widely grown in the open on a commercial scale, although some preference has been given to those grown in India and tropical Asia. The field production systems are adequately described and harvesting and post-harvest operations are given in detail and contain much valuable data on storage and processing techniques. The descriptions of the post-harvest physiology, biochemistry, nutritional and chemical composition of the crops are most comprehensive.

Each crop is accompanied by a substantial reference list, mainly originating from North American and Indian sources. Several contributors could have given more attention to the spelling of the scientific names of plants, insects and pathogens listed. This is a thoroughly researched publication, providing a comprehensive compendium of information on vegetable production and post-harvest practices in the major production centres of the world.

H. D. Tindall

Tropical Plant Diseases. (Second Edition.) By H. D. Thurston. St Paul, USA: American Phytopathological Society (1998), pp. 200, US\$39.00. ISBN 0-89054-196-5.

Does a book of this type have any place in these days of IT, CD-ROM and databases? On the evidence of this deeply disappointing publication it is difficult to argue that it does. The author faced an almost impossible task in attempting to consider all the main diseases of the whole range of tropical crops in a mere 200 pages. It does not help that the format adopted is such that no less than 38 numbered pages are almost or entirely blank, or that all the illustrations are a rather muddy black and white. Moreover, there are few recent references and the overall treatment is very uneven. Hugely important diseases such as citrus tristeza and maize streak are not even mentioned, whereas whole chapters are devoted to citrus canker, Philippines downy mildew of maize and web blight of beans. The four short paragraphs on cotton diseases do little more than draw attention to a book on the subject and occupy no more space than an irrelevant photograph of a camel cart. It would be all too easy to make further criticisms of this type. Suffice to say that this is a deeply flawed book and one that cannot be recommended.

J. M. Thresh

Feeding the Ten Billion: Plants and Population Growth. Edited by L. T. Evans. Cambridge: Cambridge University Press (1998), pp. 245, hardback £35.00, paperback £11.95. ISBN 0-521-64081-4/5.

Written to mark the 200th anniversary of the publication of Malthus' 'Essay on the Principle of Population', this book provides a penetrating analysis of the complex relationships between

population growth and food supply. It is primarily concerned with crops, as distinct from livestock and, although not written as a history, it contains a wealth of historical information. It looks at the evolution of agriculture against a series of benchmarks in population growth. The first of the eleven main chapters deals with 'Reaching the Five Million' (in pre-historic times): the last with 'Feeding the Ten Billion' (projected to be reached in about fifty years' time). For each major step in population growth, the author takes us through the agricultural innovations of the time, from the original domestication of plants to the high technology of modern farming. While reviewing a wide range of published material (there are 228 citations) the author does not give undue weight to any one aspect. For example, advances in biotechnology are presented within a framework of the genetic, environmental and sociological factors that determine yield, while economic aspects are assessed in the broader context of the biological phenomena to which they relate. This is a book that deserves to be widely read. It will be valuable as a work of reference, as well as appealing to those who are looking for a scholarly synthesis of a wide range of principles involved in feeding the world's increasing population, in alleviating poverty or in preserving the quality of the environment.

M. H. Arnold

Genetic and Environmental Manipulation of Horticultural Crops. Edited by K. E. Cockshull, D. Gray, G. B. Seymour and B. Thomas. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 225, £45.00. ISBN 0-85199-281-1.

This volume represents the proceedings of an international symposium held at Horticultural Research International (HRI), Wellesbourne in October 1997. According to the introduction, the meeting was designed to redress a perceived imbalance between the amount of molecular genetics research devoted to agriculture compared with horticulture. In reality, this relative inequality in investment is simply a reflection of the size of the market opportunities; the value of the major agricultural products is many times greater than the largest in the horticultural sector. However, it is encouraging to see the progress that is now being made in the most important of the horticultural crops. In particular, the pioneering advances in the study of tomato fruit ripening that led to the commercialization of the first transgenic fresh fruit are now being followed by similar research in strawberry and banana. Other subjects reviewed in this volume include floral induction, manipulation of phytochrome and gibberellins, responses to water and other stresses, root development and stem elongation. Several of these reviews cover traditional approaches to environmental modification of plant growth, rather than the use of transgenic methods. Overall, despite some limitations, this volume is a laudable effort to integrate results from a range of modern research techniques.

