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Marketing Australia's Wheat Crop: The Way Ahead*

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The 1989 Wheat Marketing Act has set in motion forces, in particular the deregulation of the domestic market for wheat and the establishment of the Wheat Industry Fund, which have irrevocably altered the way in which wheat and other grains are marketed in Australia. This article examines these forces and subsequent developments and seeks to address which marketing structure is best suited to maximise the position of Australian growers into the next century. Using some tenets drawn from industrial organisation economics, the international grain market and the current Australian system are discussed. Some benefits from the operation of the Australian Wheat Board are postulated and a discussion of continuing developments possibly leading to a corporatised AWB actively involved in strategic joint ventures along the marketing chain and owned by growers through shares are presented.

1. Introduction

Many factors in both the international and domestic arenas over the last ten to fifteen years have changed or have set in place changes which are irrevocably altering the way in which wheat and other grains will be marketed in Australia. The international market place has seen a relentless rise in wheat production within the European Community (EC) from around 15 million tonnes at the end of the seventies to 80 million tonnes at the end of the eighties. Despite a slump in the mid eighties of some 20 per cent in the volume of wheat traded internationally, the EC continued to increase its level of exports using export subsidies known as export restitutions. The US suffered a dramatic decline in its exports in the mid eighties and ending stocks doubled from 1980 to 1986. The US stock accumulation was due to a number of factors, including provisions in the 1980 Farm Bill, which had been predicated on an increasing world demand for wheat, to political stances over the Soviet invasion of Afghanistan and Chinese textile imports as well as to EC export subsidies. In May 1985, the Export Enhancement Program (EEP) was introduced ostensibly to bring the EC to the bargaining table over grain export subsidies, but more in reality to clear the burgeoning US stocks. The resultant price wars between the US and the EC saw AWB expected pool payments drop around 13 per cent from the 1985/86 pool to the 1986/87 pool, and area sown to wheat in Australia for the 1987/88 pool plummet over 20 per cent as wheatgrowers moved out into the relatively more lucrative wool industry (Ryan 1988). The price war was mitigated by a Northern Hemisphere drought in 1988 but it was resumed in 1990. Other significant events included the break-up of the former Soviet Union and the collapse of Eastern Europe. Added to these events is the increasing development of the economies of the Asian countries with a corresponding growth in demand for grain for food and also for feeding to livestock.[1]

Looming over all these events were the protracted negotiations on the General Agreement on Trade and Tariffs Uruguay Round, which finally reached agreement in December 1993. The agreement holds out the promise of an eventual return to some degree of discipline from 1995 onwards as aggregate export subsi-dies are wound back 21 per cent in volume, 36 per cent in value terms, aggregate internal domestic supports are cut 20 per cent and other trade barriers are converted to tariffs and then wound back. Just what will happen between now and the commencement of the agreement in 1995 will depend on the whims of administrators in the

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[1] The People's Republic of China appears poised to increase grain demand over the next several years and is making efforts to liberalize grain trading patterns. (Garnaut & Ma 1992).

US and the EC. It is worth noting that the agreement legitimises the use of export subsidies and there is some speculation that as the restrictions begin to become effective, monies previously allocated to direct subsidies may be moved into market development or into food aid type programmes in ways consistent with the agreement. The agreement, however, is believed to be beneficial to Australian grain growers through improved prices, greater market access and an increase in demand for grain and grain based products resulting from the expected general increase in world income.

In the domestic arena, various Industry Commission Inquiries, the Royal Commission into Grain Storage and Handling (1989), research reports such as Miller & White (1980), Longworth & Knopke (1982), Bureau of Agricultural Economics (1983), Myers *et al.* (1985) were produced and had impacts on the content of the Wheat Marketing Acts of 1984 and 1989. The 1989 Wheat Marketing Act (WMA) changed irrevocably the framework within which the AWB operates by deregulating the domestic market for wheat, establishing the Wheat Industry Fund (WIF) and permitting the AWB to trade in grains other than wheat. The scene had already been set in the 1984 Act, under which wheat for feeding purposes could be traded outside the AWB under a permit system. Whitwell & Sydenham (1991) provide an excellent history of the Australian Wheat Industry from 1939 to 1989 and include many candid observations on the politics involved.

Observing these changes and realising that change was going to continue, the Grains Council of Australia (GCA) convened a seminar entitled Grains 2000 in September 1991 to assess the challenges ahead and to plan for the future. The results of the conference were published in a special Yearbook (Grains Council of Australia 1991-92).

This article addresses some of the major changes which occurred in the 1989 Wheat Marketing Act, some of the changes which have occurred since Grains 2000, and attempts to try and place these changes into perspective within the world wheat marketing environment. Hopefully the reader will be challenged to think through the types of marketing structure which may best carry the Australian grain industry into the 21st Century. The approach used is influenced by the thoughts of Porter (1980) on competitive strategy and draws on industrial organisation economics as well.

2. 1989 Wheat Marketing Act

The 1989 WMA was the culmination of the Commonwealth Government's policies for the Grains Industry interacting with the political realities of the day. Possible directions had been canvassed by Miller (1984), and in a more general way in the White Paper on Statutory Marketing Authorities (DPIE 1986). It was a move away from regulation towards more open policies and a move for statutory marketing authorities to become more commercially responsible and responsive.[2]

The three major changes in the Act which irrevocably altered the marketing environment for grain in Australia were:

(a) the deregulation of the domestic market for wheat;

(b) the introduction of the Wheat Industry Fund; and

(c) the explicit inclusion of an objective for the AWB to trade wheat and other grains in order to provide growers with a choice of marketing options.

