



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Book Reviews

Principles of Field Crop Production. J. E. Pratley (ed.), Sydney: Sydney University Press, 1980, pp. 442. \$15.00.

This book, intended for tertiary students, should prove valuable for those wishing to learn the principles of field crop production in Australia and for those who need a refresher course in that subject. The book contains 9 chapters that detail the socio-political, climatic, breeding, soil, nutritional, cultural, irrigation, protection and farm management factors associated with field crops. Each chapter provides a sound treatment of the subject matter.

The thrust of this book is to develop a total approach to the understanding of the principles involved and to this end, it is largely successful. It is especially pleasing to see chapters on socio-political aspects and farm management economics along with chapters on the more technical subjects (the chapter on crop protection even includes a section on Bayesian decision theory). As such, this book should prove useful as a common text to lecturers in those separate disciplines and reinforce an appreciation of the need for a total approach to crop as well as other forms of agricultural production. There is a good balance between practical experience and that published literature on crop production which seems most appropriate for the student of Australian agriculture. Research and extension workers have not been as successful as farmers in solving crop production problems and this is acknowledged in the various chapters.

The various chapters concentrate on the current situation for field crop production with some comment on those historical factors that have created the present situation. This is valuable, but for students who will be practising agriculture in the future, it would have seemed appropriate to have included some comments on future trends. This is done in Chapter 8 in regard to plant protection strategies, but not very much elsewhere. In such a comprehensive text it would also have been valuable to conclude with an essay on why or how farmers make the decisions they do. Decisions as to whether or not to sow a crop or control pests are not made on purely economic or agronomic grounds.

Within each chapter the various authors do try and draw out the principles involved and their success varies. The chapter on soils is largely descriptive while those on cultural practices, the climate and plant protection better achieve their aims. Within the technical chapters also some more comment reinforcing the total approach to crop production would not have been amiss; for example, when discussing the area sown to tobacco in Australia (in the chapter on climate and crop distribution) it could have been mentioned that non-climatic factors have probably been as important in determining where tobacco is grown and that the area currently in production may ultimately decrease due to health regulations.

There is a tendency, not confined to this book, to reduce a subject to its component parts for analysis and discussion, and this may create problems. For example, in Chapter 1 entitled "The socio-political aspects of crop production", there are, as the author indicates initially, a complex of factors which usually determine what happens in the real world. By considering each facet of the socio-political scene the reader is inadvertently led to some wrong conclusions; for example, that the rapid expansion of the wheat industry in W.A. was due to an expansion of the rail system when many would argue that the development of appropriate strains of subclover for the infertile soils was

as or more important. This problem would have been overcome somewhat by giving a detailed account of an industry (such as wheat or potatoes) to show how political, economic, market, historical and social pressures have shaped the modern industry. Such an account need only be sufficient to remind the reader to seek complex, rather than simple answers. This chapter would also benefit from a comment on the regulation of crop production for health and quality reasons as in the minimization of pesticide residues and maintenance of wheat quality.

Problems with the text are few, though it was interesting to learn that Richmond, N.S.W., must have shifted to 35° N. as the frost free period now extends from May to October (p. 35) and that the Burrendong Dam and irrigation schemes in northern N.S.W. do not exist (Fig. 7.1 and Table 7.1) nor does the ground water supply along the Swan Coastal Plain in W.A. The *Leguminosae* should now be referred to as the *Fabaceae* and the *Compositae* as the *Asteraceae* (p. 49). References could have been more closely checked as in the cases of Stern (p. 291) and Wells (p. 292). But the major deficiency must be that in the chapter on "Crop Improvement" no discussion is given of the quality factors used in oat breeding to select suitable cultivars for porridge.

Agricultural Research Centre, Orange.

D. R. KEMP

Marketing of Agricultural Products. Richard L. Kohls and Joseph N. Uhl, New York: Macmillan, Fifth Edition, 1979, pp. xi, 612. \$US18.95.

It is a fact of life that urban-based groups are having a growing influence on policy decisions that were once the exclusive domain of agricultural producer groups. For example, the interests of consumers, unions, processors, environmentalists, government departments such as Treasury and Trade, and animal welfare groups now all have to be catered for in the development of price, income and marketing policies that affect agriculture. That collection of government initiatives previously called "agricultural policy" has been replaced by a greater awareness of, and concern for, the *whole* food and fibre marketing system, or by "food policy".

The publication of the fifth edition of Kohls' well-known text should be a welcome addition to the libraries of those attempting to come to grips with food marketing structure, conduct and performance. There is a substantial change in emphasis in this edition toward food marketing, with considerable new material on the inter-related nature of food marketing functions, processes and problems and on the most appropriate market and institutional organization to achieve desirable food market performance. The approach taken to present the material is mixed, with separate treatments of market functions, institutions, and commodity markets. Each of these treatments provides a different yet essentially complementary perspective on the complex problems in the food marketing system.