J. M. Dunwell

Take-all Disease of Cereals – A Regional Perspective. Edited by D. Hornby, with contributions from G. L. Bateman, R. J. Gutteridge, P. Lucas, A. E. Osborn, E. Ward and D. J. Yarham. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 384, £65.00. ISBN 0-85199-1246.

To anybody working on take-all disease in north-west Europe this is an essential book to have access to, but then most of the leaders in take-all research contributed to writing it! This book is not simply a review of the literature. It would have been a very different book if anyone other than David Hornby had written it, as it is a very personal insight. Much of its value lies in the 'off the record' or 'anecdotal' information which links the published data and the contributions of the various authors. Take-all is a complex disease and, not surprisingly, the information presented paints a complex picture. There are a number of attempts to summarize data in diagrams and tables and these are helpful.

The book could be described as focused on take-all, and as such its perspective is narrow. There is much to be learnt about cereal root diseases in general and little attempt is made to cross-refer to these. Although the author incorporates the major findings of molecular biological studies, the

tremendous potential of molecular biology features little in his assessment of the future, and an opportunity was missed to demonstrate how essential 'classical' pathology is to planning and interpreting molecular biological studies. Nevertheless, this book is an impressive assimilation of the wealth and diversity of past and present research on a highly intractable but important disease.

A. C. Newton

Measuring the Impact of Climate Change on Indian Agriculture. (World Bank Technical Paper No. 402). Edited by A. Dinar, R. Medelsohn, R. Evenson, J. Parikh, A. Sanghi, K. Kumar, J. McKinsey and S. Lonergan. Washington DC: The World Bank (1998), pp. 266, US\$20.00. ISSN 0253-7494.

Although the impact of global climate change on developed country agriculture has been relatively well studied, little work has been done to examine how agricultural systems in developing countries may adapt to, and ultimately be affected by climate change. This report addresses that gap by applying the results of climate change models to simulate impacts on net farm incomes in India. The Ricardian approach is used in three separate analyses that draw on different district-level time series data with highly consistent results. Projected increases of 2 °C mean temperature and 7% precipitation reduce agricultural net revenues by 12% to 35% nationally, with similar regional patterns. Sub-tropical wheat growing zones are affected most negatively, whereas net revenues and technology adoption indicators are improved in tropical rice growing areas. The results, however, must be treated with considerable caution due to serious analytical limitations; the Ricardian approach is poorly adapted to subsistence farming; and increasing weather variability, carbon dioxide fertilization, research on impact mitigation technologies and changing border prices caused by shifting international trade patterns are all ignored. Despite these limitations, the report lays a valuable baseline for future work and is necessary reading for anyone concerned with global climate change issues.

P. J. Matlon

Managing Soil Fertility for Intensive Vegetable Production Systems in Asia. Edited by R. A. Morris. Shanhua, Taiwan: Asian Vegetable Research and Development Centre (AVRDC) (1998), pp. 346. US\$15.00. ISBN: 92-9058-112-3.

This book is the Proceedings of a Conference held at the Asian Vegetable Research and Development Centre (AVRDC) in November, 1997. It was organized jointly by AVRDC and the Food and Fertilizer Technology Center of Taiwan. The book is divided into sections concerned with Nutrient Requirements (four papers), Nutrient Balances (nine papers), Use of Inorganic Fertilizers and Organic Wastes (five papers), and Methods to Model and Monitor Nitrogen Applied to Vegetable Production Systems (three papers). There are two introductory papers that present the basics of nutrient requirements for vegetables, and the role of the soil in maintaining productivity. It is apparently taken as read that the importance of vegetables and the need to manage production more efficiently in Asia is recognized. To many potential readers the absence of a paper setting out the wider context of vegetable production in Asia, and the considerable achievements in developing highly productive systems making good use of organic wastes, will reduce the value of the book. What the papers presented do make clear is that in many countries in Asia very high levels of inorganic fertilizers are now being used in association with organic wastes for vegetable production. In several instances this is leading to over-fertilization, and significant losses of nitrogen from the system, creating a potential for pollution of drinking water, as well as reducing the economic efficiency of the production system. Much remains to be done to rationalize the use of inputs in these systems. The Proceedings, while highlighting the problems, presents little in the way of solutions.

