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BOOK REVIEWS

International Trade in Temperate Zone Products. Edited by F. O. GROGAN. (Edinburgh: Oliver and Boyd, 1972.) Pp. 313, £2.50, ISBN 0 05 002372 1.

The problems of international trade in agricultural commodities have proved to be more intractable than those for most other commodities. This book provides an excellent review of the nature of these problems and of the attempts which were made to alleviate them over a period of some fifty years, culminating in the largely unsuccessful agricultural negotiations held within the context of the Kennedy Round.

The editor then draws on the lessons of the Kennedy Round in an interesting examination of the possibilities for future progress in those areas with which the Kennedy Round agricultural negotiations were concerned; namely, in achieving more orderly trade, in modifying tariff and especially non-tariff barriers to trade, and in obtaining greater compatibility in national agricultural and trade policies.

The report opens with three chapters which contain:

- (a) an account of the factors underlying national agricultural support policies and some measure of their effects;
- (b) an examination of the efforts that have been made internationally to modify protectionist policies and of the reasons why these have failed; and
- (c) a summary of the national agricultural policies of the main countries trading in selected commodities.

Then there is a commodity section with separate chapters on grains (by P. W. H. Weightman), sugar, meat (by R. Galletti) and dairy products (by A. W. Tansey) in which an assessment is made of current and probable future supply/demand relationships and of the relevance of international arrangements for each commodity. The final part of the report summarizes the conclusions emerging from earlier sections and discusses the prospects of modifying protectionist policies, either in the context of individual commodity arrangements or in a more general framework.

An underlying theme of the book is the interaction between national agricultural policies and international commodity trade and the prospects for achieving greater compatibility in national agricultural policies and so moving towards freer world commodity trade.

Grogan recognizes the tremendous inbuilt resistance to changes in domestic policies which means that international negotiations generally move very slowly and 'often appear to be a dialogue between the deaf'. At the time of the book's preparation, it did seem that the time was more opportune for major trading countries to reappraise their agricultural policies, particularly as major favourable changes in agriculture's terms of trade seemed unlikely, at least in the short term. However, such a major change did eventuate in 1973 and thus at the Seventeenth Session of the FAO Conference, for example, international agricultural adjustment did not dominate the debate as had been expected and far

greater emphasis was given to world food security and the World Food Conference. Delegations tended to concentrate on adjustment within the context of expanding production generally rather than adjustment of levels of production between countries. The changed world situation for many commodities, together with much wider currency fluctuations and greatly increased inflation rates has also had implications for the present round of multilateral trade negotiations sponsored by GATT.

Nevertheless, there have been some notable changes in agricultural policies. United States agriculture, for example, has become more market oriented. There have also been major modifications in the institutional arrangements within which the agricultural sector in Australia operates. It is interesting that two of Grogan's priorities for the rational examination of national rural policies have been met in Australia by the formation of the Industries Assistance Commission with a brief incorporating assistance to rural industries and by the publication of the Green Paper on Rural Policy in Australia. On the other hand, the unilateral action taken by several countries to restrict or ban meat imports in mid-1974 was a disturbing development in the opposite direction.

Overall, the book provides a lucid and interesting coverage of a most important topic and reflects the editor's considerable experience in international consultations. It would be a very useful reference for anyone interested in international commodity policy. It certainly lives up to the statement in the Preface that 'The subject matter of the report will be of interest to readers who are not already expert in the areas which it covers. The report brings out the complex inter-relationships among the difficult issues with which it deals and it reveals the need for positive action both nationally and internationally to ameliorate the effects of present policies. It is intended to contribute to a wider interest in these important matters and to clarification and better understanding of them'.

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Agricultural Development Planning: Economic Concepts, Administrative Procedures and Political Process. By WILLARD W. COCHRANE. (New York: Prager, 1974.) Pp. 223, \$S16.50.

Professor Cochrane's contributions to U.S. agricultural policy are well known. In this volume he addresses himself to the problems of agriculture in the less developed countries (LDC's). The objective of the book, in the author's words, is 'to understand the planning process as it relates to agriculture . . . The focus is to understand the process of planning and not the product of planning for some time or place' (p. vi).