Other important changes were made. These included a move from a guaranteed minimum price applicable to growers on a per tonne basis to an overall Government underwriting on AWB borrowings.[3] The level of underwriting was to decline over time and was put in place only to June 30th 1994. The WMA (1989) emphasises the maximization of net farm returns to producers with the consequent obligation for the AWB to minimise

[2] The Davis report (1991) further adds to the current philosophy on statutory marketing authorities although some recommendations such as annual general meetings and the establishment of policy councils have not been fully implemented for the grains industry.

transport, handling and storage costs, and port and shipping costs, wherever possible. There is an obligation for the AWB to pass costs back to the individual producers rather than pooling those costs. The AWB also could have more than one receiver of grain in a State thereby putting pressure on the previous monopoly positions of the bulk handling authorities. The WMA (1989) changed the Board composition from one which consisted mainly of growers to one comprised of people with various types of commercial expertise including production expertise. The WMA (1989) also removed the sunset provision which under previous Acts had been five years on the life of the AWB.

3. The Wheat Industry Fund

The deregulation of the domestic market and the exclusion of the Government underwriting from funds used for trading activities necessitated the establishment of a separate trading division within the AWB and the establishment of a capital base for the its trading activities. The AWB had not been permitted to build up capital reserves of any significance because the various Government financing arrangements had obviated the need for such reserves and there were no large infrastructure requirements such as those required of the bulk handling authorities. The trading division was established within the AWB as a separately managed, and audited entity from the pool operations to ensure that it stood on its own commercial feet. The trading division acts as an agent for the pool on the domestic market including the operation of pools for domestic segregations of wheat, as an agent for sales into the Pacific region including Papua New Guinea and New Zealand and is responsible for all cash grain trading and operating pools of grains other than wheat.

To establish a capital base which could be used to fund the trading activities and other investment activities, a levy was set at 2 per cent of the farm gate value of all wheat sales. The monies collected were placed into the Wheat Industry Fund (WIF). Each grower each year is issued with a certificate of equity stating how much he has contributed to WIF plus his share of earnings from WIF investments including the profits from the trading division. WIF contributions and their earnings are not taxed until monies are taken out. These certificates are transferable to anyone. The clear ownership features of the certificates make the WIF unique among the reserves held by grower organisations. WIF is managed in accordance with regulations which were drawn up after consultations between the GCA and the AWB. The WIF monies may be used for any sound commercial investment of a strategic nature related to the grains industry. An annual business plan must be approved by the GCA and this approval effectively places a power of veto on any major project in the hands of the GCA.

4. Post 1989 Developments

4.1 Grains 2000

The wheat industry had resisted the deregulation of the domestic market. Deregulation had been supported by a number of growers favourably located in relation to domestic markets. Some if not many of these growers believed that they could appropriate in a deregulated environment the monopoly rents achieved by the AWB under the regulated regime. Many were subsequently disappointed as prices were competed down to estimated pool return levels in many areas.[4] Growers who are favourably located may be better off under a deregulated system, but the size of that benefit is much smaller than many initially believed. Furthermore some growers now see the AWB, in its trading division guise, as a competitor to themselves and at times agitate for the AWB to keep away from "their" cash markets.

Fundamental change had occurred with the 1989 Act. The GCA responded by calling for a seminar on the challenges facing the grain industry and Grains 2000 was initiated. With funding provided by the Grains Research and Development Corporation, the GCA commissioned a set of background

[3] The significance of this alteration became apparent in November 1990 when world wheat prices collapsed and AWB pool return estimates and hence harvest payments to growers followed down the world prices. The underwriting did not provide a floor in the way the guaranteed minimum price did.

research papers prepared by Hassall and Associates (1991). The proceedings may best be summed up by McGauchie (1992):

> 'Almost without exception speakers at the Grains 2000 conference advocated that critical changes to our research, development and extension, production, processing, marketing and the industry's institutional arrangements are inevitable and necessary.'

Following Grains 2000 a joint Working Party from the GCA, the AWB and the Department of Primary Industries and Energy was established to investigate a possible corporate, legal and financial structure for a successor to the AWB. The Minister for Primary Industries and Energy, Simon Crean, was also keen to have suggestions from the industry and was particularly anxious to pursue value adding aspects in any future arrangements. The Working Party report (GCA/AWB/DPIE 1992) was presented to the industry at Grains Week in Melbourne for consideration and discussion. The report suggested a framework codenamed Newco.

4.2 Newco

Newco would be established under its own Act of Parliament as a private corporation. It would be owned and controlled by grain growers through a broad and diverse base of shareholders. Newco would be free to utilise capital from outside the grains industry through joint ventures and if approved by grower shareholders by issuing shares to non-grower minorities. Newco would replace the AWB and WIF and would assume the AWB's activities with potential to expand into grains processing and grain related manufacturing industries. On the presumption that the current pooling and harvest payment arrangements would continue to be offered by Newco, approximately $400- $500m of shareholders funds would be required to become financially independent of the Commonwealth Government.