The book is well produced, and remarkably good value to those with an interest in the use of fertilizers for vegetable production.

D. J. Greenland

The Pathology of Food and Pasture Legumes. Edited by D. J. Allen and J. M. Lenné. Wallingford, UK: CAB INTERNATIONAL and Hyderabad, India: ICRISAT (1997), pp. 750, £95.00. ISBN 0-85199-1666-1.

The Preface to the book declares that this volume is a sequel to two earlier books, *The Pathology of Tropical Food Legumes* (J. Wiley & Sons, 1983) and *Diseases of Tropical Pasture Plants* (CAB INTERNATIONAL, 1994). Bringing together for the first time information on the pathology of grain legumes, leguminous oilseed crops and pasture legumes from both temperate and tropical crops, this book is comprehensive and impressive. There is a substantial critical review of each crop type, as well as a cross-commodity perspective, which makes this an invaluable reference book both for scientists and students, and those concerned with policy-making in crop improvement. With both monochrome and colour plates and thorough references to the research literature, it will appeal not only to plant pathologists, but to plant breeders and agronomists as well. The chapters are well laid out and divided into subsections which allow the reader to navigate easily through this huge subject area. The authors of individual chapters and, in particular, David Allen and Jill Lenné, should be congratulated on their efforts to produce such an invaluable book.

Nicola J. Spence

Somaclonal Variation and Induced Mutations in Crop Improvement. Edited by S. Mohan Jain, D. S. Brar and B. S. Ahloowalia. Dordrecht: Kluwer Academic Publishers (1998), pp. 640, £170.00. ISBN 0-7923-4862-1.

The stated aims of the authors of this volume are to describe the relative value of a range of induced *in vitro* variations in plant breeding, the role of which has been a subject of some debate for several decades. The book is divided into three main sections, somaclonal variation, mutagenesis and molecular analysis techniques. The first section would have benefited from a tighter structure. There is considerable repetition, notably outlines of the possible causes of somaclonal variation, in many of the chapters. There are also contradictory statements between chapters on the utility of molecular markers for the analysis of somaclones. Nevertheless, some useful products have arisen from somaclonal variation programmes and, as stated by Larkin, in many cases the work does not create but actually uncovers existing variation. The mutation section commences with a useful review of the subject area, and the subject of apomixis is also covered informatively. The molecular section offers a number of interesting and detailed chapters of scientific value and relevance, with the role of transposable elements featured heavily. A concluding chapter on future developments in this area would have been a valuable addition but, with the above reservations, within this volume there is a great deal of information on this interesting, but still controversial area.

S. Millam

† Pricing of publications by the World Bank. The World Bank has agreements with sole distributors in most countries. The prices quoted in US\$ are for the USA. For UK prices it is necessary to consult the UK agent, Microinfo Ltd, PO Box 3, Alton, Hants, UK.

Mutation Breeding: Theory and Practical Applications. Edited by A. M. van Harte. Cambridge: Cambridge University Press (1998), pp. 353, £75.00. ISBN 0-521-47074-9.

This book is clearly written from a base of knowledge and practical experience. The author, through his words and explanations, provides a picture of the application of induced mutations to plant breeding: crafted from an understanding that comes from 'living' with mutation breeding rather than simply wanting to describe it. Generously for the reader, the book starts with a summary of the subject, setting the 'story line' that will unfold. There then follows a chapter that, as the author rightly notes, is a rare attempt to cover the history of induced mutation breeding. The rarity of this history is surprising since I would have thought it would fascinate historians of science – a naïve thought it seems! The author goes on to provide a wealth of information throughout the book, all presented in a careful and detailed way. If I have any criticisms, they are, first, that at times extracting the most important points is difficult if the book is used as a reference source rather than a book to read and, second, that the more recent developments, which might provide the exciting implication of making mutation induction even more controlled and directed, are disappointingly thin. (As an aside, I never did fully understand or appreciate the odd underlined phrases in the text). Nevertheless, these are minor points in a text which this reviewer found rewarding to read and, almost by osmosis, felt was absorbing the insight and feelings behind the words.

