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SOME OBSERVATIONS ON AGRICULTURAL MARKETING RESEARCH AND THE NEED FOR ITS DEVELOPMENT IN AUSTRALIA

T. H. STRONG

Bureau of Agricultural Economics

Marketing research is a relatively neglected field in Australia; and we can't afford to let it remain neglected. The situation confronting so many of our individual industries is far from bright; the beef, the dairy, the egg and the wheat industries (just to mention examples) all have major marketing problems to contend with. Even the wool industry cannot ignore the need for marketing research over a broad field in order to hold its position. From the national viewpoint market research is of vital importance in assisting us to earn more from the export of agricultural commodities which appears to be the core of the problem of maintaining the growth and development of the Australian economy.

THE OBJECTIVES OF MARKETING RESEARCH

There is a pressing need for a stepped-up Australian agricultural marketing research programme organised on a modern basis, taking advantage of the experience in other countries which have advanced much further than we have in this field. In developing such a programme, the first requirement is the setting up of well-defined and coherent objectives. As a starting point we might look at the objectives of the United States' marketing research programme initiated in 1946 which are set out in broad terms, e.g. to promote "a scientific approach to the problems of marketing, transportation and distribution of agricultural products" in order that "marketing methods and facilities may be improved, that distribution costs may be reduced and the price spread between the producer and consumer may be narrowed, that dietary and nutritional standards may be improved, that new and wider markets for American products may be developed".¹

We can accept most of the objectives of the United States programme; even including that of narrowing the price spread between the producer and consumer, ambitious though this might appear to be.² We need to add to them. This is because the rate of growth of our economy depends (unlike the United States) to an important extent on export earnings of primary products, and competent assessment of future requirements in potential export markets is essential. It needs to be made in terms of qualities as well as quantities, and must take

¹ *Agricultural Marketing Act of 1946*, Public Law 733, 9th Congress, MR6932.

² "The crudest and most brutal criterion for measuring the success of marketing research is what happens to the consumers' dollar." See: Karl A. Fox, "Framework for Appraising Marketing Research", A report of the National Workshop on Agricultural Marketing, 1956, Iowa State College, p. 19.

into account changes in processing industries and in consumer habits, tastes and motivating forces. This assessment will enable us to make appropriate adjustments in production policy. We cannot go on expanding production of dairy products, beef and other meats, eggs and wheat regardless of cost, regardless of the nature of demand in international markets or regardless of what the manufacturer, the processor or the consumer abroad (and for that matter, within Australia) really wants. We need marketing research to guide us in the formulation of production policies.

We could include in an Australian agricultural marketing research programme research into pricing policy. This is a serious omission from the U.S. programme, but perhaps it reflects Congressmen's vain political hope that a scientific approach applied to agricultural marketing research ("similar to the scientific methods which have been utilised so successfully . . . in . . . production of agricultural products")³ would solve the price-income problems of agriculture. As Cochrane states, they were looking for miracles—"a voracious maw, if you please, down which farm products may be poured endlessly without cost to the government and with price enhancing consequences".⁴

In Australia today, more than one primary industry is confronted with a price-income problem; and we need to look at all aspects of production and marketing for a possible solution, including means of improving marketing facilities and methods and of reducing distribution costs. Our problem is aggravated by the weaknesses of the designers of U.S. marketing and production policies. The United States is wealthy enough to take practically all but climatic risks out of her farming and goes on producing regardless of cost (at least to her taxpayers) using the international market more or less as a dumping ground for the surpluses which inevitably result from what, under the guise of agricultural policy, tends in the words of one of her eminent economists to degenerate into a "charity racket".⁵ Our task would be easier if the United States either would seek a "voracious maw" among her own low income and under-nourished groups or alternatively would bring production more into line with what can be moved into consumption without having to stretch further the elastic concept of what constitutes fair competition.

