



**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](mailto: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.*

## ALLOCATIVE ABILITY, INFORMATION PROCESSING AND FARM MANAGEMENT†

Kenneth M. Menz and John W. Longworth\*

A considerable range of formal farm planning models have been developed during the last twenty-five years [2, 18, 21]. However, they are rarely used by commercial farmers [18]. There are many possible reasons for the failure of practising decision-makers to avail themselves of these new planning technologies. One overwhelming reason may be that these mathematical models are not really capable of representing the actual decision problems of greatest interest to farm managers. An essential feature omitted from the conventional planning models is the need to constantly adjust the resources under the control of the manager in the light of information feed-back from the dynamic system being manipulated.

Two recent farm planning models have highlighted the need for constant adjustment of resources in response to ever-changing conditions [7, 17]. The ability to make such adjustments has been termed "allocative ability" [6]. Huffman has defined allocative ability as "the human agent's ability to acquire, decode, and sort market and technical information efficiently" [8, p. 85]. Presumably the term also implies the ability to *act* upon such information since it is manifest in "the rate at which decision-makers adjust to disequilibrium" [8, p. 85]. Indeed, Schumpeter [20] developed the theory that the *creation* of disequilibria is an essential part of the entrepreneur's role.

Allocative ability is extremely important in modern agriculture. Overseas, technological change has received attention as a major factor constantly altering the conditions under which farmers operate [19]. For example, Harle says: "in practice, one is always moving *towards* a continually improving and adjusting technical efficiency, rather than allocating at a state of technical efficiency" [7, p. 156]. In the Australian context, the climatic, disease, price and even political uncertainties and instabilities faced by farm managers, guarantee the importance of allocative ability without the added challenge of new technology. In many Australian farming situations, timely short-term adjustments are likely to be more important in determining the long-run economic result than the general farming system employed<sup>1</sup>.

---

† Manuscript received November, 1976.

\* Lecturer and Reader in Agricultural Economics, University of Queensland.

<sup>1</sup> A similar sentiment has been expressed to us by P. L. Nuthall (personal communication). This was also the conclusion reached by Harle [7].

By definition, allocative ability is integrally linked to information processing. Similarly, practical managerial experience is essentially a matter of (informal) information processing with regard to specific managerial situations. In fact, allocative ability could be regarded as a general term which encompasses practical managerial experience as *one* of its components. Few people would question the value of practical managerial experience in farm management. There is evidence that allocative ability is enhanced by a high level of general education [8, 22]. Presumably education designed specifically for farm managers would be even more effective [12]. We suggest that allocative ability in relation to farm management can be enhanced by training in information handling and by the provision of suitable data processing equipment and procedures.

All managers face problems associated with information processing. In agriculture, the problem is exacerbated by the multiplicity of functions (or roles) the manager is expected to perform [11]. Recording and utilizing data are administrative and/or entrepreneurial skills. Farm operators frequently place much greater emphasis on physical and/or labouring skills. Under these circumstances formal data processing tends to be seriously neglected by farm managers.

The traditional approach to improving farm management information processing has stressed record-keeping. While financial and physical data must be recorded before it can be processed and utilized for decision making [9, 14, 15], record-keeping should not be presented as an end in itself. Unfortunately many educational/training/extension programmes leave participants with this impression. Record-keeping needs to be seen as an aid to future forward planning and current tactical decision-making. Managers and potential managers need to experience and to learn to handle information feed-back as part of a cyclical management procedure [10, p. 66] in which the central function of the manager is to make decisions. In particular, all managers must decide what information to record, in what form, and how to translate the information into improved decisions and *timely actions* regarding the allocation of the resources at their disposal.

The most important reason why very few farmers maintain adequate (in a managerial sense) records is because they do not have the necessary data handling skills to make use of the recorded information for better decision-making. For example, few managers consider the advantages of graphs and charts (of rainfall and prices) for decision purposes. Similarly, the relative timing of various farm operations is usually regarded as "a matter of experience", but *ex-post* analysis of this question in a probabilistic framework would improve the value of the experience. Perhaps extension personnel could contribute more to improving the managerial efficiency (decision-making capacity) of farmers by devising and explaining simple analytical procedures which will make better use of the records most farmers already maintain, than by trying to persuade farmers to record new and more detailed information. The usefulness of the latter may be far from clear to the farmer and perhaps, one suspects, to the extension worker.

Financial data represents a neglected source of management information for most farmers. All primary producers must maintain a minimum set of financial records for taxation purposes. Traditionally the manager collects the financial information but leaves the analysis to an accountant. The accountant processes the data at the end of the financial year with the aim of preparing a set of records for taxation purposes. These accounts may be at best misleading and at worst virtually useless from a management viewpoint [13]. In any event, they only become available after a considerable time lag. Australian farmers now have access to a range of computerized accounting systems to ease the data processing and analysis burden [1, 3, 4, 5, 16]. Primary producers can obtain useful and timely feed-back from the financial side of their businesses. The recording, processing and analysing systems are readily available. A great opportunity exists to improve the allocative ability of present and future managers through improving their capacity to handle financial information.

