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BOOK REVIEWS

Fundamentals of Modern Agriculture. Edited by C. D. BLAKE. (Sydney University Press, 1967.) Pp. 497. $8.50.

This book has been published as a memorial to the late Sir Robert Watt who was appointed to the first Chair of Agriculture of the University of Sydney in 1910. Twenty-two members of Sydney University have contributed to the book, almost all of the contributors being members of the Faculty of Agriculture which Sir Robert was successful in establishing.

The book is primarily intended for use by senior students who are studying Agricultural Science or related subjects in high schools or in agricultural or technical colleges. University students studying agriculture for the first time would also gain benefit from some chapters.

The book is divided in five sections: The Soil and Aerial Environments; Plant Biology and Crop Production; The Biology of Animals; The Biology of Micro-organisms; and Agricultural Economics. In both the editorial Preface and in the Foreword by Professor I. A. Watson it is observed that no special effort has been made to integrate one section with another. Clearly, to have made this attempt with so many contributors would have placed a very heavy, if not impossible, burden on the editor. It is understandable, therefore, that the most serious fault of the book is this very lack of integration. One looks in vain for any unifying theme running through the text. As Professor Watson remarks in the Foreword, efficient modern agriculture demands the complete integration of all its component disciplines. The question is, can it be left to the student to relate the various things he has been taught one to another, or should his teachers guide him in this task? Reading this book left this reviewer with the unhappy suspicion that many students will get too little guidance in this respect.

Many agricultural economists might believe that their own subject could provide the integrating theme which appears to be needed. Indeed, this thought might have been in the minds of the editor of the book and his associates when they arranged for the section on agricultural economics to come after the other sections. It is disappointing, therefore, to find an almost complete lack of an economic approach in the earlier sections, especially in the chapters on plant and animal production. For example, the economics of fertilizer use are not discussed and economic principles are mentioned in relation to seeding rates and plant populations only when a total product curve with no maximum is noted. Similarly, the chapter on animal nutrition deals with such questions as compounding rations and efficiency of food conversion with no mention of economics. The depth of treatment of the subject matter varies from chapter to chapter. Some contributors have dealt with their material at a fairly advanced level. Indeed, your reviewer, as an erstwhile agriculturalist, found himself increasingly dismayed at so many facts he had forgotten or never remembered. Certainly, in both extent and

depth of treatment the book often goes beyond the requirements of advanced level school courses in Agriculture. Occasionally one is led to wonder why some of the material has been included at all in a book pitched at this level. The odd page or two here and there smacks too much of academic exhibitionism. Alternatively, taking a more generous view, some authors seem to have had difficulty in identifying or describing in simple terms those basic principles of modern agriculture which lie within their field of study.

The section on Agricultural Economics comprises seven chapters written by Professor K. O. Campbell and Mr. J. W. Longworth. The treatment is extensive and necessarily superficial, the topics covered ranging over both agricultural economics and farm management. The material is well presented with clearly written explanations supported by plenty of simple diagrams. The first chapter on Concepts of Demand and Supply is excellent in these respects, so that the following chapter on Economic Principles of Production tends to suffer by comparison. The examples in this second chapter are less well chosen and some quite difficult concepts, such as the zone of irrational production in input-output analysis, tend to be glossed over. The next two chapters on farm management are brief but sound, giving a conventional treatment of the subject. The omission of any mention of gross margins and programming presumably was dictated by limited space. There is a very good chapter introducing problems of agriculture arising from economic growth, which is used as a lead into a reasonably balanced discussion of agricultural price and income policies and agricultural marketing.

In view of its wide coverage and somewhat elementary approach this book will have limited appeal outside the particular market for which it was primarily written. Practising agriculturalists will probably find it insufficiently specific and prescriptive for use as a reference book. The section on agricultural economics could usefully be set as preliminary reading for agricultural undergraduates taking a first course in agricultural economics, and would also provide a useful working text for courses in agricultural economics in agricultural colleges, etc. Bearing in mind the problems arising from multiple authorship, the book generally does what it sets out to do reasonably well, so that it hardly matters that it fails to fill other needs so successfully.

J. B. HARDAKER *University of New England, Armidale.*

Distribution of Groceries. Economic Aspects of the Distribution of Groceries, with Special Reference to Western Australia. By D. H. BRIGGS and R. L. SMYTH. (University of Western Australia Press, 1967.) Pp. 228, $6.40.

While this work is a chatty diffuse treatment, it excites the interest of anyone engaged in research into food retailing or marketing generally. The authors are to be congratulated on a pathbreaking work which, if and when it is extended to cover the whole of Australia, will provide an even more useful adjunct to our knowledge of food retailing.

The introductory section of three chapters deals with the distribution of groceries in Australia, the competitive structure of the grocery trade and the structure of the trade in Western Australia.

From a broad description of the distribution process the authors neatly narrow their discussion to the role of grocers in the retail sphere, the significance of the "retail revolution" of self-service and a general appraisal of chains, groups and independent stores. The whole chapter is adequately illustrated with charts and tables descriptive of the relative strength of retailers and the declining wholesale sector.