CONSUMPTION RESEARCH

I do not think any of us could disagree with the contention of Professor Borden that any worthwhile marketing programme must first start with the consumer. In his approach, which is the essence of simplicity, Borden sets out the elements of the marketing mix (production and production planning, pricing, branding, channels of distribution, personal selling, advertising, promotion, packaging, disposals, servicing, and physical handling) against the forces (the consumer, trade, competition and government controls).⁶

³ *Agricultural Marketing Act, 1946.*

⁴ Willard W. Cochrane, "Agricultural Economics in the Decade Ahead", *Journal of Farm Economics* (Proceedings Number), Vol. 36, No. 5 (Dec. 1954), p. 818.

⁵ K. E. Boulding in discussion with the Agricultural Policy Sub-Committee of the Joint Economic Committee as reported in the *Journal of Commerce*, 17/12/57.

⁶ Neil H. Borden, Lecture to Australian Association of Advertisers, Melbourne, 29th January, 1958.

Marketing research cannot achieve its major objective without an understanding of the consumer.⁷ How much do we know about this major force, and what motivates him in his expenditure and preferences? What is the balance between his desires and his resistance? It is only through an understanding of such things concerning the individual consumer that we can hope to discover the possibility of increasing consumption of any particular commodity or group of commodities whether it be through policies of adapting production, through cost reduction, through packaging or appropriately presenting it and the like. Thus in order to assess demand at the national level we need to know enough about a representative sample of consumers and to know how the population can be grouped in accordance with tastes, preferences, desires, resistances and incomes. Finally, if we wish to plan ahead we need to be able to assess trends and the factors which cause changes. What is the level of our understanding of these things?

Much of our knowledge to date is derived from food balance sheets, consumer survey and time series data which show variations in food consumption or food expenditures from year to year and from which is attempted an estimate of the influence on consumption mainly of income and price and sometimes other factors.

Although there has been a great deal of work done on the influence of income and prices on demand, no one would seriously contend that the results add up to principles of consumer behaviour. For example, Stone points to the contrast between the carefully elaborated theory of the influence on demand of income and price (in a static situation) and the extremely vague notions about the effects of such dynamic factors as changes in tastes and habits on the level and pattern of consumption.⁸

Stone makes ingenious attempts to take account of factors other than income and price by using time variables and other dynamic factors. His conclusions are intriguing:

“The apparent importance of terms involving time in analyses of market demand indicates a serious situation particularly from the point of view of prediction. First it suggests that the many long-term factors determining market demand are not income and prices at all but are influences which it is hard to specify and still harder to measure. In such a situation prediction, except over a very short period, must be extremely unreliable . . .”⁹

This statement, in the light of many assessments of consumer behaviour in the United States since World War II, appears enlightened by comparison with the conclusions of Wold and Jureen, who state:

“The stability thus displayed by the consumption pattern is of great importance for demand analysis, from the viewpoint of theory and method as well as of application. Generally speaking, we are led to consider consumer demand as a relatively stable feature in the pulsating dynamics of the economic environment. Gradual shifts in the demand functions are there, of course, but they can be allowed for without entering upon anticipations, short-term reactions, or other intricacies of a dynamic approach.”¹⁰

It must be borne in mind, however, that this statement refers to

⁷ Prime emphasis on the consumer does not, of course, exclude assessment of the direction, nature and intensity of the other forces: trade, competition and government controls.

⁸ Richard Stone, *The Measurement of Consumers' Expenditure and Behaviour in the United Kingdom, 1928-38*, Vol. 1, Cambridge, England and New York, p. 272.

⁹ *Ibid.*, p. 271.

¹⁰ H. Wold and L. Jureen, *Demand Analysis* (John Wiley and Sons, New York, 1957), p. xi.

consumption patterns in Sweden during the period 1930-39. Nevertheless, until more work has been done on the effects of dynamic factors, much of the theorising about consumers' behaviour must be regarded as badly out of balance from the point of view of practical application. Clearly, more co-operative work by economists and other social scientists is urgently required.

