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BOOK REVIEWS

Critical Landcare. Edited by S. Lockie and F. Vanclay. Wagga Wagga, Australia: Charles Sturt University (1997), pp. 239, A$25.00. ISBN 1-8646006-1.

The Preface to the book declares that the goal of sustainable land management inherent in Landcare is critical to the long term well-being of the Australian people. The general thrust of this collection of papers is, however, not concerned primarily with the biological and technical issues involved but rather with the sociological dimensions of land use and landcare, and the history and development of the National Landcare Programme in Australia since its inception in 1989. What is the perception of landcare among the 'actors' and promoters of landcare; how is it defined; does it matter; what are the gender issues and what have been the roles of men and women in the landcare movement; will they change and how would that influence what the Landcare Programme can achieve? There are papers on the 'Constitution of Power in Landcare', on 'Property and Participation' and papers dealing with specific ecological and land degradation issues such as the importance of trees in the ecosystem and the problems of salinity. The question of the appropriate extension philosophy to be used in landcare is discussed in the context of the nation-wide network of community Landcare Groups that have been established in Australia.

Not everyone will find this collection of papers an easy read: it nevertheless demands the attention of anyone concerned with the promotion of sustainable land management and rural development. There are important messages delivered which are relevant to 'developed' as well as to 'developing' nations. The papers are written by authors who have been involved with landcare, many for some time, who can write with deep knowledge and authority. Stewart Lockie and Frank Vanclay have provided three key introductory papers and set the scene for the rest. It is a pity that too often the main points in many of the papers are hidden in jargon and convoluted sentence construction. But for those with an interest and commitment to landcare whether in Australia, the UK, Europe or elsewhere, this is a book that cannot be ignored.

T. J. Maxwell

Africa's Emerging Maize Revolution. Edited by D. Byerlee and C. K. Eicher. Boulder, Colorado, USA: Lynne Reinner Publishers (1997), pp. 301, US$55.00. ISBN 1-55587-776-1.

This book presents a very comprehensive coverage of the progress in maize culture in Africa. As a result of large population increases, per capita food consumption in Africa has declined sharply over the past two decades. Increased food production is critical to achieving food security, peace, and democracy in Africa in the twenty-first century, as the population doubles by 2020.

The book has four parts: The Maize Economy of Africa; Country Studies; Technology, Institutions and Policy; and Conclusions, and consists of 15 chapters written by 30 well-qualified authors. Immigration of large-scale farmers of European descent, strong agricultural research programmes, and necessary infrastructures had a big impact in increasing maize production in eastern Africa using a combination of hybrid seed, fertilizers and good cultural practices. Factors that impede transfer of this technology and these production increases to small farmers in remote areas, including high costs of fertilizers, lack of credit, low maize prices at harvest time and transportation difficulties are discussed.

Unless the rate of population growth decreases dramatically, I agree with the conclusions that 'Africa faces a long-term food crisis that is not easily solved . . . ', and that 'Success will require an unprecedented degree of active collaboration among donor agencies, senior African policymakers, experienced and committed field workers, and last but not least, farmers and farming communities.'

S. A. Eberhart

Plant Resources of South-East Asia. No. 11. Auxillary Plants. Edited by I. F. Hanum and L. J. G. van der Maesen. Leiden, The Netherlands: Backhuys Publishers (1997), pp. 389, NLG 215. ISBN 90-73348-66-8.

This is the eleventh volume in a series of handbooks published by the Prosea Foundation domiciled in Bogor, Indonesia. It is first-rate: it is authoritative and eminently readable – I suspect credit is due to the 'language corrector' – J. Burrough-Boenisch.

What are auxillary plants? 'Any plant that forms part of a land-use system and provides a service and/or product that is secondary to the main outputs of that system.' This definition embraces a very wide range of plants with an equally diverse array of functions whether shade or nurse trees, cover crops, green manures, mulches, 'fallow' crops, live fences, windbreaks and shelterbelts, erosion control, land reclamation, live supports and stakes, firewood and charcoal or water-clearing agents.

Interest in these plants is not new but developments since the 1960s have brought them to the fore. While the book is focused on South-East Asia and refers to plants that may have potential, in addition to those of proven worth in that region, the information is linked to ecological zones and so it will be of relevance to other subtropical and tropical regions of the world.