WIF monies, if supported by the industry, could be converted to issued shares in Newco (the WIF levy would cease on establishment of Newco). The shares would have the rights (voting, dividends and capital growth potential etc.) attached to them as usually accorded in other Australian companies. The Board of Newco would be accountable to the sharehold- ers and would comprise of a majority of grow ers together with independent and executive directors and a director appointed by the Commonwealth. Newco would seek to retain the single export status of the AWB.

Meetings were held across the Australian wheat belt in July 1992 to discuss the proposal. Ultimately the Newco proposition was not accepted by growers. The reasons varied. Some growers felt there was no need to change, others were concerned about the investment dangers and about possible competition between Newco and their own local state marketing authorities. Others felt that a change in Government at the forthcoming Federal election would solve any difficulties such as the declining levels or the possible cessation of Government underwriting. Some felt that a company holding an export monopoly was unlikely to be a viable structure if the Coalition won the election and that the proposed structure might increase the likelihood of losing the single desk facility.

The GCA took note of the industry concerns. They believed, however, if a satisfactory outcome could be achieved with the Labor Government, it made sense to conclude an arrangement rather than place all expectations on a forthcoming election outcome. A driving factor also was the need to have the financial arrangements, which were due to expire on 30th June 1994 for the AWB in place as soon as possible. The AWB funding activities go out some 15 months or so ahead for some facilities and the financial institutions needed to be provided with a firm indication in early 1993 of the likely arrangements. The GCA negotiated an arrangement which culminated in amendments to the WMA (1989) in late 1992.

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[4] The drought in the eastern States in 1991-92 did see the domestic market move significantly away from export parity as it took on a life of its own driven by local supply and demand factors.

5. 1992 Amendments to WMA

In October 1992, amendments to the WMA (1992) were presented to Parliament.[5] The key elements of the amendments included a specific object of the Board to participate in value added activities and the power to do so. These are deemed to be activities which increase the value of grain or grain products. The amendments included an extension of the underwriting of AWB borrowings until June 30th 1999, combined with a level set at 85 per cent (compared with 82.5 per cent previously set for 1993/94) and a continuation of the WIF levy to accumulate funds until June 1999 to provide a capital base for the AWB and for investment in value adding activities.

A subsidiary company may be formed for investment purposes. The WIF funds may be used for investment in commercially sound projects, for equity in joint ventures and for funding the trading division's activities. The WIF uses will continue to be in accordance with a business plan approved annually by the GCA and any profits from the activities will be credited to WIF equity holders on a pro-rata basis. At the end of the capital build-up period, the Government intends to withdraw its underwriting of the AWB borrowings. By then the capital base should be sufficient for the AWB to operate without the Government facility. The Government also has the view that the AWB may be corporatised at that time.

The Government decided to maintain the single export desk status of the AWB, although the export powers may be reviewed if and when there is a clearer outcome of the GATT round and as any successful reforms become effective.

In summary, then, the amendments envisage an AWB which has the objectives of:

(a) maximising net returns to farmers from the marketing of pool wheat;

(b) of providing marketing options for wheat and other grains; and

(c) of providing returns from value adding activities into the WIF.

It will have a sufficient capital base to enable it to invest in value adding activities and may be corporatised after mid 1999 by which time the Government underwriting facilities will have ceased. The AWB may start to look a little like its competitors, Cargill, Louis Dreyfus, Continental, Conagra, Bunge, and the other grain trading houses it encounters in the international arena (and also domestically in some instances).

How does this structure fit into the international grain marketing scene, and from an economic perspective, how does this structure assist or impede resource allocation and the generation of national income and the income of producers?

To consider these questions properly it is necessary to provide a brief description of the international grain market, particularly wheat, because wheat is by far the major grain in Australia. Also a brief description of the activities of the AWB is required.

6. International Wheat Market

6.1 Highly Concentrated

The world grain market is dominated by a few major countries on the supply side.[6] There are a larger number on the demand side, but the market is still reasonably concentrated. In coarse grains, corn is the predominant grain traded and the export side is dominated by the US (80 per cent) and the import side by Japan (30 per cent) and the former Soviet Union (15 per cent). In the wheat market five countries, the US (35 per cent), Canada (25 per cent), EC (20 per cent), Australia (10 per cent), and

[5] See the Second Reading Speech (Australia, House of Representatives 1992) by Minister Crean for further elaboration.

[6] See Schmitz *et al.* (1981) for a good presentation of the dominance of countries. Sewell (1992) offers a more recent description of the world grain markets.

Argentina (5 per cent) account for over 90 per cent of exports (around 100 million tonnes each year). On the importing side a much larger number of countries are involved. The former Soviet Union and the People's Republic of China account for nearly one third of imports although they vary considerably from one year to the next. The twelve major importers account for approximately two thirds of imports and most of these countries buy through a single desk.

Government intervention in wheat production and trade is endemic. The EC operates a high internal price system protected by a variable tariff and disposes of its surpluses onto the international market through a system of export subsidies (restitutions). The US has long had a farm programme in place which provides target prices, deficiency payments, loan rates, storage programmes, area set aside programmes and the EEP. Canada has had stabilisation schemes, special payment schemes (approximately $C1billion each) which have operated for periods of time and the current Gross Revenue Insurance Plan (GRIP) scheme. Canada also has a single desk, the Canadian Wheat Board. Australia has virtually no Government involvement, but the AWB has single desk status on the export market. Argentina used to have a Grain Board, along with export taxes, but now is an open market.