In *Competition* a very useful commonsense exposition of competition and monopoly as polar cases sets the tone for a discussion of the elements in the food market which modify competition or erode monopoly positions. The gradual elimination of resale price maintenance is traversed and the major arguments favouring this practice are discounted.

No evidence is offered for the contention that competition between food processors such as Unilever and Colgate-Palmolive is "genuine and keen" nor that producers' boards as public monopolies reconcile the interest of producers and consumers. In addition, the statement (p. 60) that public companies are more consistent profit maximizers than family businesses is pure assertion and in the absence of supporting evidence the alternative seems equally plausible. However, the authors by appropriate hedging allow themselves a little something each way.

Costs, Prices and Margins, the second part of the book opens with a chapter on economies of scale. A judgement type survey of costs of retail establishments in the Perth Metropolitan area provides the basis of an essay in measuring scale economies. Two methods are used, the first being an examination of expense/sales ratios during the expansion of the firms. The second approach is by inter-firm comparisons. Faced with the intricacies of problems of index numbers and accounting definitions the authors produce a straightforward non-technical exposition of economies of scale in the industry. Indeed the wealth of detail, sometimes confusing and contradictory is one of the weaknesses of this study. At least for the reviewer, the emphasis on case studies tended to pall and their exclusion would have led to a shorter and more useful monograph. The case study approach is continued in *Retail Prices* and *Gross Margins, Profitability and Pricing Policy* (Chapters 5 and 6).

Most readers would prefer a more intensive treatment of specialling and split-branding and many would disagree with the implication that split-branding is against manufacturers' interests. Indeed, this could form a very useful strategy in price discrimination.

The third part, *Firms*, produces a wealth of information on chains and groups and a cameo on Tom the Cheap Grocer which, in spite of a precious comparison between "Tom" and Henry Ford is a delight to read. There seems to be an error in the treatment of the Save-Way group which is reported as starting in December 1960 with about 200 members and growing to about 230. Reasons are given for this growth. The December 1967 issue of *Retail World* reports Save-Way as starting in December 1960 with 230 stores declining to 203 in 1967.

The book will appeal to a wide range of readers and professional economists would lose by ignoring a work which so skilfully sets the scene for a rigorous appraisal of food marketing.

J. J. QUILKEY *University of New England, Armidale.*

Marketing and Economic Development. Edited by C. J. MILLER. (University of Nebraska Press, 1967.) Pp. 422, $US7.95 (cloth), $US3.25 (paper).

This volume is an anthology of writings in agricultural marketing. It contains twenty-two articles under the headings—Foreign Marketing and Economic Development; Market Power and Prices; Transportation and Plant Location; Demand, Supply and Consumption; Firm Decision Making and Competition; and Marketing Research. Following each of these sections, there is an extensive list of supplementary readings.

The reviewer believes that, in judging a volume such as this, the appropriate criterion is adequacy of the selection; no evaluation of the worth of individual articles *per se* is required. Adequacy of selection in a *readings* entails coverage of the significant facets of the subject with the best representatives of each facet; concomitantly and necessarily it requires, particularly in such a wide field as marketing, a theme and an analytical orientation to guide the selection.

The book conforms only imperfectly to this criterion. It does attempt to provide a theme, as the title indicates; but, save for a few articles, the connection is at the most indirect. If one is accustomed to associating economic development with under-developed countries, the title is misleading. Also the analytical orientation of the contribution leaves much to be desired. One would expect a much greater level of generality than is actually the case. A number of the articles are purely applied or plainly parochial, or both. Again, the sorting of the articles into categories, and the categories themselves, are not very satisfactory. One gains the impression that the articles were somewhat arbitrarily selected in the first place, then rather roughly sorted, and finally the headings decided upon—the reverse of the appropriate procedure. This has resulted in a number of serious omissions. There is no representative of demand analysis as such, of econometric methodology, of market information explicitly, nor of institutional marketing organizations. Transportation is included but storage is not.

However, in a diverse field such as marketing, the task of providing an adequate anthology is extraordinarily difficult. Marketing is such a diffuse and inclusive notion that perhaps such an undertaking is doomed at the outset. We should then not criticize it for having been done imperfectly but laud it for having been attempted at all.

Despite this inadequacy as an anthology, the book will stand on its own as a reference source. For research workers and lecturers, the bibliographies will save a large part of the time normally spent in groping through cumbersome volumes of journals, especially those with difficult access. For this, it is strongly recommended.

JOHN PHILLIPS *Department of Agriculture, Sydney.*

Agricultural Producers and Their Markets. Edited by T. K. WARLEY. (Oxford: Blackwell, 1967.) Pp. 596, 84s.

This book consists of a collection of papers given at an international seminar on agricultural marketing, with special reference to marketing

through co-operatives, held at the University of Nottingham. The papers are grouped in four parts.

Part I, *Marketing in Context* purports to "place the need for efficiency in marketing systems and the contribution of producers' co-operatives against the broad background of an examination of the process of economic development, the key role of rising agricultural productivity in this process, the problems of world trade in tropical and temperate agricultural products, and developments in sea transportation affecting primary product exporters". In fact, the connection between papers is highly tenuous and the wide range in topics is such that it is difficult to discern any cohesive argument of the type claimed in the Preface. This criticism of a lack of cohesion applies also to later sections. Individually, however, the six papers in this section provide a useful contribution to the literature on subjects ranging from sources of economic development, to problems of world trade and aspects of shipping economics.