We must be aware and must try to take account of the dynamic changes taking place in the world today (e.g. technological factors, social changes, institutional factors, etc.). Technological factors are playing a major role, in what is more a change in habits induced by convenience rather than a rapid change in taste. The product as it is now consumed by an ever-increasing proportion of the population (at least in developed countries) is very different from the product at the farm level. In dealing with what in fact at the consumer end is a derived demand, we have to take into account the changing behaviour of an ever-increasing group of intermediary buyers, engaged in transforming raw products at the farm into the consumables in the retail store.

Major social changes have been taking place in major consuming countries. In the United Kingdom, for example, there has been a big redistribution of income over the past two decades. For example, the doctor's purchasing power in 1957, as a percentage of what it was in 1938, was 81, the university professor's 67, and the civil servant in the range 62 to 71, as contrasted to the miner's 191, the railway porter's 145 and the industrial worker's 120.¹¹ The difficulties of forecasting consumption levels over a period when such a change is taking place, particularly when account has to be taken of changes in the relative percentages of the population in occupational groups, and the basic differences in consumption habits of the miner and the civil servant are very great indeed.

Certain institutional changes can be of sufficient magnitude to affect the structure of consumption. I believe the effects of the rapid growth of hire-purchase in Australia on food-consumption may have been quite significant in recent years. A result described in the United States may be relevant. Applying the vector analysis approach¹² to consumer motivations, Bilkey¹³ found that the families' "resistance" (negative valences) against food expenditures were found to vary *inversely* with their level of free cash balances.

One could go on at length discussing additional factors which may be contributing towards changes in demand structure such as educational programmes and their effect on diet consciousness and changes in demographic factors. The field of research is indeed a wide one in which those who study demand chiefly through statistical analysis of relationships between market quantities, prices, and other variables

¹¹ Circular of Australian Producers' Wholesale Co-operative Federation Pty. Ltd. London, 28 January, 1958.

¹² A quantitative technique for measuring motivational factors in buying behaviour which involves application of the vector psychology of Kurt Lewin.

¹³ Warren J. Bilkey: *The Vector Analysis Approach to Consumer Motivations, Proceedings of the Annual Meeting of the New England Research Council on Marketing and Food Supply*, April, 1955, Cambridge, Mass. "Free cash balances were defined by nearly all of the interviewees as the cash in their checking account plus the money in their pocket book, minus foreseeable dues out for rent, doctors' bills, etc."

such as consumer income and those who study consumer motivation and behaviour must work together.

Promotion campaigns for our agricultural products are being developed abroad and more are being contemplated within Australia, but the expenditure is not likely to achieve the best result unless preceded by or based upon reliable consumer research. In the preliminary stages, emphasis must be placed on what consumers want, the reasons why they are not getting (or can't get) what they want and how their desires might be fulfilled or their resistances overcome. There will be justifiable criticism of the promotion campaigns for beef and dairy products in Australia if they are launched without this type of preliminary study. It will involve a survey of a sample of Australian consumers as representative as possible and should aim to provide detailed information on consumer attitudes to quality, consistency of quality, identification of quality, convenience, packaging and the like.

Some time ago there was much criticism of Australian efforts to expand sales of primary products abroad. They were allegedly directed too much towards Empire loyalties and suggestions of undetectable but nevertheless beneficial qualities of products originating in the land of the kangaroo and kookaburra under the insidious magic of Australian sunshine. I would caution against too ready acceptance of the validity of such criticism, as some very useful consumption surveys have been carried out, such as those relating to pear and apple consumption. These have provided information on which a promotional campaign can be based. For example, they set out the adjustments necessary in the retail trade, or the marketing system generally, to achieve expanded sales, and finally and very particularly, the production plans and adjustments within Australia which could be attempted to meet consumer requirements.