It is often claimed that: "you can't teach management". Such statements imply that experience or intuition plays the dominant role in successful management. However, "experience" and "intuition" are merely terms used to describe various informal information processing systems. A preferable term is "allocative ability" which highlights the constant need to adjust resources in the light of changing circumstances. Allocative ability can be enhanced by education related to the acquisition and manipulation of data and by specific data processing techniques (allowing the speed and scope of manipulation to be increased). Perhaps more emphasis could be devoted to this aspect of farm management by the relevant training, extension and research institutions.

## REFERENCES

- [1] ANDERSON, KYM, *Farm Management Information Systems in Australia and their Relevance to South Australia*. (Adelaide: S.A. Dept of Agric., Extension Branch, 1971.)
- [2] ANDERSON, J. R. and J. B. HARDAKER, "Economic Analysis in Design of New Technologies for Small Farmers" in *Proceedings of an International Workshop on Economic Analysis in Design of New Technologies for the Small Farmer*. (Cali, Columbia, C.I.A.T., 1976.)
- [3] AUSTRALIAN COMMITTEE FOR CODING RURAL ACCOUNTS, *Workshop Manual*. (Canberra: ACCRA, 1970.)
- [4] BUREAU OF SUGAR EXPERIMENT STATIONS, *Manual—Farm Management Accounting*. (Brisbane: BSES, 1968.)
- [5] BYGOTT, R. B., "The Queensland Department of Primary Industries Farm Management Accounting Scheme". (Brisbane: Qld. D.P.I., Econ. Services Branch, 1970.)
- [6] CHAUDHRI, D. P., *Education and Agricultural Productivity in India*. Unpublished Ph.D. Thesis, University of Delhi, 1968.
- [7] HARLE, J. T., "Further towards a More Dynamic Approach to Farm Planning—A Technically Based Model of the Farm Firm", *Journal of Agricultural Economics*, Vol. 25, No. 1 (January, 1974), pp. 153–164.
- [8] HUFFMAN, W. E., "Decision-making: The Role of Education", *American Journal of Agricultural Economics*, Vol. 56, No. 1 (February, 1974), pp. 85–97.
- [9] JOINT COMMITTEE ON THE STANDARDIZATION OF FARM MANAGEMENT ACCOUNTING, *Accounting and Planning for Farm Management*. 2nd Ed. (Brisbane: Queensland D.P.I., 1971.)
- [10] LONGWORTH, JOHN W., "Management Games and the Teaching of Farm Management", *Australian Journal of Agricultural Economics*, Vol. 13, No. 1 (April, 1969), pp. 58–67.
- [11] LONGWORTH, J. W., "The Roles of a Modern Farm Business Manager", *Tropical Grasslands*, Vol. 8, No. 3 (November, 1974), pp. 197–200.
- [12] LONGWORTH, J. W. and K. M. MENZ, "Training for Farm Management Decision-Making". Papers and reports of the 16th Conference of the International Association of Agricultural Economists, Nairobi, Kenya, August, 1976 (in press).
- [13] LONGWORTH, J. W. and K. M. MENZ, "How Taxation Accounts Mislead Managers", *Farm Policy* (in press).
- [14] MAKEHAM, J. P., *Farm Management Economics*. (Armidale: Gill Publications, 1971.)
- [15] MALLYON, C. A., *The Principles and Practice of Farm Management Accounting*. 2nd Ed. (Sydney: The Law Book Co. Ltd., 1966).
- [16] MAULDON, R. G., HENRY P. SCHAPPER and D. W. G. TRELOAR, "The Farm Management Service Laboratory of Western Australia", *Farm Policy*, Vol. 7, No. 2 (June, 1968), pp. 43–97.
- [17] NUTHALL, P. L. and D. MOFFATT, "On the Use of Deterministic Linear Programming for Planning in a Non-Certain Environment", *This Review*, Vol. 43, No. 3 (December, 1975), pp. 184–196.

- [18] RICHARDSON, R. A., J. B. HARDAKER and J. R. ANDERSON, "Farm-Level Decision Models for Developed Agriculture". Papers and reports of the 16th Conference of the International Association of Agricultural Economists, Nairobi, Kenya, August, 1976 (in press).
- [19] SCHULTZ, T. W., "The Value of the Ability to Deal with Disequilibria", *Journal of Economic Literature*, Vol. 13, No. 3 (September, 1975), pp. 827-846.
- [20] SCHUMPETER, J. A., *The Theory of Economic Development*. Translated from the German 1911 edition by R. Opie. Cambridge: Harvard University Press, 1934. Third Printing, 1948.
- [21] THROSBY, C. D., "New Methodologies in Agricultural Production Economics: A Review", in *The Future of Agriculture: Technology, Policies and Adjustment*. Papers and reports from Fifteenth International Conference of Agricultural Economists, Oxford: Agricultural Economics Institute, 1974.
- [22] WELCH, F., "Education in Production", *Journal of Political Economy*, Vol. 78, No. 1 (January/February, 1970), pp. 35-59.