In Part II, *Commodity Policies and Markets,* two papers are included on each of the nine commodities of major importance in international trade—coffee, tea, cotton, sugar, oilseeds and fats, grains, bananas and tobacco. The first paper on each commodity reviews factors affecting production, consumption, prices and trade. The second outlines international and national marketing systems for the product and presents the views of traders and processors on the performance of the existing marketing system. For the most part the papers in this section provide a lucid description of marketing practices while summarizing production and trade statistics of the type normally found in F.A.O. publications. Emphasis is upon tropical and sub-tropical crops, particularly tree crops, whereas the major grains receive very little attention. Apart from papers on sugar and cotton, readers will find little in this section directly applicable to the Australian agricultural scene. Considering Australia's continuing commitment in Papua and New Guinea however, and the export of tea, coffee, cocoa, rubber, palm oil and copra from that Territory, the findings are likely to have considerable relevance for the future trading relations of both the Territory and Australia.

The emphasis in Parts I and II is upon underdeveloped countries and international marketing of tropical and sub-tropical crops. The reader therefore anticipates that subsequent chapters on marketing organizations will relate to similar commodities and environments. This is not so, however. In Part III, *Producers' Marketing Organizations*, six papers deal with the characteristics, problems and achievements largely in the United Kingdom and Europe. Emphasis here is upon the organization of marketing boards, traditional co-operatives, co-operative groups and producer-sponsored marketing companies in a developed economy. A seventh paper is reserved for the status, achievements and problems of co-operatives in developing countries, but the treatment here is extremely superficial. It is left to the reader to adapt the findings of Part III to the problems of underdevelopment posed in the earlier sections.

Part IV consists of 24 papers outlining techniques of organization and management as applied to farmers' marketing organizations. The early papers deal with co-operative law, the promotion and development of co-operatives, business organization, financing, investment appraisal,

management accounting, data processing, labour management and public relations. These are followed by a series of papers on such topics as marketing contracts, advertising, marketing research, co-operative education and training and the role of co-operative apex organizations.

A feature of this publication is the uneven quality of the contributed papers. It could well have gained from a more judicious selection of material and the inclusion of some discussion in preference to many of the shorter papers. Nevertheless, individual papers do provide a useful introduction to a wide range of topics within the broad fields of economic development, international trade in agricultural commodities and co-operative marketing. The lack of cohesion in the subject matter is not unexpected in a collection of conference papers.

M. L. PARKER *Department of the Administrator, Territory of Papua and New Guinea.*

Agricultural Development in Tropical Africa. By J. D. DE WILDE *et. al.* (Melbourne: Oxford University Press for the Johns Hopkins Press, 1967.) 2 Vols. pp. 270, $16.50.

The success of any agricultural development will inevitably depend on whether the farmers involved will wholeheartedly and voluntarily respond to the prospective increase in income and will be prepared to make the extra effort necessary. Quite often, discussions of agricultural development in low potential agricultural areas, such as Africa, have often been characterized by sweeping generalizations or by preconceptions about the "laziness" of the African farmer and his failure to respond to rational or economic considerations (p. 53). The wide array of varied experiences presented in the text, however, effectively indicate that failures in previous agricultural improvement schemes were largely traceable to inadequate knowledge or insufficient appreciation of the relevance of all the socio-economic factors that determine the proper approach to the farmer and that condition the farmer's response and receptivity to change. It also refutes the erroneous view that the development of agriculture can be considered as a purely technical task. Agricultural development, it is emphasized, requires co-operation of the individual farmers and, therefore, an interdisciplinary approach which calls on the knowledge and analytical tools of not only the agriculturist and agricultural economist but also of the sociologist and social anthropologist.

Until recently agricultural extension work was largely conceived in terms of telling the farmer what to do. This limited conception has been responsible for much of the frustration of efforts to improve African agriculture. Colonial governments relied too much on direction and compulsion; even today some African governments in their impatience to get things done tend sometimes to fall into the same error. Shortage of trained personnel favours regulation and direction rather than the undoubtedly time-consuming but potentially more effective methods of persuasion through extension services and training facilities. The book cites many case studies where farmers have reacted against basically well-conceived practices simply because they have been pressed to adopt them or because their purpose had never been adequately explained.

In general the book is wholly empirical and fails to present a theoretical exposition of the basic principles of economic development which an agricultural economist would expect.

The strength of the book lies rather in its interdisciplinary approach. The development of agriculture under African traditional conditions is so complex that it can hardly be confined to one discipline or to a number of disciplines acting more or less independently of each other. Thus the pooling together of knowledge of five authors with different training (economics, agronomy and anthropology) affords a striking demonstration of how such problems could be approached by team work.

They have written a book which successfully—

(i) gives the reader a broad picture of the different approaches to agricultural development that have been adopted in different African countries.
(ii) points out the problems that assail agricultural development in the tropics.
(iii) indicates and analyses the causes of these problems.
(iv) appraises attempts to cope with these problems.
(v) suggests possible approaches to some of the problems.

