

ECONOMIC AND MARKETING INFLUENCES ON FUTURE ANIMAL PRODUCTION IN AUSTRALIA

M.J. TAYLOR*

INTRODUCTION

Agriculture in the Australian economy

Despite a doubling of output, agriculture has declined from a 25 per cent share of the economy in the immediate post-war period to around 5 per cent in recent years. Agriculture's share of exports have fallen from 80 per cent to around 40 per cent in the same period. However, the total contribution of agriculture and the agriculturally related industries (input supplies, financial, transport, processing and marketing services) is still approximately 20 per cent of the Australian economy.

Price trends

The economic factors influencing production changes are both domestic and international. The most significant matters in recent times have nearly all been related to the overseas situation because the prices paid for almost all our broad-acre industry products are determined either directly or indirectly on world markets.

There has been a long-term downward trend in the prices paid for agricultural products; and variations in prices paid for products over quite short time periods are very significant. Food products produced in Australia received above trend prices for a period in the fifties, and again during the seventies. There has been a rapid price decline below the trend for most products in the 1980s.

Production trends

Our long term price trend probably reflects the fact that the growth' in supply has exceeded growth in demand. Both in importing countries and in competing exporting countries, production growth is the major factor affecting the demand and prices for Australian agricultural exports. Both developed and developing countries are continuing to increase food production at a faster rate than population growth.

Growth in agricultural output has been fostered by some developing nations adopting more liberal -policies within their domestic economies: (e.g. China), and others making substantial investments in infrastructure support and new technology adoption (e.g. India). In some developed countries, particularly the European community, United States and Japan, continued production growth is primarily stimulated by their artificial agricultural support policies inducing uneconomic production.

Macroeconomic factors

In addition to these primary economic determinants of demand for Australia's agricultural products, short term price movements and long term production developments are being increasingly influenced by **broad macroeconomic factors**. Fiscal and monetary policies, through their effects on interest rates, **inflation**,

*Department of Agriculture and Rural Affairs, East Melbourne, Vic 3002

exchange rates and economic growth rates, have a significant impact. Changes in these factors result in large volatile price movements. These movements reflect the short term inelasticity of the underlying demand and supply responses.

The emergence of macroeconomic factors as a major influence on future production is related to three developments. Firstly, production is becoming much more dependent on purchased inputs with the cost of these production factors being determined largely outside agriculture. Secondly, farmers are increasingly adopting capital intensive technologies and increasingly financing such technologies through debt. Thirdly, farm output is tied to an increasingly interdependent world economy and this sector is now much more sensitive to macroeconomic developments.

INTERNATIONAL TRADE ISSUES

The value of trade in agricultural products expanded rapidly in the 1970s to a peak in 1980, but agriculture's share of total trade has continued its long term decline. Developed countries, particularly in North America and Western Europe, accounted for most of the increase in export volumes of agricultural products during the 1970s. In these countries, agricultural policies have tended to encourage production and discourage domestic consumption.

Agricultural trade problems of the 1980s have resulted from the combined effects of the worldwide economic recession and agricultural policies in the major developed countries. These policies in the developed countries have protected their domestic producers from declining international demand for agricultural products and denied the benefits of lower prices to their consumers. This has further reduced world prices and shifted the burden of adjustment disproportionately on to lowly protected; efficient producers in exporting nations heavily dependent on world markets.

The recent trade and macroeconomic developments represent a crisis in international agriculture that is comparable with the depression of the 1930s. In response to this crisis, the Australian Government has been pressing in a range of international fora for a reduction in protectionist policies for agriculture.

PROTECTIONISM

Protectionist programmes artificially raise the returns from commodities, stimulate excess production and, if passed on to consumers, reduce consumption of the protected commodity. These policies give rise to additional costs both to the country applying them and internationally;

All developed countries, subsidise their producers, but Australia does so only to a minor extent. In the European Community and Japan, support is primarily delivered by consumer transfers; in the United States it is funded mainly by taxpayers through budget contributions.

The underlying goal of all these countries has been to shield their producers from foreign competition. The direct costs of these policies to consumers and taxpayers is over AS200 billion per year for developed countries. Recent work by Australians has focussed on drawing the attention of the major international powers to the substantial costs they bear internally from the misallocation of resources toward their protected agricultural sector.