There are six major sections in the book, embracing some 28 chapters. Part I is titled "The Framework of the Marketing Problem" and contains an introduction to food marketing (Chapter 1), a summary of issues involved in analyzing agricultural and food markets (2), and a brief overview of the production and marketing of U.S. agricultural products (3). Food marketing is defined by Kohls and Uhl as "the performance of all business activities

involved in the flow of food products and services from the point of initial agricultural production until they are in the hands of consumers”, and throughout this introductory section (and indeed the book), the mutual interdependence between producers, food marketing firms, and consumers is highlighted.

“Food Markets and Institutions” is the topic of the second section of the book. In it, Kohls and Uhl discuss consumption and marketing (4), processing and manufacturing (5), wholesaling and retailing (6), and the international market for food (7). Attention is therefore focused on the various agencies and business structures that perform the marketing processes, with some comment on the roles of both local and foreign consumers.

Part 3 concentrates on “Prices and Marketing Costs” and includes chapters on price analysis (8), competition in food markets (9), the behaviour of farm prices (10) and food marketing costs (11). Reference is made to the interaction of supply and demand forces in determining prices and their role in food marketing, the various forms of competition evident in food markets, and the variability in farm prices and how this is transmitted to retail prices via the marketing margin.

Part 4 deals with “Functional and Organizational Issues” and treats the changing organization of food markets (12), co-operatives (13), market development and expansion (14), market/bargaining power (15), market information (16), standardization and grading (17), transport (18), storage (19) and risk management (20). The emphasis within this treatment of market functions is on the influence of market power in effecting movement towards integration, co-ordination and specialization in food marketing systems. Futures market issues are included within the discussion of risk management, and a separate annotated bibliography on food market research, information and news is appended to Chapter 16.

The interaction of “Government and Food Marketing” is examined in Part 5. Chapter 21 discusses price, income and marketing policies, looking especially at the rationale and evolution of these policies and at analyses of the impacts of “farm” policies on marketing activities. Food marketing regulations are outlined in Chapter 22, including a very good categorization of the types of regulation applicable to food markets.

The final section of the book briefly applies the concepts and instruments discussed in previous chapters to the marketing of six major U.S. commodities—meat and livestock (23), milk and dairying (24), poultry and eggs (25), grain (26), cotton and textiles (27) and tobacco (28). In each case the discussion covers production patterns, consumption trends, marketing channels and methods (including structural and competitive issues), market functions, and the marketing, pricing or policy problems peculiar to each commodity group.

The book, like the previous editions, is written primarily for those who are beginning their study of agricultural and food marketing. “It is designed for . . . (those) who have had little or no previous contact with economics . . . (it) presents the starting points for learning and discussion . . .” It is therefore an elementary text and should be easily read and comprehended by both beginning student and participant in the food marketing system. The presentation of major concepts and issues is clear, every chapter contains a preview and summary, and there is a 20 page glossary to define and help clarify the terminology. Those interested in pursuing points are aided by footnotes and by reference lists at the end of every chapter.

Although the volume is comprehensive in its coverage of food marketing problems, there seems to be only a passing interest in tying the various aspects of these problems together. For example, it would be useful to have much stronger links between the chapters concerned with competition and market power in food markets (9 and 15), methods of analyzing food markets (2), and regulatory perspectives (22). Further, much attention is given to describing the food marketing system and how it works, but little to how to evaluate performance. In the section on regulation, the important issues are all raised but again there is little guidance as to possible solutions, especially those involving trade-offs between different groups and between efficiency and equity considerations. More attention could also have been directed to the impacts of food system policies on prices and costs, and on functions, institutions and market organization.

A couple of other aspects of this text make it less useful for application in Australia. First, the factual information is all related to the US, especially in the commodity chapters. Second, Australia depends on export markets to a much larger extent than the U.S., so from our point of view the scant attention given to trade policy as a component of domestic food policy is somewhat of a drawback.

N.S.W. Department of Agriculture, Sydney.

G. R. GRIFFITH

Systems Simulation in Agriculture. J. B. Dent and M. J. Blackie (with the assistance of S. R. Harrison), London: Applied Science Publishers Ltd, 1979, pp. x, 180. Index, hard covers.

This book is an introductory text on systems concepts and computer based simulation methods appropriate to the study and management of agricultural systems. It is directed to “the agricultural researcher who has had little opportunity to become involved in systems studies and who would like to become familiar and operational in this area”.

The book adopts a non-mathematical approach well suited to the needs of the target audience. It contains several chapters and four appendices—principles of model building, model construction, computer considerations, stochastic specification, model evaluation, the design of simulation experiments, and model application. The first chapter overviews systems simulation and the following chapters then elaborate on issues in the sequence in which they become more significant to the model builder. Two systems models are used as major examples throughout the text.