The book is also unusual in that it combines experiences from both French and English speaking countries into one unified text. Unfortunately, the authors either inadvertently or deliberately failed to include areas from some of the former British colonies in West Africa, like Nigeria and Ghana where some tremendous strides have been made in peasant farming. Nevertheless, the sample is reasonably representative of (i) variations in ecological conditions (ii) different stages of evolution of rural society from a largely tradition bound and subsistence oriented society to a more "open" market oriented society and (iii) differences in population pressures on the land.

Volume I of the book presents the Syntheses. Volume II contains the case studies treating in a more or less integrated fashion all the factors relevant for development in each particular area chosen.

The first few chapters of Volume I deal briefly with some of the salient features social, economic, physical and technical of African agriculture and the research needs resulting therefrom. The book then turns to a discussion of particular aspects of agricultural development. First considered is the factor of labour in relation to population pressure. Some consideration is also given to the related though often ignored problems of draft-power, tools and implements. The third problem area examined is land tenure which is broadly construed to include the relevance to development of not only the various ways of holding or owning land, but also the different forms of utilizing land ranging from the individual to the collective.

The reviewer was particularly impressed by the objectivity with which the authors discussed some of the most controversial subjects, e.g. communal ownership of land vs. "individualization" of land. They avoid falling into the usual tendency of becoming advocates of particular tenure systems.

Chapter 8 analyses the various aspects of agricultural extension and stresses the need for a full appreciation of the way in which indigenous farming has been conditioned by the natural milieu, the labour resources,

tools available and the values, customs and structure of the society. The authors maintain that "only in this way can one discern the basis from which efforts to innovate must depart and realize the possible implications that particular innovations may have for the whole complex of interrelated factors affecting the potentialities and the rate of change". (p. 25).

The book provides no clear-cut and simple answers to the problems of farmer motivation and of awakening interest in government development programmes. This failure however, is not only a function of the relatively under-developed stage of the extension discipline but also the complexity of the motives with which it deals. However, a few possible approaches are introduced which fuller exploration by a new breed of psycho-economists or economic-psychologists may make useful in solving some of the problems of the African farmer.

Other points which are repeatedly stressed are the need to subject recommendations emerging from research to tests of *feasibility* and *appeal* before they are passed on to the farmers; the need to tailor research to the actual development needs of the particular area within the context of broad national policies; the need to appreciate the constraints to which the farmers are subject and of the types of innovations which can in practice be applied and which respond to the farmers' felt needs.

There are also brief observations on agricultural credit, marketing and co-operatives. It appears to the reviewer that to some extent concreteness and general adequacy of treatment have been sacrificed to brevity. For example, there is only a brief generalized mention of private marketing bodies, co-operatives and marketing boards. Yet some of these marketing institutions play a very vital role in some of the market oriented communities of Africa.

The wealth of the authors' experiences in international aid programmes shows up in their discussion on p. 230 under the heading *Some Implications for Foreign Aid.* Throughout the book considerable emphasis is placed on the vital need for educating not only the farmers but also the need for training and local orientation of all those who are concerned with agricultural improvements, whether they are researchers, extensionists, teachers or planners.

Owing to the extreme paucity of adequate quantitative data the book fails to come out with any examples of Cost-Benefit Analysis of different development projects. Consequently, one is completely unable to assess the economic merits of some of the proposals put forward. Nonetheless, the book based on the best current information available provides the African enthusiast with enough information to stimulate hard thinking. It is to the authors' credit that they have made this complicated subject readable and understandable particularly for readers with little or no knowledge of African farming conditions.

In sum, the book is excellent. It has easily accomplished its purpose of providing a non-technical discussion of a highly relevant and highly complex topic. If the reader is interested in placing the problem within a purely economic framework he may find the book a bit disappointing. If, on the other hand, he desires to gain insight into problems and reasons why agriculture has progressed relatively slowly in these less developed countries he may find this book an additional asset to his literature.

The book should fill in an important gap for those interested in agricultural development and its contribution to economic development. Though the experiences have been largely drawn from Africa it is hoped that many of the lessons learnt could, with some modification, be applied to some of the Asian countries. The Australian extension worker will also find a lot of useful reading material particularly on new approaches to the job.

W. AGGREY-MENSAH *University of New England, Armidale.*

Wool! Modern Myths and New Horizons. By G. S. LE COUTEUR. (Melbourne: F. W. Cheshire, 1967.) Pp. 187, $4.75.

The wool industry, and more particularly many producers of wool, are in financial difficulties. This situation has gradually developed as a consequence of a decline in prices and the inexorable rise in costs, to the point where there is considerable uncertainty as to the industry's future and producers are anxiously searching for relief. In such a climate there could be a flight of confidence; some sector of the production, marketing, promotion and research functions could become the scapegoat for the producer's troubles.

Mr. Le Couteur's book is a calm expression of faith in the future of wool as a fibre and of the wool industry, providing it is willing and able to adapt to changed conditions. He touches on the contribution wool makes to the maintenance of economic development in the Australian economy, and concludes that improved productivity and greater production of wool are essential.

The book describes the various ways in which wool is marketed through the medium of an account of the selling practices followed in the main producing countries, with the exception of Russia. These may be judged alongside a list of qualities which are generally regarded as essential to an effective system (p. 39).