The opening chapter, titled 'The Challenges in Agriculture' deals with the need in LDC's to increase food and fibre production to meet the requirements of a growing population and economic development. The statistical data on agricultural growth in the last two decades is taken from F.A.O. studies and only LDCs' performance is reported. A comparison with the performance of the developed countries, easily

available from the same source, would have brought the point into sharp focus.

The second chapter deals with the state of knowledge regarding agricultural development. Cochrane decides to catalogue the whole range of theories and goes on to state the limitations of some of these. There is no attempt to bring out the conflicts involved in the alternative approaches. Referring to John Mellor's essay 'Towards a Theory of Agricultural Development', Cochrane says that 'Mellor's efforts in his essay do not really move beyond the state of affairs summarized in his conclusions' (p. 18), namely attempts so far have not moved beyond cataloguing the relevant factors. Ironically, the present book hardly goes beyond cataloguing!

Chapters 3 and 4, on Development Planning and the National Development Plan, summarize the views of W. Arthur Lewis, Jan Tinbergen, Stolper and others. Non-economists would find these chapters informative and interesting, but economists interested in planning would not obtain much information from this section.

It is only in Chapters 5 and 6 that the author reveals his preferences as a 'Political Economist'—a term which he thinks would describe him. His political preference is: let the government come in to provide infrastructure for agricultural development and leave everything else to the 'invisible hand'. This is restated in the concluding chapter as follows, 'Our thesis is a simple one. Plan around the edges of the economy, concentrating on those tasks that are absolutely essential, and depend on that great labour saver, the market, to direct the rest' (p. 222).

Even as a political economist Cochrane fails to see the conflicting interests of different sections of society. Land reforms and taxing the rich farmers are prescribed with a naïvety that is difficult to associate with the expertise and experience of Cochrane.

Chapter 7 dealing with Implementing the Plan outlines organizational aspects of planning and implementing machinery. The model highly recommended is the one which bears strong resemblance to the Indian system. The fact that twenty-five years of experimenting with this model have not produced the desired results does not deter the author from recommending it.

Chapter 8 describes the planning experience, with some factual details, of India, Thailand, and Tunisia. This is a very readable and informative chapter. It is a pity that Cochrane did not evaluate these experiences in the light of his recommendations of Chapters 5 and 6.

The concluding chapter is a restatement of the author's faith in the market system. He wants development planning to provide the framework for this great human creation, namely the market system. Thus the issues which would torment a policy maker in a typical LDC, (of political pressures, economic vested interests), are all reconciled (or swept under the carpet?) in the proposed grand scheme of the mixed economy.

Thus a serious student of economic development would find Chapters 4 to 6 interesting, a non-expert would do well to skip Chapter 2 and a policy maker may not find it of much help. Some printing errors, e.g. Ranis printed as Ranus (pp. 17, 20), and the lack of an index, are additional negative aspects of this book.

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Economics and Management Planning of Range Ecosystems. By DONALD A. JAMESON, SANDY D'AQUINO and E. T. BARTLETT. (Rotterdam: Balkema, 1974.) Pp. 256, \$US9.25.

A book of this level and with this orientation could meet a real need for students interested in range management. It is regrettable that the authors did not expend additional effort to refine their product. Some serious errors limit its appeal and make it a very questionable choice as a reference for students.

The book is divided into three major sections:

- (1) a two chapter introduction on the functioning of a market economy,
- (2) a four chapter review of introductory production economics, and
- (3) six chapters which examine various techniques for determining optimal resource use plans with range management examples.

Chapter one is a straightforward review of supply and demand relationships in a market economy. The troublesome concept of elasticity is further confused by errors in some figures on page ten. The almost complete failure to discuss non- or extra-market considerations appears to be a serious omission for a book designed for managers of range resources. As an example, to essentially ignore the collective good characteristics of many range situations appears to be a serious shortcoming. Chapter two is the most unsatisfactory chapter. An attempt to condense the discussion of four market models into one chapter presents obvious problems. The chapter contains several errors which could be serious for the student with limited training in economics. It appears as though the figures and some text materials were not proof-read by an economist. The number of such mistakes is unpardonable in a book of this type. Additionally there is no attempt to relate the significance of the differing states of competition to the management of range resources.