It is apparent that the authors see systems modelling and application as activities for experienced research and extension officers. On a number of occasions they recognize the high cost of modelling and the need for there to be significant benefits. It is consistent with this point of view that they see their introductory text as being for “experienced researchers” rather than for students—

“Obviously, we anticipate that readers will have a general appreciation of agriculture as well as a firm understanding of their own speciality and will have a basic grounding in statistical method. However, no previous experience in model-building is assumed though those with some association with computers and a computer language will find progress through the book simpler and quicker than those without this experience.” (p.x.).

My main criticism of the text is the limited consideration of what are agricultural systems. Of course, a system is defined by the system boundary and where the system boundary is placed will vary from study to study. However, the authors justify the text on grounds that include differences between agricultural systems and other systems that have been prominent in the development of systems simulation methodology—"agricultural systems, with important biological components interacting with equally vital social and economic elements, embody particular characteristics which influence the approach to their study." (p. ix). The significance of this perspective is not elaborated. In particular, there is a lack of consideration of the "social element"; models discussed in the text are biological and bio-economic.

I agree with the authors that the social or human element is an important one in agricultural systems and will need to be included inside the system boundary of some systems models. The problem for discussing this conceptual issue is undoubtedly (as the authors point out in the final chapter) our inadequate awareness of the farming scene (p. 155). Even so, I feel that a text such as this could do more to alert readers to the potential significance of elements other than the biological element in the performance of agricultural systems.

In conclusion, the book is a good one and is written with a target audience clearly in mind. Researchers who are not familiar with systems simulation will find the text both readable and informative. I suspect that even the competent extension officer who may lack both basic training in statistical method and familiarity with computers will find the text of value as a foundation for the better understanding technical research.

New South Wales Department of Agriculture, Lismore.

GEOFF BUGGIE

Proceedings of the Conference on Value of Meteorological Services, Melbourne, 1979. Melbourne: Royal Meteorological Society, pp. 197. \$5.00.

This Conference was initiated by meteorologists, who in the face of fiscal restraint and competition for resources, see an increased requirement to justify the value of the services they offer. The Conference was sponsored jointly by the Royal Meteorological Society (Australian Branch), the Economic Society of Australia and New Zealand (Victorian Branch) and the Australian Agricultural Economics Society (Victorian Branch).

The aims of the Conference were:

- Communicating understanding of the diverse relationships between society and meteorology.
- Gauging the success of the application of meteorological products to social problems, and
- Seeking new methodologies by which application can be assessed.

The Conference was divided into six sessions. These were—

- (1) Opening session.
- (2) The value of meteorology to primary industry.
- (3) The value of meteorology to secondary and tertiary industry.
- (4) The value of meteorology to the general public.
- (5) Workshop on the methodology of assessing the value of meteorological services.
- (6) Synthesis and discussion session.

A total of 38 papers were presented of which 25 were contributed and 13 invited. The proceedings only include extended abstracts of these papers, however readers should be able to trace respective authors to obtain more detail if they so desire. Also included is full documentation of six keynote papers requested for particular sessions and well compiled summary comments on each of the sessions.

Most of the keynote papers deal with methodological issues, however one paper by R. E. Marks attempts to estimate weather related losses in the tertiary sector and losses avoided if weather forecasts are adequate. Some detail is also given on the length of forecast required.

The range of extended abstracts gives the reader a perspective of the vast array of industries and other human activities that can benefit from weather forecasts. However, if meteorologists were looking for actual benefit/cost figures very few estimates were forthcoming. The introductory section quotes one of the few benefit/cost ratios mentioned in the proceedings. It came from Professor Allan Murphy of Oregon State University who quotes "the cost/benefit ratio for various national meteorological services ranges from 1:2 to 1:40!" Most abstracts indicated a benefit with the airlines submissions and Bass Strait examples being particularly interesting. However, there were frequent calls for longer term forecasts, more accurate forecasts and a small amount of discussion on presenting forecasts in probabilistic form.

The Conference concluded that methodology was available but assessment of benefits can be extremely variable and there is a credibility problem with any results. The Bureau of Meteorology is anxious for independent research to at least minimize this credibility.

There was considerable discussion on who should pay for services and promotion of services available. One particular dilemma faced by the Bureau of Meteorology is that they do not advertise their services because any money collected from sale of publications is returned direct to Treasury so that any increase in public demand for services cannot be met by staff increases. Some discussion followed on the need for private consultants in the field.

After reading the proceedings, anyone contemplating tackling the job of valuing meteorological services should be overwhelmed at the enormity of the task. As Professor Freebairn of Latrobe University has pointed out ". . . decisions in practice usually concern additions to, or deletions from, or modifications to services within an established organizational framework, it is the evaluation of benefits and costs of these changes rather than of the whole set of services which is most important".

Overall the proceedings are a useful documentation of a conference which indicates many areas of potential research but did not provide many direct answers for meteorologists to use in justifying their expenditure. The proceedings will provide interesting reading for anyone with an interest in the effect of meteorology on human activity and essential reference material for anyone contemplating assessing benefits and costs of meteorological services.

New South Wales Department of Agriculture, Dubbo.

B. L. DAVIES