Without denying the significance of marketing methods and features, to the discussion of which a good proportion of the book is devoted, the author firmly dismisses this sector of the industry from the list of possible sources of a solution to the industry's financial problems.

A useful discussion of the plan to introduce "controlled marketing", through the medium of the 1965 reserve price scheme, is included. From this it emerges that the industry, especially the proponents of the scheme, was unclear as to its objectives and hence the contribution it might have made to the industry, as distinct from the needs and aspirations of the growers.

Mr. Le Couteur looks for more positive solutions through an improvement in the relationship of gross income from wool and aggregate costs, including taxation liability. A better net result can thus be achieved. His treatment of costs would have been improved by closer examination of the costs of services which constitute about 20% of the average grower's costs of "production". This area which includes outwards freight, wool selling charges, and rates and taxes, is one where the rate of productivity increase appears relatively slow.

As for the future of wool as a fibre, the author relies heavily on promo-

tion, adequately supported by research. He believes there is a satisfactory market for an increased production of wool i.e. that increases in supply will not necessarily lead to a lower level of prices.

Many questions are raised by this broad canvass study, particularly about the main prescription—grow more wool—and its possible effect on prices and hence, net income. With the improvement in man-made fibres and the installation of multi-fibre processing plant in mills, the substitutability of wool and synthetics is greater than previously. Can increasing supplies of wool be sold at premium prices over synthetics or is it more likely that there would be a narrowing of the margin which wool enjoys over its substitutes?

Relative elasticities are not static: they vary with technical change and they can be influenced by promotion. The success of the author's prescription would be dependent on the success of wool promotion.

One is left with the impression that the future of wool is primarily dependent on the quality of management which is applied to promotion and the production-marketing activities research being an integral part of those functions.

The basic theme of the book revolves around personal initiative, private enterprise guided by the market and assisted by government. It is a refreshingly frank affirmation of the economic case for free enterprise.

G. D'A. CHISLETT *Australian Wool Growers and Graziers Council, Sydney.*

Agricultural Economics in Tanganyika. By H. RUTHENBERG. (Berlin: Springer-Verlag, 1964.) Pp. 212, DM 28.

This book is the second in a series published by the African Studies Centre in Berlin. A most unfortunate thing about this generally fascinating book is the incoherent, unsystematic and repetitive way the material has been presented. The author admits, however, the book is intended as a progress report rather than a definitive study.

The first few chapters describe agricultural conditions prevailing in Tanganyika (now Tanzania) and of the measures that have been taken to improve peasant farming in the past, both by colonial and independent governments.

Throughout the various chapters the key role of the farmer himself is recognized and it is stressed that a prolonged and comprehensive effort is necessary before any impact can be made on African agriculture. The author calls for more collaboration between the relatively new political and economic institutions and their leaders, and the older but still quite deeply rooted organizations for community action which still characterize some societies in Tanzania.

In the final chapter, questions of principle in regard to agricultural development by international agencies are discussed. The vital importance of giving adequate attention to staff training is emphasized. The author suggests that when foreign organizations are given certain responsibilities for agriculture their programme and activities must rest on the premise that their role will be of limited duration. Apart from their task of diagnosing problems and devising and testing various solutions to these

problems, their principal responsibility must be to train the indigenous staff to take over and to ensure not only the permanence but also the further development of the approaches to agriculture which they have devised.

The book will be particularly useful in providing guidance for organizing and handling government services for agriculture including extension and research, supplies, land tenure, credit co-operative action and marketing training. One may not agree with all that is said but the book offers some scope as a natural starting point for further research into the problems of agriculture in East Africa.

W. AGGREY-MENSAH *University of New England, Armidale.*

Back of Bourke. By R. L. HEATHCOTE. (Melbourne University Press, 1965.) Pp. 240, $6.50.

A Study of Land Appraisal and Settlement in Semi-Arid Australia is the sub-title of this book by Dr. Heathcote. The *Warrego* country selected for survey as a sample representative area occupies the flood plains of the Warrego and Balonne, two large northern tributaries of the Darling River, situated astride the New South Wales–Queensland border. In the past it was largely divided into extensive pastoral holdings (as indeed was a great part of New South Wales in the nineteenth century) which progressively over time have been cut up for closer settlement. Because of its location, partly in Queensland and partly in New South Wales, the opportunity of comparing land policies in the two states has been provided. The story starts at the commencement of settlement in the area, including the observations of its first explorers, and continues to the middle 1960's. In 1954 the population of the *Warrego* totalled 16,000, slightly less than double that of 1901, but "as representing the growth of fifty years" the author concludes this is not impressive.

To his task Dr. Heathcote brings the skills of the geographer and historian. Whatever material is procurable in the shape of records has been meticulously sieved by an intensive historical and *geosophical* examination. "Ideas and opinions have been culled from personal interviews and memoirs, from newspapers and government records, from field observations and private papers and, despite certain reservations on their usefulness, (from) statistical data." As would then be expected, this is a competent first-class study of a difficult subject. It should demolish once and for all whatever romantic concepts might be retained of the Australian version of the "conquest of the western frontier". The pastoralist in his struggle against an unfavourable environment has not succeeded very well, even with all the benefits of modern technology, in subjecting the semi-arid interior to producing more than its rainfall will permit.