Of the 213 species described in the book 120 are attributable to the Leguminosae and 10 (the second largest group) to the Compositae. Of the total, 91 are regarded as major auxiliary species and are treated in a way commensurate with that status. Their descriptions include details of origin and geographic distribution, botany, growth and development, diseases and pests, ecology, propagation and planting availability of genetic resources, uses and properties. The latter sections indicate very clearly how earlier preconceptions have been misplaced. For example, *Calliandra calothyrsus*, not known to be useful in Central America where it is native, can successfully serve at least six functions in Indonesia including the provision of shade, green manure and fuelwood and the minimization of soil erosion. *Fleminga macrophylla* is even more amenable with the additional production of dyestuffs and medicines.

With its excellent glossary and indexes of scientific and vernacular names, this book is strongly commended. It is a 'must' for land-managers who wish to seek secondary products and aim to breakdown the unhelpful separation of agriculture and forestry from the conservation of soil and water.

F. T. Last

Interspecific Hybridisation: Progress and Prospects. Edited by M. P. Jones, M. Dingkuhn, D. E. Johnson and S. O. Fagade. Bouaké, Côte d'Ivoire: WARDA/ADRAO (1997), pp. 231, price unstated. ISBN 92-9113-113X.

This book is a piece of grey literature about rice, though one would not learn that from the title. It is a multi-author work based on a meeting held at the West African Rice Development Association (WARDA) in December, 1996.

The contents are based largely on WARDA work but there are some external contributions, for example from IRRI and elsewhere in Francophone West Africa. The starting point was that *sativa* rices (AA) have largely displaced the local West African rices (mostly *glaberrima* (A^gA^g or GG)) in recent decades. But the latter (now only 15% by area) have some useful features, such as hardiness,

heavy tillering and attractive quality to offset poor yield, small and shattering panicles and deep dormancy.

It has long been known that *sativa* and *glaberrima* can be hybridized but it was believed that the hybrids were all sterile. However, some F1 fertility has been known for many years and recently, as related in this book, there has been a serious attempt to exploit it. The effort has taken the predictable course of crossing and back-crossing, to try to introduce the attractive characters of one species into the other. Several chapters do indeed relate entirely to AA × A^gA^g (or GG) crosses but some are concerned with much closer and easier combinations. There is some reference to biotechnological techniques which may indeed be useful in testing identities and pedigrees.

Clearly, some progress is being made and it is good to know that the long-established belief that all hybrid derivatives were sterile is shaky. Something useful may yet emerge.

N. W. Simmonds

Farms, Trees and Farmers: Responses to Agricultural Intensification. By J. E. M. Arnold and P. A. Dewees. London: Earthscan Publications Ltd. (1997), pp. 292, £16.95. ISBN 1-85383-484X.

The numbers of trees in agricultural landscapes are growing rapidly, yet they are often overlooked and ignored. This book brings them into the spotlight and focuses on why farmers do or do not plant trees; knowledge of this kind is essential if projects to encourage tree planting for social, economic and environmental reasons are to succeed. Eight leading experts have contributed to the ten chapters, which provide both global overview and detailed case studies from Nepal, India, Pakistan and Kenya. Sadly, the Sumatran climax agroforests, models of sustainable and profitable land use in the moist tropics, are not included.

This book stresses the importance of a holistic and dynamic framework for an understanding of the dynamics of farmers' economic responses to change in demand and supply, and to scarcity and abundance. It indicates the importance of 'livelihood security' and 'induced innovation' in categorizing farmer response strategies to change. Among the conclusions that complex tree production problems have complex non-forestry solutions, is the interesting suggestion that tree crops have emerged as a cash crop in association with farmers' changing needs and possibilities in areas such as income generation, risk aversion, household food security and the optimal use of land, labour and capital.

This excellent paperback version of an earlier book *Tree Management in Farmer Strategies: Responses to Agricultural Intensification* published in 1995 makes this essential reading easily affordable.

R. R. B. Leakey

Bioengineering of Crops. Report of the World Bank Panel on Transgenic Crops. By H. W. Kendall, R. Beachy, T. Eisner, F. Gould, R. Herdt, P. H. Raven, J. S. Schell and M. S. Swaminathan. Washington DC: The World Bank† (1997), pp. 30, US$20. ISBN 0-8213-4073-5.