Chapters three to six are a fairly straightforward treatment of factor-product, factor-factor, and product-product relations. Generally sloppy work as well as some obvious errors in the illustrative figures coupled with a generous quantity of typographical errors mar these chapters. Considering that this book is likely to be used by people with a substantial production bias, a much clearer distinction between physical and economic efficiency should be made.

Chapter seven discusses the concepts of cost-effectiveness and benefit-cost analysis. Those unfamiliar with the subjects may find the presentation a bit troublesome. Chapters eight and nine provide an introduction to the technique of linear programming (LP) which is the basic model for optimization used in the last section of the book. There is a substantial amount of detail in these chapters, but those unfamiliar with LP are likely to find references that are easier to follow. The assumptions of LP and the interpretation of results for range situations merit a greater emphasis. Most people interested in using LP are likely to have a 'canned' programme available for their computer. The availability and flexibility of such programmes should have received more comment.

Chapter ten provides the basic format for a general LP model for management of a specific resource management area. A creative worker could easily use this model and modify it to meet his particular needs.

An elaboration on the static nature of the model is probably warranted. Chapter eleven introduces optimization under uncertainty. The role of discounting for time versus uncertainty is left unclear. There may be an over-reliance placed on the normal distribution and its acceptability. The discussion of Monte Carlo techniques should make clear its inadequacy for treating time dependence which may be a key aspect of modelling biological processes.

The final chapter discusses the use of simulation techniques. The authors recognize that they cannot do justice to the subject in one chapter. They may have been better off to have provided a more general treatment of the method rather than to have provided a limited look at a couple of specialized approaches. Australians would be better advised to read some local applications to range issues. The first paragraph repeats a common position that optimization models (e.g. LP) assure us of finding the single solution that cannot be improved upon. Simulation models are said to make us reasonably confident that an adequate search has been made in the general area of the best solution. One needs to bear in mind that the 'best solution' under either approach is constrained by the specification of the model. To the extent that the gain from LP's single best solution comes at the cost of a less well specified model, the benefits may be illusory.

A careful editing of the final manuscript would have markedly improved this book. The stated audience for the book, resource managers and planners, include a wide array of training and expertise. This requires the author to provide both introductory and in-depth coverage which is a formidable task. This book will provide a valuable service to the extent that it stimulates some resource managers and planners to delve further into those areas of particular concern to them. Those considering possible adoption as a classroom reference are advised to give it careful study in relation to their students' requirements.

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The Value of Agricultural Land. By C. CLARK. (Oxford: Pergamon, 1973.) Pp. 117, £2.75. ISBN 0 08 017070 6.

The analysis of land prices has been a challenging area for research since the early work of Ricardo. While the general principles relating to the value of land are well understood, empirical analysis is complicated by an array of miscellaneous factors all influencing actual land prices. This book is essentially empirical in nature, attempting to identify the nature of the relationship between the net return to land and the value of land. Some progress is made in this direction, but overall, the book is somewhat disappointing.

The book begins with a brief statement of general principles emphasizing that land has value because it is expected to earn rent. This is followed by comments on the concepts enunciated by Von Thünen, particularly transport costs. The very sketchy introduction does not provide any thorough elaboration of the theory of land values nor does it clearly establish the objective of the following empirical analysis.

The empirical analysis attempts to show that land prices are related to the economic return from that land. The return to land is estimated

from three general sources, production function studies, linear programming studies, and residual imputation procedures. In each case, only cryptic comments are offered on the underlying assumptions and limitations of these methodologies.

The empirical evidence presented is drawn from a wide range of sources and covers many economic situations. Some of the information presented is drawn from obscure and unlikely sources while few researchers would agree with the author's assessment that he has covered the entire field of studies. For example, in the chapter which discusses marginal products derived from production function studies (usually of the Cobb-Douglas variety), there is little reference to any of the now considerable literature on allocative efficiency in subsistence agriculture. Likewise, in the review of linear programming studies, which is considered complete (p. 52), only two studies are reported from Australia. It is apparent that only a selection of studies is included with no indication of the selection procedure employed.

The final two chapters discuss actual rents and prices for agricultural land. These data range from the 5th century B.C. to the present and span most countries. Rents are related to gross product and factor income, and as expected this relationship varies considerably over space and time. Similar wide variations are indicated for the relationship between rents and land prices. These aspects are amplified in analysis of land price and rent data for England and Wales over the period 1770 to 1965-66. This highlights the fluctuating importance of what Clark terms 'amenity and expectation' factors in determining land prices. These factors vary significantly in importance over time and therefore complicate the explanation of variations in land prices.