The principal conclusion which may be derived from this study is that in the settlement of the marginal interior, rainfall is too sparse and its incidence too unreliable to permit anything more than opportunist development—that is, for production and thus income to be maximised in good seasons and for operations to be contracted in dry and drought years. But this requires some sixth sense or prescience born of experience which permits the taking of calculated risks. The history of the Far

Western areas of New South Wales is strewn with bankruptcies and failures; the outstandingly successful stories are relatively few.

From a situation in 1901, when the Far West was virtually a dust-bowl and the control of its affairs was handed over to a Western Lands Commission, New South Wales has broadly followed the policy of withdrawing land from the large pastoral occupiers when their leases have expired and of sub-dividing these holdings into "home maintenance" perpetual leasehold areas, designed on a reasonably generous scale. Under conditions where average rainfall fluctuates between seven and twelve inches and stocking capacity from one sheep to seven acres to one sheeep to forty acres, there is close supervision of the Crown tenants to guard against over-stocking, destruction of timber, and other abuses of the land, and to ensure as far as possible that the grazing operations will be conducted on a prudent basis. The absentee landowner and the itinerant manager have disappeared, and in their place have been permanently settled a new generation of smaller western leaseholders. The anomalous position is that the Western Division carries now, in normal seasons, a considerably smaller number of stock than it did in the heyday of its first exploitative occupation in 1892.

This process of "closer settlement" was accelerated by the Western Lands Act introduced in 1942 and 1949. It was virtually completed by the mid-1950's when 96 per cent of the total area was held under leasehold, the great bulk of it in leases of limited size, with only a very small proportion remaining in larger quantities. By comparison, at the same date in Queensland closer pastoral settlement occupied only 23 per cent in the representative sample.

This preoccupation with *closer settlement* policies has worried Dr. Heathcote. Writing with conditions up to 1956 in mind, he notes, (p. 167): "The point to be stressed here is that (from 1901) the policy of intensification of land use through closer settlement was continued. The mental rut to which most of the official land policies eventually returned . . . ran deep and broad through the first half of the twentieth century . . . it seems in some way connected with the A.L.P. platform of the basic wage but all political parties, at some stage, appear to have supported its essential argument for increasing productivity, population and the national income, despite the fact that in many cases the argument bore scant relation to the facts of settlement on the plains. In the political arena the problems of 1901 were soon to be forgotten". It is a fair comment that had Dr. Heathcote been writing in 1968 he would probably have expressed himself even more strongly.

Valid as these criticisms may be and conceding that from 1947 to the onset of drought conditions in 1958, and beyond, there was an unusual succession of good seasons, it is safe to say that so far as land policies are concerned, the clock cannot be turned back. The egalitarian approach to land ownership has become too deep-rooted in our society for this to occur. On the other hand, it is now more than probable that for the first time the State will have to take positive measures to assist its tenants. A period of long continued drought after the exceptional boom years of the 1950's, associated with low prices have left many graziers with little or no reserves on which to fall back. Without the State's assistance the situation may well arise when properties cannot continue to be maintained and scrub growth controlled. The State will

then step in, as it has done before as a conscientious landlord, and make such minimum adjustments to its conditions as the need arises to restore its favoured tenants to some degree of liquidity.

All attempts at State control of land settlement involve some degree of compromise and pragmatic periodic adjustment. Prices, costs, returns and seasonal conditions are uncertain elements upon which to predict budgetary situations extending into the future. New South Wales at least has committed itself to a situation where normal considerations of free enterprise and self help are no longer operative and where the objective must be to continuously maintain its western leaseholders in fair health and comfort for the indefinite future. This relatively new responsibility is too recent to confidently predict the final outcome.

Dr. Heathcote's study is a valuable contribution to existing knowledge. Divided into two parts, the first and smaller section (pp. 1-80) is written in broad perspective as an appraisal of stated objectives and principles; the second (pp. 83-199) is the chronological account of settlement through its various phases. There is some unavoidable repetition. Perhaps, also, the development in the early nineteenth century is given too much weight by comparison with the treatment given to the more recent period, which is the more interesting from the point of view of policy.

Dr. Heathcote's work is yet another of an impressive series of books on Australia's pastoral and agricultural history made possible through the research scholarships offered to prospective Ph.D. students by the Australian National University and the publication facilities of the Melbourne University Press.

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Shearing Shed Management. By H. S. WOODBRIDGE. (Sydney: Angus and Robertson, 1967.) Pp. 268, $7.00.

At the present moment the sheep owner is faced with uncertain and even falling income from his greatest crop, his woolclip; at the same time it is quite obvious that the cost of everything he uses continues to rise, including the cost of shearing.

There are only two avenues open to him—increased production by heavier stocking of his property and/or greater efficiency of his operations. Shearing is one of the main operations, and Harry Woodbridge has produced a timely book.

This book is a complex and very meticulous work—no stone is left unturned to explain to the reader every single detail likely to be encountered during the shearing operation. There is no doubt about the qualifications of the writer, and the text has been set out extremely clearly, even with some humour but without verbosity.