Japanese agricultural policies are estimated to cost Japan as much as \$10,000 million per year (1 per cent of gross domestic product). In conjunction with similar policies in South Korea and Taiwan they are estimated to have

depressed world ruminant meat prices by as much as 9 per cent. The BAE estimated that in the five years to 1984/85 the European Community policies had resulted in Australia foregoing almost \$1 billion in export earnings from agriculture and had increased unemployment by nearly 1 million persons in the European Community.

MARKETING FACTORS

In Australia, producers and governments alike are recognising that international competitiveness depends on each of the links of the production and marketing chain. The multiple marketing and production stages involved in the delivery of agricultural products to final consumers in Australia and overseas all represent opportunities for improvement, modification, and the addition of services that will add to competitiveness of agricultural products.

Increasingly, the share of the consumer dollar expended on food is associated with services and activities prior to or beyond the farm gate. For sales within Australia the farming sector accounts for only one-third of the consumer food dollar. Innovation and improving performance and economic efficiency in these other areas is just as important to success as on farm improvements. Significant opportunities exist for improvements in the transport, storage and distribution of agricultural products. Marketing chain costs of many products are increased by State and Commonwealth Governments and their agencies. It is essential that these bodies assess and review options for improved performance. The Royal Commission into Grain Handling and Storage is but one example.

WHAT DOES MARKETING MEAN AT THE VICTORIAN DEPARTMENT OF AGRICULTURE AND RURAL AFFAIRS?

John Naughtin*

WHAT BUSINESS IS DARA IN?

This seemingly innocuous marketing type question produces some fundamental considerations about organizational direction. Organizations evolve in response to changing economic and political conditions. Restructuring, amalgamation, divestiture, and takeovers are often means of implementing such change. Departments of Agriculture in most States have undergone some major changes in recent times. In this climate of change and in this audience it is worth asking "what is our business?".

The view of the Victorian Government is that DARA is not only a scientific department concerned with the application of research, development and extension skills and regulatory activities to enhance productivity in rural industries. The emphasis has now been placed on DARA as an economic development department. Economic development implies a concern for the performance of the whole of the industry, including handling, packaging, distribution and marketing. This trend is consistent with the much wider role that is being imposed on DARA in recent years with priority being given to concerns like marketing, rural affairs and more recently food purity.-'

DARA is now in the business of agricultural industry development. Consequently we are concerned with economic efficiency in all aspects of the functions undertaken by our industries and not least, the marketing function. The contrast with the traditional Department of Agriculture can be easily overstated, but the change in emphasis is considerable. It is a change which has created both excitement and concern in staff, and has significant implications for career development,

*Department of Agriculture and Rural Affairs, East Melbourne, Vic. 3002

SOME MARKETING CONCEPTS OF RELEVANCE

Most people concerned with animal production, particularly research and extension officers, were brought up in the scientific culture which has a different value system and ways of thinking from the marketing culture. Marketing is concerned with some very qualitative issues like changing tastes and preferences of fickle consumers. It is concerned with economic issues like efficient performance in the storage, handling, transport, distribution and selling of products. It is also concerned with strategic planning for market share, product positioning, product mix, rate of return etc.

Some important concepts include the following: (i) marketing is concerned with what the product is and what it does for the consumer - the product is not sacrosanct; (ii) the product has different meanings for different customers - we need to be aware of market segmentation possibilities; (iii) an awareness of the qualitative shifts which occur in the markets; (iv) the evolution of market segments over time; (v) the fact that market dominance arises from some net competitive advantage; and (vi) that sustained competitive advantage arises from commitment, persistence, strategy and resource allocation.

THE ESSENTIALS OF MARKETING

An analysis is required of the following: (i) market; (ii) customer; (iii) competitors; (iv) trade situation; (v) the company marketing the product; (vi) economics.

Critical decisions are required on selection of the market, policy concerning the product, appropriate pricing, distribution and promotion. Note the level of planning and resource commitment required in all this. The marketing plan or strategic plan becomes a critical feature of how a company proceeds with product development.