P. D. S. Caligari

Farms of Tomorrow Revisited. Community Supported Farms, Farm Supported Communities. By T. Groh and S. McFadden. USA: Chelsea Green (1998), pp. 312, £12.95. ISBN 0-938250-13-2.

In 1990, the same authors published *Farms of Tomorrow. Community Supported Farms, Farm Supported Communities*. This book updates and augments the original publication by drawing on the experiences of the intervening seven years.

The authors argue that today's modern agricultural systems are not sustainable and do not meet the needs of farmers, consumers or the environment. They put forward the case for a change of strategy, arguing in favour of 'Community Supported Agriculture'. This is defined as a community-based organization of producers and consumers where consumers provide direct support for the local growers producing their food.

At times there is a tendency to present arguments in an emotional way but, even if the points raised are not always embraced, the text is stimulating and the reader is challenged to re-evaluate today's modern agricultural systems.

This book presents a thought-provoking assessment of present policies, their perceived shortcomings and how these may be addressed. It is not merely idealistic rhetoric. The authors back their arguments with practical examples of farms where the methods advocated have actually been adopted. They also provide detailed information on how Community Supported Farms can be set up and include details of financial performance.

Lorna Holland

Lupins as Crop Plants: Biology, Production and Utilization. Edited by J. S. Gladstones, C. Atkins and J. Hamblin. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 465, £75.00. ISBN 0-8519-9224-2.

This monograph of the crop species of the genus *Lupinus* fills a gap in the literature of crop plants admirably. In 15 chapters, the reader is treated to a comprehensive account of every aspect of lupin biology, agronomy and economics. The book starts with a review of the distribution, origin and taxonomy of the lupin species by a man closely identified with the birth of the now flourishing Australian lupin industry, John Gladstones. Indeed, the dominance of Australian contributions to this book underlines the rapid rise in the importance of these crops in that country. Since 1960, as

lupin production fell in all other parts of its range, Australian production rose in 25 years from zero to over 600 000 ha, more than half the world total. Despite the predominantly Australian authorship, the book maintains an international outlook and will serve as an excellent reference for all with an interest in lupins. Following Gladstones' opening chapter, the book presents a comprehensive review of genetic resources, discusses the latest advances in biotechnology, including recent progress in genetic transformation and describes breeding strategies. The remaining chapters review several aspects of lupin physiology and abiotic stress, pathology, agronomy, nutritional quality and use, economics and trade, completing a well-rounded and indispensable reference on these crop species.

G. Ramsay

Plant Breeding and Whole-System Crop Physiology. By D. H. Wallace and W. Yan. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 390, £55.00. ISBN 0-85199-265-X.

This comprehensive treatise sets out clearly the authors' views on crops as physiological systems and the need to take a holistic approach to crop improvement. In turn, this requires the solution of the funding problems met in pursuing long-term research programmes. The book is a suitable introduction for advanced students, with examples from an interesting range of crops to illustrate topics such as biomass accumulation, photosynthate partitioning, phenology and yield system analysis. Plant development is an integrated process modelled by the effects of genes controlling day-length response, vernalization requirement and temperature responses. Yield selection requires careful statistical analysis with the use of environments where yield differences are expressed. On the whole, the book is well presented but some diagrams are over-complex and some figure captions are incomplete. The potential for the use of molecular biological analysis in crop improvement is apparently dismissed in a half-page comment, which suggests inter-disciplinary collaboration as the way forward. If the authors had followed their own theme then this book could have been a useful pointer to new developments rather than simply a retrospective analysis.

Roger Ellis

The Silviculture of Mahogany. By J. E. Mayhew and A. C. Newton. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 226, £25.00. ISBN 0-85199-307-9.