6.2 Oligopolistic Marketplace

Economists have long postulated that the international wheat market was not a perfectly competitive, price clearing market (see McCalla 1966, Alaouze *et al.* 1978). Some empirical support for an oligopolistic market structure is provided in Kolstad & Burris (1986). In their study, which predicted trade shares compared with actual trade shares, a US-Canada duopoly model performed somewhat better than a US-Canada-Australia triopoly model which again was better than a free trade model. Paarlberg & Abbott (1986) combined consideration of market power in international wheat trade with the endogenous treatment of domestic policies and concluded that US, Japanese and EC policies were insensitive to other nations' policies, but that Canadian and Australian policies were sensitive to policies elsewhere. Ahmadi-Esfahani & Carter (1987) also note the dominance of the US in wheat trade and how the loan rate may be used to affect the position of other exporters. These results are hardly surprising to people familiar with the trade. These studies were undertaken prior to the EEP introduction in 1985. A more recent study, Anania *et al.* (1992) demonstrates the influence of EEP as well as concluding that EEP is basically a failure in meeting any of its stated criteria.

6.3 Targeted Subsidy Programmes

Even the most cursory of casual empiricism suggests that in matters of price determination and trade flows, the USDA in Washington and the European Commission in Brussels play pivotal roles. The export subsidy programmes operated by Washington and Brussels are targeted programmes. The level of subsidies set by each bloc varies quite considerably across importing countries, so that the administrators have a great deal of flexibility and control over the quantity and prices which a country has to pay for wheat imports. The average EEP subsidy level over the life of the programme is $US33/tonne. There is a wide variation between countries at any one point in time and also over time. A country, for example, such as Japan which is a non-targeted EEP country (Japan does not import EC wheat) is faced with the non-subsidised or US commercial wheat price as its world price. Countries such as Egypt, the former Soviet Union and the Peoples Republic of China may face prices at times up to US$60 per tonne lower than the commercial US price with other countries in between. In the aftermath of the drought in North America in 1988, EEP subsidies in 1989 generally averaged below $US 10 but they rebounded with a vengeance towards the end of 1990 averaging over $US40. Countries which are not targeted for EEP and/or which do not import EC wheat but which are potentially eligible also face a price below the US commercial price because of the threat of imports from the subsidising blocs.

As a result of these export subsidy programmes there is no single world price for a particular grade of wheat. Rather there is a whole schedule of prices

depending on which country is under consideration. Add this to the varying premia, discounts for different types and qualities of wheat and for varying locations and there is a whole complex of prices facing any given importer. Wheat from one country or even one grade description is not an homogeneous commodity. There are differing degrees of substitution based on technical criteria as well as preferences based on relationships or on political considerations. The degree of substitution and hence the strength of preferences will be influenced by price differentials, although some of the technical factors, for example factors characterising feed-wheat, will prevent the use of such wheat as milling wheat.

6.4 The Grain Traders

In this mix of administratively and market determined prices and traded quantities we have the international grain traders operating. Morgan (1979) provided probably one of the first insights into the way in which this small and highly concentrated group operates. Essentially five or six almost all privately owned companies dominate the world grain trade. Caves (1977-78) provides a very interesting economic analysis as to why a US industry which is highly competitive, has such a presence of large traders and high concentration in export sales. He concluded that the large scale nature of these firms seemed to result from scale economies in co-ordinating information and risk. He also noted that profit margins in large traders depended on the instances of disturbances that create opportunities for a good deal of non-routine arbitrage. In other words when events are happening quickly, grain trading firms are in a position to capitalise on their strengths. The profits have little to do with price levels, with which producers particularly are concerned, only margins.

Gilmore (1982) in a very comprehensive piece of work provides an even more detailed description of the activities of the large grain traders which all have affiliates in key areas around the world. Gilmore provides insight into the ways in which these large companies position themselves from an international perspective, not a national one, to maximise profit. He describes how they create opportunities for themselves through inter company transfers across borders, through striving to gain every advantage from the various farm programmes and administrative procedures and regulations in place and through the use of optional origin contracts as well as in many other ways. Gilmore (1982, p.29) notes the vast amounts of capital required to fund these large and diverse grain trading companies.

7. The AWB

The AWB provides a full marketing service for wheatgrowers and for growers of other grains unless limited by government statute. Included in this service are market promotion and development activities, financing and risk management activities, pricing alternatives and the opportunity for investment through the WIF. Detailed descriptions of the AWB activities are available in various Annual Reports and also in Whitwell and Sydenham (1991). A number of these activities and some of the economic arguments in favour of a single desk seller were advanced in Ryan (1984). The AWB financing and risk management activities have developed in line with the increased sophistication of these facilities and include the wholesale sourcing of funds, the use of swap and sophisticated derivative transactions for both currency and commodity risk management. The economies of scale identified by Caves (1977-78) continue to flow to the AWB from information and from logistics. The ability to accumulate grain Australia wide, to access particular parcels of wheat and to programme shipments from all ports with minimal search and co-ordination costs is a major advantage for the AWB given the vagaries of the Australian climate. Increasingly, grain customers are demanding grain within certain specifications and are wanting an assurance of a consistency in supply from one season to another. Issues about the AWB and its activities which may be of concern to economists relate to getting the appropriate price signals back to producers, the ways and costs of providing the marketing and ancillary services, and the opportunities for innovation and developing new markets or niche markets. These marketing opportunities are intimately tied up with ensuring customer satisfaction, which means providing customer service

which is superior to that provided by competitors to Australian grain. Before considering some of these issues in more detail it is necessary to consider the product and the market facing Australian wheat.