This report, prepared by a panel of eminent scientists, examines the potential, and inherent risks, of crop bioengineering. Whilst these aims are laudable, and the panel well qualified, the report generated is most disappointing, particularly because of its incomplete and outdated coverage. For example, field trial data are recorded – but only from 1993 – and comment is made that 'a large number of Bt-transformed crops are being field tested'. In fact, such crops have been on the market

† 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 its UK agent, Microinfo Ltd, PO Box 3, Alton, Hants, UK.

for the last two years and are being grown on considerable areas in North America. There is no information on the present total sales of transgenic varieties and there are serious gaps in the range of projects described. For example, the introductory chapter on 'World Food Supplies' comments on the lack of vitamin A in the diet in south-east Asia. There is no reference, however, to the Rockefeller Foundation programme which has produced transgenic rice with elevated levels of this nutrient. Similarly, the value of herbicide-resistant, transgenic crops in the battle against parasitic weeds is not described.

Overall, the reader is left with the impression of a report with admirable motives, but which has been prepared in haste and is therefore of limited value.

Jim Dunwell

Developing Technology with Farmers. By L. van Veldhuizen, A. Waters-Bayer and H. de Zeeuw. London: Zed Books in association with ETC Netherlands BV (1997), pp. 230, hardback £39.95, ISBN 1-85649-6 Hb, paperback £19.75, ISBN 1-85649-490X Pb.

This is a manual for trainers preparing staff to work with farmers to develop technologies for ecological agriculture. The training provides active learning which mirrors the approach intended for use with the farmers. This encourages the clients to draw upon their own experience to participate in initial planning and subsequently in implementation, monitoring and evaluation of local development activities. The authors have extensive experience in their subject but importantly have drawn on the collective experience of trainers and practitioners from many organizations throughout the world. An international workshop which was held in 1990 produced a guide. Informal feedback and then a systematic consultation conducted in 1995 resulted in this manual. The manual addresses four main issues: basic skills required by field staff for a participatory approach to agricultural development; approaches to joint analysis and planning; means to support farmers' experimentation; and extension of technologies and participatory methods. These sections are very clear and professionally presented. The content is easy to follow and presents many useful learning activities that build on clear, well-structured theoretical foundations. The book is a credit to all its contributors.

Geoff Barber

Farmers' Experiments: Creating Local Knowledge. By J. Sumberg and C. Okali. Boulder, Colorado: Lynne Reinner Publishers (1997), pp. 186, US$45.00. ISBN 1-55587-674-9.

Sumberg and Okali address an important lacuna in the literature on farmer participatory research. The authors draw on empirical research of farmer experimentation in Africa, as well as on one site in the United Kingdom, to examine the common assertion that the effectiveness of formal agricultural research and extension could be improved significantly through the close integration of farmer and researcher experimentation. Using interview data with farmers, the authors explore systematically the nature of farmer experimentation. Key findings include the following: the majority of farmers experimented; the majority of experiments were planned and made some provision for controls and/or replication; and most experiments were focused on incremental innovations within a limited range of agronomic topics.

The authors conclude that farmer experimentation is an important complement to formal research. It expands the extent of experimentation and provides site-specific testing and adaptation. At the same time, given the limited scope of farmer experimentation, they question the call of some advocates for the greatly expanded role of farmer experimentation and the concomitant restructuring of formal research systems that this would require. In sum, the authors provide a comprehensive literature review and empirical research that helps to clarify the appropriate role for farmer

experimentation in research. One shortcoming is that adequate attention is not given to other researchers such as Ashby *et al*. (1989) and Sperling *et al*. (1993)‡, who have provided excellent empirical evidence of the increased impact that can be achieved from researcher–farmer partnerships in experimentation.

Deborah Merrill-Sands

Plant Pathogens and the Worldwide Movement of Seeds. Edited by D. C. McGee. Minnesota, USA: The American Phytopathological Society (1997), pp. 109, US$40.00. ISBN 0-89054-185-X.

This multi-author monograph provides a timely critical appraisal of the relevance of seed-borne pathogens as world trade in commercial seeds and in seeds as germplasm increases. It examines the implications for seed-borne diseases of the greater freedom of movement of seeds enabled by the North American Free Trade Agreement (NAFTA) and the General Agreement on Tariffs and Trade (GATT), and the potential effects of the introduction of new health accreditation systems which will allow the US seed industry to be self-regulating in producing phytosanitary certificates. Set against these events the chapters review existing US technology and scientific thinking on the relevance of seed pathology research, on disease avoidance management in multinational seed production systems, on seed quarantine procedures in the US, on the world phytosanitary system and regulatory needs for standardized seed health tests. It includes chapters on European experience on government and industry co-operation in seed health testing and activity at international level on the control of pathogens in seed germplasm.