There is scope for well-planned experimentation. This is one area within which experimental methods used in research in the physical sciences, appropriately adapted, might be used to advantage. Experience gained by the United States in its market research programme should be of particular interest to us in Australia. Hoofnagle,¹⁴ for example, refers to some interesting results. He states:

"In our controlled retail store experiments we have come to recognise certain principles which run through all of the tests. Variety is known to be an important factor affecting total store sales within departments. In conducting retail store experiments in Pittsburgh, Pa., it was found that a combination display of medium and large size pears and bulk and various size packages resulted in sales one-fourth larger than sales from a display of medium size pears alone. In an experiment conducted with apples, the findings indicated that a combination display of bagged and bulk apples, priced in 5-pound units, increased apple sales significantly over previous methods of retailing. Sales increased still further when bagged apples were offered in 'catch weights', varying from 2 to 6 pounds. The increased sales apparently resulted from added variety. Some customers preferred to select apples and pears from bulk displays, others preferred the convenience of bags. Maximum sales were achieved by satisfying both types of customers. In an experiment of national cheddar cheese, it was found that sales of this product may be stimulated by providing consumers with an opportunity to purchase both in-store packaged and pre-packaged cheese, and making cheese available to consumers in 5 weight ranges, varying the package size from about 6 ounces up to 2 pounds. These results all point to the importance of variety in satisfying the preferences of consumers."

When industries are becoming more interested in developing the home market, one might wonder what are the prospects of increasing

¹⁴William S. Hoofnagle, "Changes in Merchandising Agricultural Products", Agricultural Marketing Clinic, East Lansing, April, 1957.

or boosting aggregate consumption. Will the consumption of one product be increased at the expense of another? Will people consume more meat, more milk products, more eggs, and less bread and potatoes, for example? Can we have an intensive campaign of promotion based on the findings of our consumer research programme which will fulfil most of our objectives, including in particular the improvement of the farmer's net income, without there being conflict with the objective of earning more from sales of our products abroad? There may not need to be any conflict at all. However, emphasis in our research programme should not be one-sided. In those industries which produce traditionally for export as well as the home market we should keep in mind the need for parallel research into the specific requirements of markets abroad. At the same time our methods and systems of marketing may need to be modified.

SOME INDUSTRY PROBLEMS REQUIRING MARKETING RESEARCH

(1) The Beef Industry

Up till a comparatively short time ago it was generally believed¹⁵ that the long term export outlook for Australian beef was good. It appeared that, due to population increase, rising real incomes over much of the world through full employment and general policies of economic development, demand would increase rapidly. It would be difficult to increase production at a sufficient rate to prevent substantial relative price increases.

We in Australia believed that the 15 Year Meat Agreement whilst being a good thing for Australia, was also a good thing for the United Kingdom. It would provide us with the long term assurances which would create the atmosphere conducive to increased investment by the industry in Australia. The United Kingdom would be fortunate in that she would have supplies available at prices not excessive in a world in which the commodity had become progressively scarcer. No one would have foreshadowed the possibility of the obligation under the agreement for deficiency payments on the scale of the past year.

Some of the factors which have contributed to the present situation appear to be:

- (1) The magnitude of the increase in production in Australia, the Argentine, and the United Kingdom. Since 1949, Australian production of beef and veal has increased from 606,000 tons to 805,000 tons in 1956-57 and in the same period exports have increased by 83 per cent. In the Argentine, production of beef and veal has increased from 2 million tons to 2½ million tons over the same period. Exports have increased from 171,000 tons to 360,000 tons. In the U.K., production of beef and veal since 1950 has increased from 634,000 tons to 815,000 tons. Before the war, about half the beef and veal eaten was home-produced but currently the figure is nearly 70 per cent.
- (2) Miscalculation of future demand for beef (and possibly all meats) in the United Kingdom.

¹⁵ There is an interesting exception. See: L. Lorinez, *The World Future of Meat After the Transition Period*, Supplement to "Agriculture Abroad", September, 1945. Econ. Div., Marketing Service, Dept. of Agr., Canada.

There has been a very slow recovery to pre-war consumption levels in the United Kingdom. The pre-war (1934-38) figure for beef was 54.9 lbs. per head, it was 36.8 lbs. per head in 1953, and for 1957 it is estimated at 54.3 lbs. There have, of course, been changes in relative prices but we might well have expected the increase in real income together with the significant redistribution of income (previously referred to) to have given a different result, i.e. a much higher average per caput consumption.