7.1 Australian Wheat Characteristics and Markets

Australia produces some 15.5 million tonnes of wheat out of a world production of some 550 million tonnes and exports around 12 million tonnes into a world trade of some 100 million tonnes. Australian wheat is a white wheat around 70 per cent of which is classified as Australian Standard White (ASW) with a protein level generally in the range 9-11%. Most other wheat produced in the world is red wheat.. A comparable grade in a technical sense with ASW is the US Hard Red Winter (HRW) ordinary and its average protein level may routinely be 12% or more. Protein is a crude measure of quality. Australian wheat has a reputation for being clean and very dry (see US Congress Office of Technology Assessment 1989, p.109). This reputation is in contrast to the reputation of US wheat, which has been the subject of infestation and high levels of admixture and continual buyer discontent.[7]

The ASW card price which because of the corrupted nature of the international market, essentially only relates to the price achievable in Japan and South Korea, is very closely related to the price of the comparable US wheat (HRW ord) at the Pacific North West region of the US. Australian wheat markets range around the Pacific and Pacific Rim through South East Asia and up into the Middle East as would be expected given freight differentials from competing suppliers. Many of the buyers have a preference for Australian white wheat because it may be milled to a higher extraction rate than the red wheats, because of its low moisture content and cleanliness, because they are used to milling it and their customers are used to baking with it. The US and Canada are the main competitors of the AWB in most markets although the EC is a direct competitor in some markets. Argentina, Saudi Arabia, Turkey and other occasional smaller producers may cause some disruption in particular markets for a period of time until their exportable supplies are sold. The markets in South East Asia and Japan are very quality conscious and the demand for wheat for specialised products such as noodles is increasing in those countries. The bulk buyers, Egypt, former Soviet Union, People's Republic of China, Iran etc., are less discriminating and are more concerned with price and in some instances credit availability. There are quality standards, however, such as a minimum protein level which are still important in these countries.

7.2 Price Signals: Pools and Cash

The AWB's major pricing mechanism to producers is through returning an average price for given grades of wheat. Under pooling, returns for the same class of wheat (Prime Hard, Hard, ASW, General Purpose, Feed) are pooled over time and over markets. Within these classes, various grades may exist. For example Prime Hard 14, Prime Hard 13, Victorian Hard, Noodle Wheats etc., are binned separately and will provide different returns to the suppliers. Normally if a segregation can be made which will return a differential amount, then that segregation is made. This includes regional pools and pools for particular types of off-grade wheat, for example Prime Hard varieties (but protein level not sufficient to make the Prime Hard pool) or Hard 3, Hard 4 etc. In the 1991-92 season, some 44 different segregations were made. Overlying these differentials are payments for protein in 0.1% intervals (over set ranges) and any dockages which might be applicable. The estimated pool return rates are no longer guaranteed minimum prices as they were under the WMA (1984), and if prices fall below expectations contained in those estimates then growers returns will decline. The AWB pays a proportion, normally 85 per cent of

[7] The US hygiene and inspection system was plagued with scandals in the 1970's with substandard shipments, ghost ships, and falsification of documents. In 1976 (Gilmore (1982, p.124)) reports that 16 US firms including all the major companies (except Cargill) and 146 individuals were indicted under the Grain Standards Act of 1968, resulting in a total of $1 million in fines, 31 years of incarceration and 111 years of probation for various offenses.

the estimated return at harvest time with a post harvest payment in the following March. Further payments are made if returns are above expectations and as funds become available. The time over which a pool remains open is generally determined by the timing of receipts from credit sales.

On the cost side specific deductions to pool returns are made for freight and handling, for port costs and for any other costs incurred which can be reasonably attributed to individual growers.

The AWB has a comprehensive pool pricing system and one which provides to growers market signals clear of much of the noise associated with spot prices. Pooling is a useful risk management tool for producers. Production is an annual decision, however it is an empirical question as to whether producers make better resource allocation decisions through receiving a pooled price or working from spot prices. The relevant prices are those in the future rather those in the past, although some producers who otherwise may have made poor marketing decisions and become bankrupt may have survived because of receiving a pool price.

The AWB offers cash prices through the trading division to growers for wheat and for a range of other grains including pulses. Forward contracts prior to sowing are offered by the pool. These contracts are multi grade contracts and may be for a fixed price or for a minimum price. The minimum price contracts are an option type contract and growers are able to take advantage of price increases if they occur. Specific hedging tools have been developed to enable the AWB to offer these types of contracts. Fixed price/fixed grade contracts are also offered later in each season by the trading division.