This is an excellent compendium of knowledge on mahogany *Swietenia macrophylla*. It is written for professional foresters with the aim of producing a comprehensive account of the silviculture of this species in order to promote strategies for the efficient management of the mahogany plantations in Sri Lanka, drawing on experience especially from Indonesia, the Philippines, the Solomon Isles, the Caribbean, Mexico, Central America and the northern part of South America. It is essential reading and an essential work of reference for anyone contemplating work with this species.

The structure of the book resembles the classical layout of silvicultural monographs, with sections on the species; the history of plantations; seed production; nursery techniques; site selection; plantation establishment; plantation maintenance; growth and yield; timber quality; shoot borer control; protection; silvicultural systems and conclusions.

I congratulate the authors and the publishers on an easily read, informative and well produced paperback. The layout is excellent and the selection of types for the headings and sub-headings is very effective; the tables and figures are well designed and easy to comprehend, although the quality of some of the photographs is not equal to the rest of the work. Like all such compendia, there has been difficulty in linking material from diverse sources and ensuring that the context of observations and the definitions of terms have been specified. So readers unfamiliar with the areas under discussion may have difficulty in appreciating some of the reasons for the differing opinions and apparent contradictions reported in the text.

M. S. Philip

Dictionary of Plant Pathology. (Second Edition.) By P. Holliday. Cambridge: Cambridge University Press (1998), pp. 536, £85.00. ISBN 0-59453-7.

This is the second edition of a highly successful dictionary for those learning and practising plant pathology skills. The text has been updated and expanded to contain 3000 new entries, making a total of over 11 000, including those for fungi from more than 500 genera and 800 viruses, bacteria, mollicutes, nematodes and viroids.

This book complements the first edition and is a further impressive achievement when one appreciates the scope of the task set himself by the author. The text is clear and easy to read. The bibliography contains an extensive list of authoritative names for plant pathogens. The cross-referencing of host plants, pathogens and symptoms is extremely effective. The allocation, in this edition, of common names of diseases such as blight and canker to their respective host crops is valuable.

In addition, there is information on diseases and disorders, taxonomy of organisms, terminology, fungicides, biographical notes on past plant pathologists and many other relevant matters.

I found this an absorbing and informative book. In respect of my own research areas I found it up-to-date, containing most of the relevant references. There were very few inaccuracies. This is a book that I can thoroughly recommend.

R. B. Maude

Agricultural Values of Plant Genetic Resources. Edited by R. E. Evenson, D. Gollin and V. Santaniello. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 285, £40.00. ISBN 0-85199-295-1.

This book focuses upon ways in which the values of crop plant genetic resources (old and new varieties of crop plants and their related species), can be determined. Addressing the value of genetic resources is seen to be important in social, economic and political terms because of the cost of conserving these resources which are under threat of loss and extinction.

The volume is in five parts contributed by 19 authors. Part I deals with econometric modelling of plant breeding and land conversion. Part II covers two empirical studies of field diversity while Part III addresses the breeding values of genetic resources. Part IV provides views on farmers' rights and intellectual property issues while Part V specifically addresses the value of rice germplasm collections and how their use and value may be affected by advances in biotechnology.

This book is of significance but is not necessarily comprehensible to all geneticists, plant breeders, biotechnologists, economists, agriculturalists and politicians. Compiling the book will not have been easy, and some of the chapters will prove more than challenging for some readers. However, the editors should be congratulated on their very timely effort. This is a book to which I shall continue to refer, and I recommended it as a source of both information and controversy. It is also encouraging to find that the editors' conclusion is that plant genetic resources are worth conserving!

B. Ford-Lloyd

Biopiracy. The Plunder of Nature and Knowledge. By Vandana Shiva. Totnes, Devon: Green Books Ltd (1998), pp. 144, paperback £7.95. ISBN 1-870098-74-9.