- (3) The strong preference of the United Kingdom consumer for home produced and chilled beef over frozen (chilled beef is now in direct competition with all but the choicest grades of the home product). Moreover, with the recovery of supplies after years of scarcity, consumers have been able to exercise a progressively greater choice which has swung in the direction of smaller and leaner joints.
- (4) The slowness of Australia to adjust to the changing circumstances becoming evident in the past few years. Adjustment involves:
 - (a) the adaptation of transport facilities to enable chilled meat to be marketed in the United Kingdom to compete effectively;
 - (b) adaptation of Australian production and delivery to markets of the chiller quality cattle which will provide the cuts of beef preferred by the U.K. housewife in terms of size, proportion of fat, and palatability;
 - (c) the adaptation in accordance with (a) and (b) to provide for continuity of supplies.

I believe that, in spite of the ill-founded opinions of some experts overseas,¹⁶ we in Australia have both the scope and the technology to produce and deliver to markets on a major scale the class of animal that will enable us to compete effectively. Advances in the field of animal husbandry are being commercially applied at a continually increasing rate in the zones of Australia where the potential for quality beef production really lies. There has also been marked progress in internal transport techniques. However, too much emphasis cannot be placed on the role of pricing policy;¹⁷ and for a pricing policy to operate

¹⁶ Two examples which I have read recently are those of Garner and Mackness. Frank H. Garner, "Agriculture in the British Economy (1956)", *Proc. of Conf., Imperial Chemical Industries*, p. 150. "Beef production may keep pace with home consumption and at the same time about maintain the present volume of exports. It is unlikely that the exportable surplus will materially increase in the near future. For the long term there is the possibility of a major increase in production in the Northern Territory..." Also see: R. A. Mackness, *Jnl. of Agr. Economics*, Vol. XII, June, 1956. After analysing the problems of our beef industry and placing prime emphasis on the North and semi-arid sector, Mackness "draws conclusions". "With the risk element high and returns relatively low, there does not appear to be much economic incentive to induce capital investment. On the whole, therefore, one is forced to the conclusion that the exportable surplus of beef available for the United Kingdom is unlikely to increase and may reasonably be expected to decrease in the long term. This latter possibility is the more likely the higher the level of incomes remain within Australia and the larger the population growth." It is beyond the scope of this paper to point out all the fallacies in the above. In general they overstate the spectacular and sometimes romantic problems of the marginal sector of our great beef industry where the potential is limited.

¹⁷ There has recently been a move in the right direction in the provision of a significant bounty payment on "chiller" type cattle to provide an appropriate incentive.

effectively, there is need to face up to role of grading and the overall requirements of an efficient marketing system.

The importance of marketing research in defining production policy cannot be over-emphasised. The smaller quickly grown animal with a light fat covering is said to meet both the technological requirements for the transport of beef in chilled form¹⁸ and the established preference of the U.K. consumer. There is much to be learned or confirmed since if there is a trend towards lower fat percentage in the consumer's preference, it is technologically less exacting on the production side. In short, we would be able to fulfil requirements far more easily and more widely over Australia. The important issue is that the beef producer must know what is the real requirement and whether it is long term or only temporary.

One of the most important requirements of marketing research in the beef industry is to provide a factual analysis of the overall scope for increased production and marketing at remunerative prices in the world. How otherwise can we advise on future production and production policy? For example, a United Kingdom authority states: "It would seem to be practicable within a period of 10 years (assuming the continuance of present consumption) to reduce our beef imports by half".¹⁹ If this is so, there is need for research into the market potential outside of the United Kingdom.

(2) Other Industries

(A) *Wheat*

In the world generally during the last decade or so, many developments have affected the structure of the world demand for wheat. Amongst the main ones are:

- (1) Production policies of traditionally deficit countries such as the United Kingdom;
- (2) Production and marketing policy of some exporters, particularly the United States;
- (3) Extension of mechanisation in the baking industry;
- (4) Growth of the Asian wheat market based primarily on increased consumption of bread and noodles.