7.3 AWB Export Pricing

One of the major advantages of the single desk status of the AWB is the ability to price discriminate on the international market.[8] The US and the EC both price discriminate by offering different levels of subsidies to various importers. They move down from a high internal price. The AWB is able to sell the same wheat on any single day at whatever prices the various markets will bear. For example, the Japanese market is a non-targeted market and is the highest returning market. If Australia were like Argentina and sold through the trade those rents would not be captured because competition between sellers would drive the price down. All buyers would pay the prevailing Australian fob price irrespective of destination, freight, or any other advantage that Australian wheat might have for that buyer. This is the way economic theory predicts the market to function and the way it works for Argentina. A country, however, as Voon & Edwards (1992) point out, is unlikely to be interested in the welfare of consumers in other countries when it comes to pricing wheat into those countries.

8. Market Segmentation and Dynamic Considerations

8.1 Product Differentiation and Customer Relations

Porter (1980, p.39) identifies differentiation and focus as two of the three generic strategies industries may use to obtain a competitive advantage. ACIL (1992, p.55) also point out that product differentiation is a very important aspect of successful market segmentation. Factors other than subsidies assist in differentiating the Australian product from other origin wheats and therefore in the ability to maximise returns through price discrimination. The AWB differentiates its product by emphasising the attributes of Australian wheat, (it is clean, dry, and white), by ensuring that customers receive the type of wheat best suited to their needs (for example noodle varieties, wheat varieties from particular regions etc), by service, by promotion and market development.[9] Even the fact the wheat is from a

[8] See Rae (1978), Martin & Zwart (1987) and ACIL (1992, p.53ff) for discussions on the theoretical and practical opportunities to gain from market segmentation.

[9] Whitwell & Sydenham (1992, Chapter 13) provide a good overview of developments in the quality area, including noodle market development and the rapid dough method for bread making which is ideally suited to Australian wheat and acts as a barrier to entry to other wheat suppliers.

non-US origin, from a small country in world political terms or the AWB being regarded as Government agency all helps to get market access and to get a price.

The AWB places a high degree of emphasis on customer relationships, on understanding what the customer requires, in undertaking research, market development and training courses for customers both on-shore and off-shore. Wilson and Preszler (1992, p.557) state that buyers cannot observe all the relevant quality characteristics of the wheat prior to purchase. A sellers' reputation therefore depends on past performance, and a good reputation generates repeat business, concepts which are embodied in the economics of quality and reputation as set out by Shapiro (1983). Grain traders will also be concerned with relationships, but that relationship is more likely to be transaction based and the emphasis will be on their firm, not on Australian wheat or wheat products. As discussed later, the attention of the traders of US wheat to relationships is at times questionable. The reason why emphasis is placed on these factors is to differentiate Australian wheat in the eyes of the buyer and to focus on the needs of the buyer to ensure repeat business at a price premium. Wheat in excess of the demand from these discriminating buyers is sold into lower priced markets and it is the single desk status of the AWB which allows those premiums to be captured and not competed away.

The AWB is vitally concerned with marketing Australian wheat as distinct from selling wheat from whichever origin will give the highest return to the company. The trading companies' books are controlled out of the US or Europe and the emphasis appropriately is on company position and company profit, not on a particular country's product. There is a considerable divergence, therefore, in the objectives of the grain traders and organisations such as the AWB. This divergence results in different behaviour which has substantial relevance when examining marketing from a national perspective.

8.2 Dynamic Relationships and Growth

Porter (1990) in his work on the competitive advantage of nations places a great deal of emphasis on competition and rivalry, particularly on domestic rivalry in stimulating innovation and maximising efficiency.[10] The Australian domestic market in wheat and other grains is small in comparison to the export markets. The export market is highly competitive and distorted with all forms of government intervention. The pressures therefore on a non-subsidising country such as Australia with a product which is highly substitutable are immense. The defenses against these pressures consist of innovation, development of methods and products which are suited to the end users in different countries, developing relationships and in general developing smarter ways of marketing. There must be a marketing structure in place which not only finances and allows these innovations to occur but which continually drives them forward. If the AWB's product and services are not acceptable or it is not able to differentiate the product, then it will lose market share or it will suffer reduced prices compared with other origin wheats. In the international market the conditions for contestability are fulfilled. Alternatively, if the AWB is able to promote Australian wheat, to form better and stronger relationships with customers in a more efficient way than alternative marketing arrangements then the gains over time may be quite substantial. It is very difficult to model and to quantify these benefits which arise out of relationships, innovation and growth. It may be instructive, though, to consider how promotion and developmental activities are undertaken in the US system of an open market to gain some possible insight into how Australia might fare under an altered system.

8.3 US Development Activities

The marketing promotion and development work in the US system is undertaken by US Wheat Associates. US Wheat Associates is funded by growers and by the US Department of Agriculture and is a separate entity from the grain trading firms which do the marketing. The grain firms themselves do not undertake market promotion and de-

[10] See ACIL (1992, p.36 & also Appendix 2) for a particularly good summary of the various models and the salient points arising from the literature.

velopment because they have no incentive to do so. Competition prevents individual firms from capturing benefits which would accrue to the industry from promotion and development. There is a gulf between the firms who market the US grain and the people who take responsibility for quality control and for market development. The buyers are often frustrated over the quality of US grain shipments. Gilmore (1982, p.124) describes in alarming detail (for US producers) the problems that buyers face and the lack of attention to their complaints. Whilst there has been considerable improvement in this area, the concerns of lack of consistency and uniformity in wheat from the United States is an ongoing concern of buyers as noted in Wilson and Preszler (1992, p.556) and from the personal experience of the author. The US Wheat Associates personnel are often frustrated by the inefficiencies which result from them having responsibility for promoting the product, developing the markets, but not having control over the supply of that product.