DARA'S ROLE IN MARKETING

DARA's contribution to industry development stems from its knowledge and skill base, research and development capacity, and its regulatory functions. If we consider an agricultural industry in national or state terms as roughly equivalent to a large firm competing in export markets, then in marketing terms, much of the work in product development, market research, market information, competitor analysis and improvement in transport and distribution systems is done in the public sector, including Departments of Agriculture. This is especially the case in smaller industries where there is no existing marketing organization.

If some of the marketing functions are performed in the public sector, then it is essential that close links be established with exporters and farmer groups. This can be difficult, but has mostly worked well in Victoria. DARA staff need to accept both the role of intense interaction with other industry groups, and the project orientation implied. The objective is an applied industry development project involving a team approach across a whole industry.

The key to a marketing project is a strategic plan or marketing plan. A strategy is produced on how an industry will develop and market existing or new products in terms of the marketing decision framework. The plan will specify in detail how producers, exporters, wholesalers, DARA etc. will develop the product and market.

A strategy involving some of the outlined principles has been evolved in Victoria for the table grape industry and the pear industry. We hope to evolve,

an appropriate strategy for some of our animal industries.

MARKETING OF WOOL

John O'Connor*

WHAT ARE THE IMPORTANT ISSUES IN MARKETING WOOL?

The market faced by Australian woolgrowers differs quite markedly from those faced by producers of other important commodities. Australian woolgrowers provide 28 percent of world wool production, and 52 percent of world wool trade. These figures understate Australia's position because we provide 40 percent of the world's apparel wool (fibre diameter less than 30 microns) production and around 75 percent of world trade in apparel wool.

This dominance in the market allows the Australian industry to do two things which other industries cannot do. Firstly, it makes possible the Reserve Price Scheme, which makes the Australian Wool Corporation the largest single factor in the world wool market and allows it to stabilize prices over time to a significant extent. The Scheme is concerned with medium term stability and does not have an identifiable effect on the long term position of wool in its market. Secondly, the dominance of the Australian wool industry makes it potentially profitable to promote wool in apparel. There is little point in the Australian industry promoting sugar worldwide: the benefits would accrue largely to other producers: There are limited opportunities for promoting Australian wheat, but the amounts which can usefully be spent are small. By contrast, the Australian wool industry will spend about \$180 million this year on promotion (including a government contribution of \$35 million). Most of this is spent jointly with other exporters through the International Wool Secretariat, but Australia provides around 70% of the total expenditure.

There is increasing evidence that this money is well spent, in that it returns to Australian woolgrowers an amount greater than their outlay. Yet such evidence as is available suggests that the long term future of wool in the world fibre market will be determined not primarily by the success of our promotion activities, but by the most fundamental factor of all: price - or, more completely, price by quality or value for money. This point is best illustrated by examining the competitive position of wool in the fibre markets. For 15 years the ratio of wool prices to synthetic fibre prices has shown no identifiable trend and it has fluctuated around 3:1, but that ratio does not appear to be changing. Yet, and' this is the point, when wool prices fall causing a drop in this ratio, the quantity sought by the world textile industry **increases** substantially and quite quickly. A similar but opposite effect follows increases in wool prices and the ratio. Wool prices are more volatile than synthetic fibre prices, and are therefore more likely to cause a change in the ratio. In economists' terms, therefore, **the Australian wool industry** faces a very elastic demand curve despite its market dominance, and any reduction in the cost of producing wool will result in a solid response in terms **of the** amount of wool we can profitably sell. Put more simply, the revenue earned by the Australian wool industry is very sensitive to the efficiency with **which** we produce and market our **wool**, and the evidence suggests that this efficiency is a much more important factor than our efforts in promoting wool. Thus it is those who succeed in increasing efficiency in **production, distribution** and transport who make the most important contribution to marketing **Australia's wool** (and other important **commodities**) not the advertising and PR people. Unfortunately, it is fashionable at present, particularly among politicians of both the parliamentary and agricultural varieties, to assume the

*Australian Wool Corporation, GPO Box 4867, Melbourne', Vic. 3001

reverse ranking.

CURRENT ISSUES IN WOOL MARKETING

Two issues which have attracted much interest in recent times are objective measurement and the development of the wool processing industry in Australia. They are also likely to be important issues for a considerable time.