The core message from this book is that there is urgent need for greater national and international standardization of seed and plant health test methods and there is also a need for the development and application of seed health tests which relate to the ability of the pathogen to cause disease.

R. B. Maude

Genetics, Cytogenetics and Breeding of Crop Plants. 2. Cereal and Commercial Crops. Edited by P. N. Bahl, P. M. Salimath and A. K. Mandal. Enfield, NH, USA: Science Publishers (1997), pp. 357, US$78.00. ISBN 1-886-106-94-0.

This is a two-volume multi-author work of which this is the second volume; I have not seen the first, which is devoted to pulses and oilseeds. In practice, the scope of this volume is rice, wheat, maize, sorghum, millets (*Pennisetum*), cottons and sugarcane. With the exception of T. T. Chang, who has written the chapter on rice, all the authors are Indian and mostly working in India. There is no doubt of extensive personal experience of the crops they treat but the Indian focus is both obtrusive and restrictive. No special order of presentation within chapters has been attempted but, broadly, each crop progresses from cytogenetics to breeding. There are large bibliographies by chapters and an adequate index. Tables and figures are generally adequate but with a few disasters. Errors of sense and logic are not wanting, alas, and the big wide world outside India is largely ignored. Disease resistance is often either misunderstood or just wrong. The volume as a whole is interesting to the knowledgeable reader but of limited usefulness. The choice of crops is sometimes baffling: are cottons and sugarcane really the only commercial crops in India?

N. W. Simmonds

‡Ashby, J. A., Quiros, C. A. & Rivers, Y. M. (1989). Experiences in group techniques in Columbia. In *Farmer First: Farmer Innovation and Agricultural Research* (Eds R. Chambers, A. Pacey & L. A. Thrupp). London: IT Publications; Sperling, L., Loevinsohn, M. E. & Ntabomvura, B. (1993). Rethinking the farmers' role in plant breeding: local bean experts and on-station selection in Rwanda. *Experimental Agriculture* 29:509–519.

Biodiversity in Trust. Edited by D. Fuccillo, L. Sears and P. Stapleton. Cambridge: Cambridge University Press (1997), pp. 371, £45.00. ISBN 0-521-59365-4.

This book provides an overview of the status of the genetic resources collections in the International Agricultural Research Centres of the Consultative Group on International Agricultural Research (CGIAR), covering roots and tubers, legumes, cereals, forages and banana. Each crop chapter is structured on Botany and Distribution (origin, domestication and reproductive biology) and Conservation and Use (conservation methods, evaluation and use, breeding, prospects and limitations).

The CGIAR Centres have placed their collections in trust under the authority of the FAO. The Centres are collaborating under the System-wide Genetic Resources Programme (SGRP) to ensure their activities are concordant with the Convention on Biological Diversity. This book is one of the tools being used to promote the SGRP and the transparency of the system with regard to the origin of the material and the policy on intellectual property and utilization. It presents a unique synthesis of information from the CG Centres. The information on the botany, utilization and future prospects forms a valuable reference source, whereas the collection information will date rapidly. It is difficult to see at whom exactly the book is targeted but its justification is perhaps as a statement of the CG Centres' achievements with genetic resources, future potential and policy.

D. Astley

Wheat Production and Utilization. By M. J. Gooding and W. P. Davies. Wallingford, UK: CAB INTERNATIONAL (1997), pp. 355, £49.95. ISBN 0-85199-155-6.

After a somewhat tedious account of crop morphology and development, suggesting that the authors are dealing with aspects outside their specialist interests, this book provides a thorough and perceptive account of factors limiting grain production and quality and their control by agronomy and breeding. Special reference is made to recent work on protein analysis and its relation to grain quality. A very full account is also given of the effects of weeds, pests and diseases and of their control by chemicals or other means. The book concludes with consideration of industrial uses of wheat and with a valuable section on post harvest grain management, pointing out that on a world-wide basis up to 50% of grain harvested may be lost before utilization. A very full list of references is provided.

Although the more practical aspects considered are largely based on work in the UK, problems arising in other parts of the world are reviewed and useful comparisons made. Despite a discouraging start, this book provides an excellent review of recent work and is to be recommended.

F. G. H. Lupton

State of the World 1998. By L. R. Brown *et al*. London: Earthscan Publications (1998), pp. 251, £12.95. ISBN 1-85383-532-3.