In her book with the provocative title 'Biopiracy – the Plunder of Nature and Knowledge', Vandana Shiva targets her considerable intellect and passion at the modern (agricultural) industrial complex, free trade and globalization, and in particular at the exploitation of genetic diversity and indigenous knowledge for corporate profit. She views, with some justification, genetic engineering and the patents that go with it as the ultimate expression of commercialization of science and the commodification of nature. The present book is a reaction against the almost perverse scramble for exclusive rights on diverse biological materials, made possible by a reductionist biotechnology and individualistic and legalistic property rights regimes. Some of her analysis may be criticized and her

total and complete rejection of commercialized biotechnology may suggest a certain bias. Still, it is an important and well documented book that should be of interest to biotechnologists and other scientists who look beyond their ever narrowing field of research and have not lost concern for ethical values. The message that all is not well with biological and cultural diversity has far reaching consequences and needs to be heard.

J. J. Hardon

Agricultural Biotechnology in International Development. Edited by C. L. Ives and B. M. Bedford. Wallingford, UK: CAB INTERNATIONAL (1998), pp. 354, £55.00. ISBN 0-85199-278-1.

This book contains 26 presentations made at a meeting under the title 'Biotechnology for a Better World', which was held at the Asilomar Conference Center, Pacific Grove, California on 28–30 April, 1997. The meeting was sponsored and co-ordinated by the project for Agricultural Biotechnology for Sustainable Productivity (ABSP) based at Michigan State University and it was co-sponsored by USAID and Garst Seed Company.

Some presentations describe the state of biotechnology capability in certain developing countries, including Egypt, Mexico, Indonesia, Kenya, Peru, Costa Rica and Thailand, while particular crops are addressed in relation to rice in East Asia, bananas in Central America, date palm in Morocco, cassava in Colombia and oil palm in Malaysia. Since the biotechnology industries have some way to go in many of these countries, the state of development in the USA was dealt with in several presentations in order to show the way. Particularly helpful was the presentation by Pamela Marrone, who showed how a private Agricultural Biotechnology Business could be built.

Of particular interest is the study by Ariel Alvarez-Moralez, who addresses the problem of what may be the consequences of bringing transgenic maize into Mexico where the wild inter-fertile species of *teosinte* and *tripsacum* grow. This is like the problems we have in Europe when transgenic, herbicide-resistant, sugarbeet is brought into areas where the potential weed *Beta maritima* grows.

Ralph Riley

Understanding Options for Agricultural Production. Edited by G. Y. Tsuji, G. Hoogenboom and P. K. Thornton. Dordrecht, The Netherlands: Kluwer Academic Publishers (1998), pp. 399, £199.00. ISBN 0-7923-4833-8.

The International Benchmark Sites Network for Agrotechnology Transfer (IBSNAT) project and its product, the related Decision Support System for Agrotechnology Transfer (DSSAT), each produced a large amount of work but the accounts of that work are highly dispersed among primary journals and in project reports. The community of users and potential users really need to have a convenient and concise account of the achievements of IBSNAT now that it has concluded, and to know the present state of development of the DSSAT package and its component models. This need is evidenced by the large amount of electronic mail traffic on the subjects among agro-modelling users' groups, for the products of the projects are now widely used. This book should go a long way to addressing that need.

The book makes a valuable contribution in drawing together a concise account of the IBSNAT and DSSAT projects that should enable new entrants and other modellers of arable systems to appreciate the scope of the work already done. Importantly, it will also enable them to identify which parts of the underlying models are process-based and which are empirically based or even are 'pragmatic'. (I think that means, 'We use it because it seems to work'.) In addition, this book can be used to show where there are gaps in understanding that the project was unable to tackle and which may deserve study in the future.

Two major premises of the IBSNAT project were that farmers increasingly need the sort of decision support that can only be provided by computer-based packages, and that systems analysis and simulation will contribute significantly to understanding the options that face them. These

premises may well be correct but the presentation given in this book is not addressed to farmers. It is debatable whether it is suited even to agricultural policy makers, unless they wish to understand the basis of advice from modellers. On the other hand, this book will be widely appreciated by modellers in many countries.