The further development of objective measurement for wool is considered to be important for two major reasons. For processors, wool is a very inconvenient fibre to handle, particularly compared with its clean and uniform major competitors, synthetic fibres. As a natural product, wool will never be able to fully close the gap, but we hope to reduce the cost of processing it sufficiently to obtain some increase in the 3:1 price ratio. The second purpose of objective measurement is to assist the development of a more efficient wool marketing system. Marketing systems which require buyers and sellers to travel to a central location to present and inspect the commodity are necessarily relatively inefficient, yet they continue to be prominent in agricultural marketing, particularly in Australia for wool, meat and horticultural produce. The single factor which prevents cheaper "sight unseen" marketing systems is the ability to objectively describe the product. If and when we can objectively describe wool as we can wheat and eggs, wool marketing processes will be cheaper.

The weakness of the Australian dollar since early 1985 has increased talk about, and even action in, the development of the early stage wool processing industry in Australia. This is not surprising given that Australia already had a number of advantages over most countries in this industry. The fall in the \$A increased those advantages by reducing the cost of Australian capital and labour in world terms. A point I want to make on this issue is that again politicians and others have their perspective wrong. While there is much talk about the development of the processing industry, the additional earnings from that industry will be much smaller than the additional earnings from the increased wool production which is resulting from the same impetus, namely the reduced value of the \$A. This illustrates the broader point that it is probably Australia's existing industries which will play the major role in ending our balance of payments problem, rather than the much talked about new manufacturing industries which are notably slow to appear. Those involved in agriculture in any capacity should not fear for their relevance to the national 'economy.

MOVING THE MEAT INDUSTRIES INTO THE 1990s

D. Phillips*

INTRODUCTION

To maintain or improve our financial position both at home and abroad, Australia's red meat (beef, lamb 'veal and mutton) industries will need to reach levels of efficiency and marketing which place us in a strong position vis-a-vis our competitors. The importance of our overseas markets is illustrated by the fact that over 50% of Australia's beef, veal and mutton and nearly 20% of our lamb production was exported during 1985/86. On the domestic front, even though the red meat industry accounts for 74% of the domestic meat market, sales of red meat **have** met stiff competition from the white meat (poultry and pork) industry, in recent years. From 1982 to 1986, per capita **consumption** of red meat fell 3.0, kg while per capita consumption of poultry rose 3.2 kg (AMLC 1986).

*The Australian Meat and **Livestock** Corporation, P.O. Box A498, Sydney south, N.S.W. 2000

The need to be competitive, increasing cost pressures and the introduction of new technology will move the Australian red meat industry towards greater **rationalisation**, specialisation, integration and centralised boning. New marketing and product developments will increase demand for livestock which meet very specific market requirements and can be supplied continuously. Initiatives such as **AUS-MEAT** and **CALM** are indicative of a response to this. They assist industry movement towards specialised production for identified market niches.

CURRENT INITIATIVES

AUST-MEAT

The Authority for Uniform Specification of Meat and Livestock provides the means for the establishment of a national system of product description based on objective **carcase** measurements. It facilitates the rapid conveyance of market signals from consumer to producer, provides for sight unseen trading and should increase product consistency, thus hopefully increasing customer satisfaction.

AUS-MEAT is a quality assurance system which relies on industry self regulation. It is supervised by a National board elected by the industry. Area managers accredit abattoirs and monitor their quality control programs.. They also provide industry training, run national **carcase** competitions and handle trade complaints. Accredited abattoirs maintain a quality control program, run by certified staff, they adhere to a Code of Practice for trading in **carcases** and provide feedback information to producers.

The description language used by **AUS-MEAT** is based on **carcase** weight, fat thickness, dentition, sex, bruising and a muscle or visual score. This information is passed back to producers in the form of feedback sheets and forwarded along the marketing chain to wholesalers, retailers and importers via **carcase** tickets, **carcase** brands or carton labels.

An accurate description system, tied to product price, will give the live-stock producer/processor the incentive to produce/process the most desirable animal for a particular market. For the producer, increased emphasis must be given to better livestock handling, direct delivery to abattoirs using the appropriate genotype and the selection of breeding stock on economic performance.

Equipment trials

The high cost of data collection and its analysis in abattoirs is being reduced through the implementation of automated equipment. Larger abattoirs have moved towards computerised data collection on their slaughter floors. In some cases this has included the electronic measurement of **carcase** fat depth.