To round the book off, there is a real need for a concluding chapter which distils the main findings from the vast amount of detailed evidence. Some appraisal of the quality of the data used, and more complete referencing of sources would improve the book as a source of empirical data.

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Economic Theory of Natural Resources. By O. C. HERFINDAHL and A. V. KNEESE. (Columbus, Ohio: Charles E. Merrill Publishing Company, 1974.) Pp. 405, \$US15.95. ISBN 0 675 0889 5X.

Economic Theory of Natural Resources sets out to review the economic concepts which are applicable to environmental problems. Herfindahl and Kneese concentrate on developing basic micro-economic theory for general application to these problems. After reviewing this theory briefly in Chapter 2, they spend Chapters 3, 4 and 5 on its application to resource use over time. Chapter 6 concerns the theory of estimation of benefits and costs, and Chapter 7 is entitled 'Production Function, Cost Allocation, and Problems in Pricing'. The remaining four basic chapters (8 to 11) address the analysis of residuals management.

The title suggests that this is a book on economic theory and/or natural resources. But readers who are searching for a text in micro-economic theory that is complete in itself will be disappointed. The theory is only briefly summarized even though the summary is well

done. Those who search for a text in the economics of resource management will also be disappointed. The book concerns the application of theory and not the solution of management problems *per se*. The authors' readily acknowledge these limitations and have nominated a different goal for themselves. This is to provide a text on the general theoretical constructs to analyse problems of resource management. They have been successful in this objective. As such it is a text that students of this subject will wish to purchase and be asked to purchase. It will be a useful text throughout formal studies and subsequent professional careers. This is fortunate for the publishers in view of the likely price in Australia.

The orderly presentation and quality of the work derives from the authors' long research careers in this area. Herfindahl and Kneese have spent some ten years together at Resources for the Future. Their work here is built into the text as illustrative examples and valuable insights. They confess to inflicting earlier versions of the text on students at a number of prominent universities in the United States.

Readers will need a working knowledge of micro-economics and simple algebra, since the basic concepts are covered very briefly. Production theory is covered in only seventeen pages. Similarly, demand theory is covered in only twelve pages. A natural outlet for the book is therefore as a supplement to a micro-economics text for an introductory sequence in resource economics.

The usefulness of the book will depend, rather more than usually, on the reader's reaction to the range of topics that are covered. The allocation of resources over time is particularly well addressed as is the question of residuals management. But outside these areas the book is weak. The derivation and application of production functions in the environmental area is only sketchily covered. Equally the empirical application of demand and utility theory is almost totally ignored. The authors admit to the possibility of debate on what has been included and excluded. Nevertheless, the student who is obtaining his economics in an environmental context will find this a deficiency. The lecturer who is teaching the course could find this a reason not to prescribe such an expensive text.

The adequacy of coverage of each of the selected topics is very variable. Chapter 7 (5 per cent of the book) on the production function, cost allocation and pricing provides an inadequate treatment of each of these topics. It mainly summarizes journal articles and perhaps therefore could have been left out. The chapter on estimation of benefits and costs (15 per cent) is couched in the establishment of social objective functions. This is a refreshing approach but the rest of the chapter offers little new on methodology for valuation. The treatment of time problems (40 per cent) is thorough. It includes discounting and simple models of rate of resource use over time. It then follows through to uncertainty, and complex systems, to model the interactions of resource stock, output flow, supply and demand over time. Residuals management is also treated well (20 per cent of the book).

Work on residuals management has been slow to begin in Australia. In this context the book provides both a perspective and thorough exposition of economic theory as it can be applied. The authors show how systems analysis at a macro level can be blended with micro-econo-

mic concepts to provide a workable model and theory. There have been two economic approaches to residuals. General equilibrium theory and input-output models have been used to examine the whole physical/biological/decision-making system. In their examples the authors discuss the use of such models at a regional level to put the whole system and relative parts in focus. Then the second approach, through externality theory, permits the analyst to consider how to manage a particular type of residual. The two approaches through externalities and regional models, are well contrasted and blended.

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