Major deficit countries such as the United Kingdom and West Germany appear to be producing varieties of wheat with highest yields for those environments. Flour made from these varieties alone does not meet the more exacting requirements of today's baking industry; and wheat imported to meet the steadily reducing deficit must increasingly have special quality characteristics to complement those of home produced wheat.

Extension of mechanisation in the baking industry has involved progressively greater emphasis on certain quality characteristics of flour; and millers have had to adapt their grist accordingly. They need consistent control over the quality of their flour. A mixed raw product of unpredictable composition of qualities of wheat creates both a technical and a cost problem for them. Their preference must be in the direction of a homogeneous product with reliable specifications.

¹⁸ I do not mean to imply that this is the ideal type from other viewpoints.

¹⁹ Frank H. Garner, *op. cit.*, p. 157.

The Asian wheat market because of its growth also requires detailed study of the requirements of both processors and consumers. In some countries, such as Japan, bread users appear to be highly quality-conscious. In Hong Kong and Singapore demand is influenced by the fact that bread standards are based on volume not weight.

The expanding noodle market in the East provides a real challenge. Consumers' preferences for specific characteristics vary. High protein is important to some consumers. To others, colour is perhaps the most important characteristic. In Japan, whiteness is particularly important. In order that production policy (which includes the breeding programme, agronomic practices and extension activities) may be properly oriented, market research must provide precise answers to quality requirements together with sound estimates of future trends. In general our wheat production potential is such that we are able, given control over certain agronomic practices and varieties of wheat, to produce an array of reasonably homogeneous aggregates of wheat which would enable us to compete far more effectively than we are now doing in a range of sub-markets each requiring a particular class of wheat.

(B) *Dairying*

The dairy industry of Australia is confronted with an immediate price-income problem and a longer-term one of whether increased production for export can find markets at remunerative prices. Increased efficiency both in marketing and production enabling a greater total volume to be sold at lower prices may help to solve these problems.

Once again a promotion campaign will not yield the desirable net result unless we know more about the prime force: the consumer.

On cheese consumption, questions to be answered are:

- (1) Have we really explored the possibilities of greatly expanded cheese consumption in Australia?
- (2) Is poorness of quality, the lack of variety or unreliability of quality a factor or factors in the low consumption of the product in Australia?
- (3) Is cheese packaged in convenient weights?
- (4) If the answer to (2) is positive, what are the adjustments in production, processing, pricing or retailing policies or any combination of these which are necessary to make the product readily available in the form and assured quality desired by the consumer?

We do, of course, always want to know whether the price is the major factor operating against greater consumption.

On the subject of whole milk consumption, points raised are:

- (1) Is our milk distribution system efficient? How can its efficiency be increased?
- (2) Have we anything to learn from the U.S.A. about homogenisation, reduction and reconstitution techniques, adaptation of the carton to the convenience of the housewife and so forth?

(C) *Fat Lambs*

This industry is one in which determination of the best production

policy is a complex problem a simple answer to which may not necessarily be provided by marketing research.

Over recent years the bigger proportion of lambs has been required for the meat market at home, to meet ordinary replacement requirements or to enable farmers to build flocks to take advantage of a rapidly expanding feeding capacity. A comparatively small proportion of lambs is available for the overseas market. In view of this, does the adviser in the extension service recommend specialised production of small lambs with certain conformation known to be popular in the overseas meat trade in the pre-World War II era?

The questions to be answered are:

- (1) What is the Australian consumer's preference?
- (2) What are consumers paying or willing to pay for the preferred cuts or classes of meat?
- (3) Is our grading and distribution system such as to enable consumers' stated preferences to be met?
- (4) What are the preferences of the U.K. consumer?

If there is decided preference and additional payment for cuts of the kind that can be made available only from the appropriately conformed 30 to 35 lb. weight lamb, the next question to be answered is whether it will pay the producer in traditional regions of specialisation to market the lambs at that weight or carry them longer since he has the feed available at a convenient time to do so.

(D) *Fruit and Vegetables*

In this industry, there is indeed a major problem of distribution and an intriguing subject for research covering all aspects of the packaging, distribution and pricing, and including such problems as spatial monopoly in the big urban centres.