D. K. L. MacKerron

The Political Ecology of Bananas. Contract Farming, Peasants and Agrarian Change in the Caribbean. By L. S. Grossman. Chapel Hill: University of North Carolina Press (1998), pp. 268, paperback £15.95. ISBN 0-807847-186.

Lawrence Grossman has traced the history of government intervention, commercial exploitation, and Anglo-American trade rivalry on the banana economy of the Windwards in the Caribbean, and on St Vincent in particular. Persevere through an introductory discussion of political ecology (not a convincing new 'ology' to me), globalization and theories of the private sector contracts with peasant labour to the heart of the book. Here, unusually, Grossman examines the case of St Vincent from both macro and micro perspectives, and it is this duality which gives the study its insights. For some, the selection of the single community of Restin Hill as a case study would query the rigour of the study, but undoubtedly his understanding of the community illuminates the often harsh local impact of uninformed, self interested, decisions taken at a distance, by other public and private stakeholders in the banana economy of the island.

Grossman's main thesis, that globalization is a continuing phenomenon and not a creature of the 1990s, commencing with the World Trade Organization, is well supported. His second thesis is that peasant labour, because of its 'environmental rootedness' is not easily controlled and de-skilled by private sector contracting. While supported by the resilience he reports in the still impoverished St Vincent peasantry, after over a century of manipulation, his particular evidence leaves the general case of widening commercial control open. The chapter notes are very useful and the book is well referenced to the wider literature.

Two constituencies will get particular value from the book, those with an interest in the West Indies and bananas, and those concerned whether the social cohesion, much admired in agriculturally based communities in developing countries, will survive population growth, globalization, government intervention and the widening authority of the private sector.

M. P. Collinson

Readers may be interested to know about the following publications received but not reviewed because of their limited relevance to the majority of readers of *Experimental Agriculture*.

Land Reform and Farm Restructuring in Moldova. Progress and Prospects. (World Bank Discussion Paper No. 398.) By Z. Lerman, C. Csaki and V. Moroz. Washington DC: The World Bank (1998), pp. 98, US\$20.00. ISBN 0-8213-4317-3.

Weed Seedbanks: Determination, Dynamics and Manipulation. Aspects of Applied Biology 51. Edited by G. T. Champion, A. C. Grundy, N. E. Jones, E. J. P. Marshall and R. J. Froud-Williams. Wellesbourne, UK: The Association of Applied Biologists (1998), pp. 296, £30.00. ISSN 0265-1491.

The Human Use of Animals. Case Studies in Ethical Choice. By F. B. Orlans, T. L. Beauchamp, R. Dresser, D. B. Morton and J. P. Gluck. Oxford: Oxford University Press (1998), pp. 330, paperback £20.00. ISBN 0-19-511908.

Ethics and Values: A Global Perspective. Proceedings of an Associated Event of the Fifth Annual World Bank Conference on Environmentally and Socially Sustainable Development. Edited by I. Serageldin and J. Martin-Brown. Washington DC: The World Bank (1998), pp. 115, US\$20.00. ISBN 0-89054-227-9.

The Economics of Agro-Chemicals. An International Overview of Use Patterns and Perspectives. Edited by G. A. A. Wossink, G. C. van Kooten and G. H. Peters. Aldershot: Ashgate Publishing Ltd (1998), pp. 406, £70.00. ISBN 1-84014-084-4.

Preparation and Use of Food-based Dietary Guidelines. Geneva, Switzerland: World Health Organization Publications (1998), pp. 108, SwF 23 (developing countries SwF 16.10). ISBN 92-4-120880-5.

Partnerships for Global Ecosystem Management. Science, Economics and Law. Proceedings and Reference Readings from the Fifth Annual World Bank Conference on Environmentally and Socially Sustainable Development. Edited by I. Serageldin and J. Martin Brown. Washington DC: The World Bank (1998), pp. 272, US\$35.00. ISBN 0-8213-4265-7.

Protection and Production of Sugar Beet and Potatoes. Aspects of Applied Biology 52. Edited by M. F. Dale *et al.* Wellesbourne, UK: Association of Applied Biologists (1998), pp. 430, £36.00. ISSN 0265-1491.