This truly excellent technical book should be within easy reach of every grazier, station manager, jackeroo or agricultural student, shearing contractor, woolshed overseer, woolclasser and expert.

PHILIP RUSSELL *Mawallok, Beaufort, Victoria.*

Tax Burden on Indian Agriculture. By V. P. GANDHI. (Harvard Law School International Tax Program, 1966.) Pp. 240, $US3.00.

A General Theory of Tax Structure Change During Economic Development. By H. H. HINRICKS. (Harvard Law School International Tax Program, 1966.) Pp. 143, $US3.00.

These two publications are revised versions of doctoral dissertations sponsored through fellowships given by the International Tax Program to encourage study in the field of economics of taxation in developing countries. Both books are concerned with specialized topics and one would expect their circulation to be confined, in the main, to libraries.

In the first publication, Gandhi examines the case for imposing a higher tax on the agricultural sector as a means of aiding economic development in India. In the past, a case for additional taxation of the agricultural sector in underdeveloped countries has been made out on the grounds that small market supplies of agricultural produce coupled with a severe lack of monetization of the agricultural economy have provided one of the major obstacles to economic development. It has been argued that heavier taxation of the predominantly subsistent farm population would force them to increase production and market supplies and also give rise to some beneficial side effects. For example, the resultant monetization of the agricultural sector would enlarge the tax base for indirect taxation, impart to the agricultural sector a sensitivity to prices and other market stimuli and increase the labour force available for non-farm jobs.

With this theoretical argument in mind, Gandhi examines the case for additional agricultural taxation in India on the grounds of equity between sectors and classes. The major part of the dissertation attempts to establish a case for additional agricultural taxation, on the premise that the tax burden within the agricultural sector is relatively lower than that in the non-agricultural sector. Gandhi attacks the problem by beginning with a simple model and gradually approximates to a more realistic model. One minor criticism is that this procedure makes this part of the text somewhat repetitive and the presentation would have been improved by simply giving a detailed explanation of the final model. This model assumes that taxable capacity is dependent on four factors; taxable income per capita, wealth per capita, inequality in income distribution and inequality in wealth distribution. The relative tax burden of the two sectors is defined as the difference between relative tax payments and relative taxable capacity. From this analysis, Gandhi concludes that on equity grounds the agricultural sector of the Indian economy is being inadequately taxed. Because the average taxable capacity of the agricultural sector is approximately half that of the non-agricultural sector, the above conclusion is utterly dependent upon the value judgement as to what is an equitable rate of tax progression. The author is well aware of this point and in fact calculates the relative tax burdens for a range of "reasonable" tax progression rates. However, in the reviewer's opinion, an improvement would have been to indicate explicitly the particular rate of progression making the tax burdens on the two sectors equal, and then comparing this rate with actual rates of progression in other countries having a similar income distribution. In fact, further evidence of inequity is given by comparing classes with equal taxable capacity in the two

sectors, and showing that actual tax payments are lower in the agricultural sector.

Having presented a case on equity grounds for increased taxation of the agricultural sector, Gandhi then seeks to assess the likely impact of increased taxation on agricultural production. Clearly, an increase in taxation would be unacceptable if it were to reduce agricultural production and consumption when already a large number of Indian farmers were existing at the subsistence level. An attempt is thus made to show that there is slack in the Indian agricultural sector, slack being defined as operating within the production possibility frontier. By examining such indicators of slack as the difference between average and minimum crop yields, actual crop rotations and optimum crop rotations, and showing that a number of government irrigation projects are being under-utilized, Gandhi presents a reasonably convincing argument for the existence of some slack in the agricultural sector. Given the existence of slack, it is argued that additional taxation of Indian agriculture—which is strongly supported by equity considerations—will mobilize this slack, and agricultural production will increase because of a strong motivation to make up for the income lost in additional tax payments. In the final chapter, an attempt is made to determine the best method of imposing the additional tax. Gandhi concludes that the main objectives in the tax reform should be to increase the progressiveness in the tax structure of the agricultural sector, and also make the tax system of this sector more income and production elastic in order to check the further growth of intersectoral inequity over time. The most important suggestion is that the present land tax should be replaced by a graduated faculty tax. This tax would take into consideration not only the land, but also other assets owned by the individual, and hence be more closely related to the individual's overall ability to pay.

In the past, the work of the International Tax Program has been largely descriptive. It is hence encouraging to find a dissertation which seeks to quantitatively test a well formulated hypothesis. On the whole, the reviewer considers that the author achieved his aim. The reviewer's main criticism, is that the real crux of the problem is the impact of additional tax on the agricultural sector, rather than the need to establish a very detailed case on the grounds of equity. The main reason for this criticism is simply that, despite sophisticated analysis, the equity problem remains a value judgement for all situations not included under the maxim of equal tax treatment for persons in the same economic position. And even if the most conclusive case for additional tax on equity grounds is presented, this cannot be implemented unless it is known that the impact of the tax on agricultural production will be favourable. The reviewer feels that the analysis of the latter should have been extended, rather than devoting four chapters to equity considerations, and only one chapter to the effect of additional tax on agricultural production.