The contrast in quality, price and convenience of supplies of fruit and green vegetables at retail level between the United States and Australia is striking. This applies even in the big U.S. eastern cities which depend substantially on supplies which have to be transported up to 3000 miles.

Tomatoes, oranges, lettuce and cantaloupes, as examples, are available at prices generally appreciably below the average price in urban centres in Australia. Potatoes, of course, are available at a fraction of our price dollar equivalents. The difference between prices at farm and at retail in urban centres judged by data I have accumulated (limited though it is) is astounding.

DISCUSSION

IAN SHANNON

Consulting Economist and Statistician

In the United States and the United Kingdom and some other countries the agricultural sector can largely be supported by subsidies flowing from tertiary and manufacturing sectors of the economy. In Australia the situation not only tends to be the other way around, but in addition agricultural products must supply both the internal and the export markets. The requirements for each market can be at variance and this raises problems not found in countries where agricultural production flows mainly into the domestic economy.

It seems appropriate—since the bulk of agriculture in Australia cannot be subsidised by other sectors of the economy—that agricultural marketing research should be directed into channels yielding immediate increased agricultural income at the farm gate level.

This could raise problems. Most marketing research at the consumer level is naturally concerned with consumer tastes, habits and the like, and this means any findings must be carefully translated back through distribution channels to the producer. This is hard enough to do in the manufacturing sector, with but a few producers. With the thousands of relatively small and independent agricultural producers the task is greatly magnified.

Although an increase in consumer expenditure on foodstuffs through market research could increase net farm income, it may instead represent larger outlays to offset the cost of better packaging, greater range and the like. Any consumer research should be orientated in directions most likely to suggest the actual outcome. For instance, would the introduction of two grades of milk with a higher profit margin for the superior grade increase incomes of dairy farmers? Unless at least a pilot study were undertaken it is difficult to say what the net result would be.

In Australia, of all the variables required for forecasting future internal food requirements, population projections are probably the most important. In turn population growth is likely to be influenced considerably by political motives. Another factor is the effect of immigration from varied countries on Australian food consumption patterns. It is likely that food consumption patterns of old Australians have altered considerably over the last decade due to the stimulus of different food consumption habits of many New Australians. Also, many dishes introduced into the country with the wave of migration from continental Europe have been of the cheaper (but no less appetising) variety.

If agricultural market research were to add up to much in Australia, then it seems appropriate that this kind of work should be done on a national basis. Behind the sameness of the Australian landscape lie vivid contrasts. It is a fairly safe assumption that food consumption patterns differ quite considerably between say, Brisbane, Hobart and Perth, and that the percentage of family income spent on foodstuffs between the various cities would also vary. Other factors causing

variation in consumption are the size of family units, family income, retail outlets, and the relative prices of foodstuffs.

Market research in Australia has grown considerably over the last few years and, along with several independent market consultant organisations, at least one market research society flourishes with monthly meetings and a journal. With this growth in market research has come improved techniques, sampling methods and the like; but after experience in this field over the last years, one can see the major problem of any expansion is the lack of trained statisticians. By statisticians I mean people who have read for a degree in statistics and not economists and the like who have flirted with the subject. If this shortage of trained individuals were overcome, then market research studies as envisaged in Dr. Strong's paper can surely give satisfactory results—so long as the money is forthcoming to finance the studies. However, in the manufacturing field it has been repeatedly demonstrated that the costs of market research are much less than the hit and miss methods, and it must be expected that the analogy would follow for agricultural products.

Promotional campaigns of the Department of Trade are probably yielding considerable net benefits to the Australian agricultural producer, but at times one feels the techniques of promotion are somewhat stereotyped. There must surely be a need for extremely different promotional campaigns say in New York, London and Singapore. Similarly, as is well known, the products required can be at variance. But consumer research is probably most important in seeking out potential demands, and, in this respect, I feel that the Asian market would be an excellent field for external pilot studies of consumer consumption patterns relative to the Australian exportable surpluses (or possible exports).