The Washington DC-based World Watch Institute and its President Lester R. Brown not only have a reputation for gloom on the future of the planet, but are also known for well researched facts and well articulated argument. The 1998 version of its influential annual 'State of the World' flagship publication is in this tradition. Brown himself makes three of the ten contributions. Within the theme of sustainable development which is the think tank's mandate, his opening chapter on 'The Future of Growth' and his closing chapter on 'The New Economy' embrace eight more specific contributions on forests, biodiversity, fisheries, crop productivity, organic waste recycling, responding to climate change, curbing the proliferation of small arms, and private capital flows to developing countries.

As usual, both the writing and the documentation are compelling. Brown's introductory chapter critiques the 'ideology of growth', taking the view that the economy is outgrowing our ecosystems. As one theme it juxtaposes increasing demands for grain for human and animal consumption and increasingly scarce water. His final chapter, 'The New Economy', is a reprise on the introduction, founded on the statement that, 'Just as an aircraft must satisfy the principles of aerodynamics if it is to fly, so must an economy satisfy the principles of ecology if it is to endure'. Of the more specific chapters I found those on organic waste recycling, climate change and private capital flows the most informative.

Readers will be most interested in the chapters on biodiversity, forestry and crop productivity. It is in these more familiar areas that the advocacy can be seen to stumble. On crop productivity Brown comments that, 'The USA nearly tripled its wheat yield by 1983, for example, but even with all its access to technology, fertilizer and agronomic knowledge, it has not been able to raise yields since then'. Apparently, in the manner of some die-hard agricultural researchers, he confounds yield potential and economic yield. As an economist he does not have their excuses.

Data from the book, and all other World Watch publications are available, with trends from 1950 and sources, on the 1998 World Watch Database Disk. It must be a valuable aid for both teaching and publication.

M. P. Collinson

Genetic Engineering – Dream or Nightmare? The Brave New World of Bad Science and Big Business. By Mae-Wan Ho. Bath: Gateway Books (1998), pp. 277, hardback £13.95, ISBN 1-85860-052-9, paperback £9.95, ISBN 1-85860-051-0.

The author started life as a biotechnologist, saw the light (so to speak) and became one of its fiercest critics. She develops a long list of pet hates of which the following is a fair sample: intensive agriculture; international banks; biotechnology; big business; commercial breeding; dams; Darwin; genetic 'determinism'; eugenics; free trade; genetics, conventional and molecular; Green Revolution; herbicides; Human Genetics Project; insurance; Malthus; monoculture; Natural Selection; and seeds trades. She also presents a dismal catalogue of risks to humans, including the following: allergies; antibiotic marker genes; 'breakdowns' of resistance; foreign DNA taken up in the human gut; new diseases, bacterial and viral; escape of deleterious transgenes following outcrossing; failures; instability and unexpected products; and toxins. She is in favour of the following: biodiversity; entropy; holism; organic farming; and sustainability.

The author gives no biochemical details and her book is mercifully free of those dreadful DNA and amino acid sequences which disfigure so much of the literature. She expresses clearly many of the numerous doubts which must attach to any application of biotechnology to human affairs, specifically the rather poor evidence of safety, ethical matters and the exploitation of poor tropical countries by big business. There is, she says, quite correctly I think, inadequate public control and a lamentable lack of understanding by the bureaucrats nominally responsible.

Given this good sense, it is a pity that the author spoils her attack by irrelevance and error. This lays her open, of course, to seeming refutation by those (of whom there will be plenty) who attack her for bad reasons.

The book is well made, has a fair bibliography and an adequate index. I enjoyed reading it but it is not easy to find the hits among the froth.

N. W. Simmonds

The Adoption of Sustainable Agricultural Technologies: A Case Study in the State of Espirito Santo, Brazil. By Hildo M. de Souza Filho. Aldershot: Ashgate Publishing Ltd (1997), pp. 176, £32.50. ISBN 1-84014-160-3.

Notwithstanding its title there is little about sustainable agriculture in this state. The overview of agricultural development in Brazil describes how government economic policies encouraged the development of larger farms using purchased inputs, described by the author as a Green Revolution. The detrimental impact of this type of agriculture is discussed in social, economic and environmental terms. There is a useful review of some of the global literature on sustainable agriculture, though the author admits that sustainable agricultural development is difficult to define.

A detailed discussion on the theories of diffusion of technologies, not specifically related to agriculture, may be of more interest to an econometrician than to an agronomist. The techniques involved in these are applied to the adoption of sustainable agricultural technologies in Espirito Santo. A survey in this state of the adopters and non-adopters of sustainable agriculture, defined as those farmers who do not use chemical inputs compared with those who do, appeared to show that the former adopted because of concerns on health, low cost and less risk.