8.4 Australian Experience

A small supplier such as Australia does not have the luxury of ignoring customers' requirements or of ignoring complaints. (In hard practical terms, buyers of any size have little alternative but to import wheat from the US in most instances). Australia has the considerable advantage of being able to service the customer with the people who market and supply the wheat. In principle, problems can be dealt with immediately. If the service is not up to buyers' expectations then the AWB sales will suffer. AWB technical people can and do work closely with the end users to identify market opportunities which the marketing people may then address. Numerous examples of co-ordination of research work are available such as the work on noodle wheats and the penetration of the South Korean market.

The South Korean Government controlled the imports of wheat prior to 1984 and the milling wheat requirements were satisfied by Western White wheat out of the Pacific North West of the US. The AWB became involved in that market by selling feedwheat into it in 1984. The import restrictions were in the process of being relaxed and the AWB technical people began following up the market opening that had been established with the various mills. One of the major uses of milling wheat in South Korea is for noodles. Research projects into the needs of the noodle wheats were undertaken and continual representations were made to the mills. Feedwheat sales continued spasmodically (depending on their availability) and small sales of milling wheat were commenced about six years ago. By 1991-92 those sales had built up to 450,000 tonnes representing 20 per cent of the milling market. In 1993-94 sales of milling wheat are expected to approach 600,000 tonnes and the AWB is very confident of continuing to make inroads. South Korea is a non-EEP market and along with Japan is one of the few high returning markets available in the world. It is a war in which the AWB met the full might of the US system, traders, US Wheat Associates etc., head-on and appears to be beating them without cutting prices. The US Wheat Associates unsuccessful response was to put pressure on the USDA to grant South Korea EEP so that US wheat could regain the market.

9. Single Desk Selling: Benefits and Efficiency Concerns

What is the likely size of the benefits from the single desk seller status and from product differentiation? The question is a very difficult one to answer, as noted earlier, partly because data are not readily available, and partly because it is very difficult to construct a model to capture the effects, particularly the dynamic and competitiveness effects.

9.1 Benefits: Large or Small?

Miller (1991, p.5) states that the AWB has probably extracted higher average prices in world markets than otherwise obtainable, but he feels at the cost of much lower levels of product differentiation and value-adding activities. A study by the International Policy Council on Agriculture and Trade (1991, p.154) also concludes that the Canadian Wheat Board and AWB gain price advantages as single desk sellers. The Industry Commission (1991, p.48) continues to doubt the ability of Aus-

tralian marketing authorities to extract consumer surpluses from overseas buyers. Piggot (1992, p.130) recently concluded from an equilibrium displacement model that returns from market power to a single desk Australian wheat seller were likely to be empirically small. His conclusions may not be valid because the model assumptions do not appear to adequately represent the existing marketing environment. A market structure in which price differentials of up to $US60 per tonne apply, appears to offer plenty of scope for price discrimination and for capturing higher returns simply from that factor before turning to other methods of market segregation or considerations.

Internal analysis within the AWB, although unpublished and not available publicly, indicates that there are substantial benefits from price discrimination. The estimates were obtained by going through the major export markets over the four years 1987/88-1990/91, making a number of simplifying and conservative assumptions, and then calculating the difference between AWB returns for the markets and the subsidised EC and US prices at the time of sale. A $US5 per tonne discount was made to allow for a premium for any intrinsic qualities of Australian wheat which may exist irrespective of marketing arrangements. The benefits are estimated to vary from one year to the next as the targeted subsidy levels varied. The average benefits may be of the order of $20 per tonne or over $210 million per year. These are crude estimates, but they do not appear implausible and may indicate the order of magnitude of the benefits. These estimates do not include any estimates of the economies of information, of co-ordination of logistics nor of any of the benefits from the host of other AWB activities. These activities include market differentiation (other than the subsidy effect), market access, promotion, development, better relationships, funding and managing the foreign exchange, interest rate and commodity price risks and also freight chartering. Nor do these benefits include any estimates pertaining to AWB activities on waterfront reform, handling and storage and freight activities arising from the AWB obligation to maximise net returns to producers. Many of these activities are possible because of the size of the AWB. As a comparison, on the cost side the total AWB budget for all its activities for 1992-93 was $48 million ($3.53 per tonne) or some 2.2 per cent of expected per tonne Australian Standard White wheat returns.

In the long run the gains from market promotion, market development, better understanding the customers requirements, better relationships including strategic investments, development of products or technical processes, improved varieties and other research activities may well be very much more important to the future of the Australian grains industry than subsidy levels of competitors. The relevant question remains whether a deregulated marketing environment delivers such goals as effectively as the current arrangements or some variation of the current arrangements?