The AMLC has developed and provided to industry a software package **AMIS** (**AUS-MEAT** Information System), to facilitate the analysis of collected **carcase** data. . The primary objectives of **AMIS** are to facilitate feedback sheet production and to lead the industry into grid selling,

Grid selling involves awarding premiums and discounts to **carcases** based on objective measurements which give some indication of **yield** of saleable meat and meat quality. It is the ideal means of relaying information to the producer on specific market requirements. Feedback sheets will enable producers to compare their **carcase** information from different abattoirs and over time.

A number of other management aids including an extensive costing system are also provided.

CALM

Computerised Aided Livestock Marketing provides an alternative to the traditional methods of selling livestock with the aim of increasing industry efficiency. CALM uses the AUS-MEAT language and all livestock sold using the CALM system are slaughtered in accredited abattoirs with carcass measurements monitored by AUS-MEAT Area Managers.

Implications

Some of the implications of these initiatives for producers, processors and researchers are as follows :

Firstly, producers will increasingly face price grids and tighter specifications based on objective carcass measurements and assessments. Increased carcass weights, reduced bruising and stress, increased carcass yield and year round supply are obvious consequences of cost pressures in the market place. Throughout Australia, much greater specialisation of beef production will occur as markets are identified for the types of stock that can be reared in different environments.

Secondly, the processor will be faced with increased rationalisation as automation, specialisation and integration have their impact upon the industry. Cost efficiencies through such things as centralised boning will be facilitated by AUS-MEAT. Greater emphasis will be given to product branding as processors, wholesalers and retailers are guaranteed more consistent livestock and/or product, through tighter specifications, made possible through AUS-MEAT.

Finally, the researcher will need to direct his/her attention towards those factors which will aid the movement of the meat industry into the 1990s and beyond. With respect to AUS-MEAT, areas requiring attention include :

- a better understanding of the links between carcass and meat quality and factors such as age (dentition), fatness, muscling and meat and fat colour;
- practical methods of measuring carcass quality including meat and fat colour, tenderness and yield of saleable meat; and
- animal breeding and production evaluations which specify what market destinations are being targetted.

CONCLUSION

M.J. TAYLOR*

Marketing innovation will play a critical role in animal production in the future. John Naughtin, discussed the new approaches to marketing being developed in the Department of Agriculture and Rural Affairs in Victoria. These approaches were pioneered in the horticultural industry but they now are being applied to the animal industry. The approaches are obviously fashionable, novel and will impact on the role of the Government scientists in the future;

John O'Connor, from the Australian Wool Corporation, provided a contrast by looking at promotion through the importance of price of wool relative to its competitors. Other popular issues such as further processing in Australia and objective measurement were also raised but he stressed the overriding importance of

*Department of Agriculture and Rural Affairs, East Melbourne, Vic. 3002

ensuring efficiency of production rather than relying too much on promotion.

The paper by David Phillip of the AMLC provides another marketing angle by looking at objective measurement of carcasses through AUS-MEAT and the related Computer Aided Livestock Marketing (CALM). These represent technical innovation in marketing of meat which could considerably reduce costs in meat marketing.

My objectives in this contract is to put together papers which present some of the current approaches to innovation in marketing. I expect that all of these approaches will be relevant to most of this audience to greater or lesser degree.

Monitoring and assessing economic developments, and more investment in marketing as well as on farm technologies, will be crucial to future animal production. In my view this sector of the Australian agriculture economy will continue to grow but the share of the total economy will probably decline. Our prospects will depend on those producing and marketing products being able to out-perform Australia's international competitors in all areas including marketing requirements, product quality, and reliability of supply as well as price.

Technical innovation will remain a critically important element in the future of animal production in Australia and is of continuing importance to the growth and development of the Australian agricultural economy. Adoption of more efficient production methods eases the production constraints imposed by limiting resources and reduces the marginal costs of production. Benefits of technical change accrue to those farmers, and countries, who adopt new innovations first. Countries adopting innovations that improve their relative competitive position will succeed in the international market. Those that do not will be faced with an intensifying cost price squeeze as the economic impact of the innovators works its way through the international agricultural economy.

REFERENCES

A.M.L.C. (1986). Annual report of the Australian Meat and Livestock Corporation.