Though there may be some worthwhile ideas on the general topic of adoption of new technologies, the book adds little useful information to the debate on the best ways to develop sustainable agricultural production in a tropical ecology.

John Coulter

L'Amélioration des Plantes Tropicales. Edited by A. Charrier, M. Jacquot, S. Hamon and D. Nicolas. Montpellier, France: CIRAD/ORSTOM (1997), pp. 623, FF 380.00. ISBN 2-87614-292-9.

This volume provides a valuable and detailed account of the plant breeding and selection work undertaken by the French state sector organizations CIRAD and ORSTOM and their collaborators in the tropics, concentrating on the results from the past ten years. The twenty-four chapters were written by experts and the references are up to date. The crops covered are citrus, pineapple, groundnuts, the eggplants, bananas and plantains, cacao, coffee, sugarcane, coconut, cotton, eucalyptus, passion-fruit, okra, Guinea grass (*Panicum maximum* and allied species), rubber (*Hevea* spp.), yams (*Dioscorea* spp.), maize, cassava, millet (*Pennisetum glaucum*), cowpea, oil palm, rice, sorghums and tomato. The treatment of each crop is succinct and includes information on relationships within species or groups, plant breeding methods and progress, the dissemination of modern varieties and future targets for breeding and genetic engineering. The diagrams and tables are well-designed. This book can be recommended to students of these crops and to specialists alike. One minor criticism is that page headings could usefully differentiate the chapters. The proposed English language version will be a most welcome addition to the literature, and will enable a wider audience to gain access to the substantial work done upon these crops in the francophone community.

Lesley Currah

Strengthening National Agricultural Research Systems. By D. Byerlee and G. E. Alex. Washington DC: The World Bank† (1998), pp. 87, US$20.00. ISBN 0-8213-4173-1.

This publication, produced by two experienced World Bank staff members with in-depth knowledge of national agricultural research systems (NARS) in developing countries, is a useful contribution and summary of the current status of thinking on the issue. It succinctly distills information garnered from a range of sources – the literature, consultation and interaction with policy makers and managers, scientists and stakeholders over many years. The 'format' is attractive and it is an easy

read, including a detailed executive summary and an extensive bibliography. Its four chapters (supported by useful annexes) cover The Recent Evolution of National Research Systems; National Research System Development: Issues and Good Practice; Strengthening Public Institutes: Issues and Good Practice; and The World Bank's Role in Strengthening National Research Systems. Attention is drawn to the many factors impeding the creation of really effective research systems despite the considerable investment of finance, time and effort in the past 20 years. Significantly the NARS are recognized as very diverse in strength, capability and efficiency, thus requiring individual consideration both initially and temporally. The better involvement of universities, which are grossly under-utilized and the increasing role of the private sector are recognized as having a big potential in strengthening the NARS with properly applied finance. From the reviewer's lifetime perspective and considerable recent 'dirty boots' experience in several of the NARS systems mentioned in the publication, it is disappointing yet again to see the problems so well identified but to note the marginal improvements made, especially in smaller national systems, particularly in Africa. It is evident that without far better application of these well identified policies, improved real priority setting (demand led), motivation of management and staff encouraged by far more realism and well targeted, timely and regular delivery of national and donor funds at the 'work face', the issue of strengthening of NARS will still be a premier focus of such discussion and rhetoric in the pleasant conference and committee rooms at select locations 20 years from now.

J. C. Davies

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*.

Rural Development from Vision to Action. (Environmentally and Socially Sustainable Development Studies and Monograph Series No. 12.) Washington DC: The World Bank† (1997), pp. 157, US$30.00. ISBN 0-8213-3966-4.

Incentives for Joint Forest Management in India, Analytical Methods and Case Studies. (World Bank Technical Paper No. 394.) Washington DC: The World Bank† (1998), pp. 112, US$20.00. ISBN 0-8213-4143-X.

Indicators of Land Quality and Sustainable Land Management. An Annotated Bibliography. By J. Dumanski, S. Gameda and C. Pieri. Washington DC: The World Bank† (1998), pp. 124, US$20.00. ISBN 0-8213-4208-8.

Setting Priorities for Environmental Management. An Application to the Mining Sector in Bolivia. (World Bank Technical Paper No. 398.) By W. S. Ayres, K. Anderson and D. Hanrahan. Washington DC: The World Bank† (1998), pp. 108, US$20.00. ISBN 0253-7494.