In the publication entitled *A General Theory of Tax Structure Change During Economic Development*, Hinricks seeks to provide a number of broad empirical generalizations concerning the size and structure of government revenue systems through certain phases of socio-economic development. His approach is essentially two-pronged consisting of a static cross-section analysis of different countries at the same point in time, and a dynamic study of particular countries through time. In the

static analysis, an attempt is made to find the determinants of government revenue as a share of gross national product, by means of a multiple regression study of sixty countries. A cross-section profile of twenty-six countries is also given to illustrate the structural differences within the government revenue in respect of, for example, direct taxes, internal indirect taxes, foreign trade sector taxes and components other than tax. The dynamic analysis provides a study of the changes in these structural components over time. Finally, a heuristic model based on both the static and dynamic analysis is given, as a general theory of change in tax structure during development. On the basis of this model, Hinricks concludes as follows on the most significant determinants of government revenue structures.

(i) In traditional societies, such as was Japan in 1875, military power is the main determinant;

(ii) In transitional societies, such as Nepal and Iraq, it is the size of the foreign trade sector. This is due to the embryonic political and administrative apparatus having limited ability to collect revenues via internal taxation, and also because traditional direct taxation tends to be income inelastic, thus forcing greater reliance on the foreign trade sector.

(iii) In modern countries it is the "style" set by cultural and political factors, rather than as in traditional society sheer exploitive might, or, as in transitional society, the necessities of economic structure and the limited ability of the government to use the internal tax mechanism.

Hinricks states that his book is not designed to present a list of recipes for tax reform in less developed countries, but he does make some observations. His first main point is that it frequently so happens that the easiest places to collect taxes are often those that have the greatest growth potential. In other words, the very sectors where taxes should perhaps be least, are often the first to be taxed because of administrative simplicity. His second contention is that certain tax structures, which have existed at certain phases of socio-economic development, may provide an indication of the limits as to what is possible, given the political and economic patterns at that phase. Knowing these limits, may allow administrative and research resources to be chanelled into areas where reform has the best chance of success.

Because of its socio-economic approach and largely descriptive nature, this economist finds the study difficult to evaluate. The study has involved the accumulation and presentation of a vast quantity of empirical data, which in itself is a valuable contribution. The reviewer would hope, however, that analysis of this data will be extended beyond that presented in this publication. A useful extension, for example, would be to present some "optimal" tax structures for different stages of development based on theoretical concepts of equity, growth inducement and so forth, and compare these with actual tax structures. Finally, I find Hinricks' suggestion of using historical data as a basis for establishing political and administrative limits on what is feasible, contentious. Taken to its extreme, it implies that we cannot hope to better the best that has been achieved in the past.

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The Economics of Agricultural Development. By J. W. MELLOR. (Ithaca, N.Y.: Cornell University Press, 1966.) Pp. 403, $US10.00.

Professor Mellor's book is a joy to read. In style it is lucid and the presentation is easily followed. Since the book, says the author, requires "only a casual knowledge of economic theory" the qualities of clarity of expression and cohesion of argument mean that it should appeal to the layman and the beginning undergraduate. The professional economist with some economic theory will, however, find that there is meat enough for him also.

Mellor himself stresses the lack of a well articulated theory of agricultural development well endowed with supporting factual evidence. He does bring to bear his own considerable experience in distilling from his work in a variety of countries the bits and pieces of economic theory and empirical evidence from which, hopefully, a theory of agricultural economic development may emerge.

The book is organized under three major headings. First, the role of agriculture in economic development; second, the nature of traditional agriculture; third, the modernization of agriculture. The first major heading has chapters devoted, amongst others, to the effects of population growth and income growth on food demand, the financing of farm operations and the role of agriculture in earning foreign exchange. Chapter 4 on "Income Growth and the Effective Demand for Food" and Chapter 5 on "Agriculture and Capital Formation" I found particularly good. In the former chapter, Mellor uses what scarce information exists on income elasticities in low income countries to develop a sustained discussion on the directions in which resources may have to flow if income elasticities are allowed to play their role as development occurs. On the role of price elasticities Mellor's discussion is rather brief. This, of course, simply reflects the fact that reliable estimates of own price and cross elasticities of demand are as rare as the proverbial hen's teeth. Yet, in analysing the effects of development, changes in the consumption mix are as important as the rate at which the aggregate mix grows. While production data in developing countries are shaky enough, consumption data are often positively creaky.

The second major heading deals with the traditional trinity of inputs with a final chapter on price policy. Here again, the empirical support on supply elasticities is wanting but Mellor seems to come down for supply elasticities in developing countries which are higher than in developed countries. The policy implication—all planners take note—is that the market mechanism may be usefully employed in low income countries.

The third major heading contains chapters ranging from the role of research, the provision of new inputs, the role of education and the size of farms to marketing institutions. Because of the breadth of the problem of modernising agriculture this last major heading tends to be somewhat of a grab bag and therefore uneven in quality. The final chapter on planning could, in this reviewer's opinion, have been dealt with more summarily in the chapter on the supply of inputs to agriculture. Similarly the chapter on the size of farms hardly does justice to the complex economic and social issues relating to land tenure in developing countries.

In summary, this is an enjoyable book—something that cannot be said

for all economics books. I would recommend it highly as an undergraduate text.

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