9.2 Quotas and Pricing Efficiency

ACIL (1992, Chapter 6) in their study of New Zealand marketing arrangements does not believe marketing authorities are necessary to capture benefits on the export market. ACIL suggests that quotas or licences could be issued and auctioned as does Piggot (1992, p.132). The administration of licensing arrangements and auctions are not without cost. Anecdotal experience within the horticultural industry which at one stage investigated auctioning export licences, indicates a number of practical administrative problems which may arise with holding tenders. These include uncertainty regarding the number of licences to issue, the frequency of issue, how is collusion among buyers to be avoided and also how and to whom are the licence fees to be returned? The international wheat market is dynamic, highly variable, subject to arbitrary government actions and hence the size and sources of the rents and the timing of their availability will vary considerably. This uncertainty must raise questions regarding how efficient such a system would be in capturing the economic rents available in the international wheat market. The current system has one very experienced licence holder who passes all benefits obtained back to Australian producers. There is no leakage. The alternatives would appear to be administratively cumbersome, and at the very least would not return benefits to growers in as direct a fashion and possibly not even to Australian interests at all. Import

licences, however, are auctioned in a number of countries and it would be possible to devise a system. The real question is whether the rents and other benefits postulated for a single desk seller exceed or are exceeded by some alternative marketing system.

Another price concern most recently articulated by ACIL (1992, p.xiv), in relation to some New Zealand marketing arrangements, centres on a divergence between producer returns and the market return for the marginal unit of output. It is the classic Catch 22 situation where if returns are raised through capturing rents, resource allocation may be distorted by averaging prices to producers. Theoretically this could be of concern depending on supply elasticities for particular grades of wheat although quite often nature thwarts planned output. Keeping in mind the risky nature of grain production and the likely divergence between private and social attitudes to risk, individuals may require a higher expected, less variable, pool price to plan the socially desirable output in any case. Also, providing more segregations are made in accordance with market developments, this issue becomes less of a concern and the averaging is removing the noise from the price signal.

9.3 A Judgement

In the final judgement one has to weigh up all the benefits and compare them with any costs the particular marketing system imposes. People may intuitively identify with market segmentation and price discrimination and the benefits arising from that discrimination when targeted subsidies are being widely used. This is a definite advantage for a single desk seller arrangement. The other areas of product differentiation, market development, promotion, relationships, innovation, the economies of information and co-ordination, and the likely benefits arising from them under the current structure or under an alternative system, are more intensely debated. These issues and how an industry organises itself to capture them and in effect to defeat or lessen the pressures of competition, while at the same time ensuring that the industry continues to grow and adapt, is at the heart of the issue. The question being addressed is not which is the best marketing system from a public policy perspective but which marketing system confers the maximum advantage to Australia. The model outlined here of a properly managed, integrated marketer is a strong and a useful model for Australia given the structure of the world grain market.

10. The Way Ahead

The amendments to the WMA (1989) will shape the structure of the AWB into the future. It is a structure which will permit the continuation of the single desk marketing of wheat and its attendant advantages. The arrangements will provide a capital base for the AWB's activities which ultimately will result in the AWB being financially independent of Government. The AWB will continue its product differentiation and market development activities and in the process provide new and enhanced markets and improved pricing options for grain growers. The value adding activities are currently being assessed and will involve joint venture projects with others along the marketing chain. The Schenzhen joint venture in China in a feed and flour mill with influential partners may typify the types of strategic investments which will be undertaken both offshore and onshore. Certainly the establishment of an AWB office in Hong Kong in early 1994 will ensure that a great deal of attention will be given to the Asian countries. Other sorts of projects may involve consultancies similar to the storage and handling projects currently underway or under discussion in Iran and in the People's Republic of China. The projects may involve activity within the farm gate to better assist farmers in producing the grain. These projects are intended to yield a return in themselves and also to place the AWB in a strong position to market our main product, wheat and other grains, by creating strategic opportunities or alliances. Possibly Miller's (1991) vision of the future for the AWB may be fairly close to reality by the year 2000, although the single desk status may still be in place. His vision foresaw a company, Ausgrain Ltd. formed through a joint venture with growers and Australian companies involved in agribusiness, the wool industry and the resources industry. The growers' capital was provided from the WIF and amalgamations of some state marketing and handling authorities.

One thing is certain, however, and that is that change will continue. A number of markets which have central buying agencies such as Egypt, the Peoples Republic of China, Pakistan, Iran and possibly Indonesia are moving or may move to more decentralised buying arrangements. These changes will present more challenges and may increase the demand for more specific market requirements as individual mills may express their preferences directly to the sellers. The GCA have instituted a number of Strategic Planning Units which are letting contracts to international consulting firms to analyze, to prepare benchmarks and to assist in developing strategic plans for malting barley, grain legumes, milling wheat and feedgrains. Booz-Allen and Hamilton have obtained the contract for the milling wheat component and they are due to finish their considerations in September 1994.

The Government, as discussed earlier, has mooted corporatisation of the AWB in 1999. Interestingly the ACIL (1992, p.xxxiv) recommendation to corporatize all the New Zealand statutory marketing businesses, issue shares to producers and allow shares to be traded freely is closely aligned with the rejected Newco proposal. Quite possibly some similar structure may eventuate as the GCA and the industry deliberate on the issue. WIF equity certificates are not shares, but they are currently tradeable and in the Newco proposal formed the base for a share issue. The WIF structure removes a concern which the ACIL (1992) report raised. ACIL were concerned with the effects on resource allocation of pooling off farm investment returns with the price of the product, particularly in the case of the New Zealand dairy farmers. Under WIF the investment returns are credited to individual certificate holders rather than being returned to producers through higher product prices.

The next few years offer a lot of challenges and opportunities. It is critically important that there is a marketing structure which will permit Australia to take advantage of those opportunities. The Booz-Allen and Hamilton consultancy appears to be the next major input into the deliberations.

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