AUSTRALIA’S FOOD INDUSTRY
recent changes and challenges

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• Australia’s agriculture and food industry is undergoing a period of rapid change. The industry makes a major contribution to the Australian economy but is particularly important to rural and regional economies. Accordingly, many food producers and processors are keen to understand the changes that are occurring now and where the Australian food industry is heading.

• In this article an overview of recent changes in the Australian food industry — and in food processing and retailing in particular — is presented, accompanied by a discussion of key issues and implications for stakeholders.

Introduction
At first glance it might appear that change in Australia’s food industry is being driven by the two largest supermarket chains, Coles and Woolworths, attempting to reduce costs, increase demand for wholesale and retail services, and maximise shareholder values. While these goals may be supported by increasing the level of integration in the food sector, the high levels of market concentration in Australia’s food retail sector, and in some parts of the processing sector, and concerns about the level of competition in the provision of retail and wholesale services, add fuel to the debate about change.

However, the Australian food industry — producers, processors and retailers alike — competes within a global food market, and so while Coles and Woolworths are actively seeking to maximise returns, they are themselves responding to wider market pressures.

In many respects the Australian food industry is very dynamic and has a record of achieving efficiency and productivity improvements in response to international competition. Nevertheless, Australia’s food industry will need to continue to develop and innovate in the face of continuing competitive pressures if the industry is to continue to make a positive contribution to Australia’s rural and regional communities in the future.

Australian food industry snapshot
A comprehensive list of food products and sectors within the food industry is provided in box 1. Food is defined to include a range of items from unprocessed (minimally transformed) agricultural and seafood products, such as grains, whole fish and shellfish, through to processed (substantially and elaborately transformed) products, such as biscuits and cakes.

As illustrated in figure A, the food industry supply chain or value chain has four main elements: the primary production of food commodities; the processing of raw food commodities for consumption; the retailing of food products to consumers; and distribution and wholesale networks linking the production, processing and retailing components.

In Australia the four supply chain elements have traditionally been separated or clearly
delineated in terms of ownership. However, this environment is changing rapidly as the food supply chain is becoming increasingly vertically integrated (discussed further below).

Detailed information and statistics on the Australian food industry are contained in *Australian Food Statistics 2004* (DAFF 2005a). A summary of key statistics for the industry is provided in table 1. A diagrammatic representation of the food supply chain is provided in figure B.

In 2002-03 (the last year for which comprehensive statistics are available across all sectors), total annual retail food turnover in Australia was estimated at $82 billion, which was almost half of all retail turnover in Australia for that year. Moving down the supply chain: value added by the food processing industries was $17 billion;

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**Box 1: Products and sectors included in the food industry**

In this article (and in DAFF 2005a), food is defined to cover products from unprocessed (minimally transformed) agricultural and seafood products, such as grain, whole fish and shellfish, through to highly processed (substantially and elaborately transformed) food products, such as biscuits and cakes. A comprehensive list of products and sectors included in the definition of the food industry is provided below.

**Minimally transformed**

- **Live animals** – cattle, sheep etc exported for consumption in countries of destination
- **Fish and shellfish** – live, fresh, chilled and frozen
- **Fresh/chilled horticulture**
  - Vegetables
  - Fruit and nuts
- **Grains** – wheat, barley, corn, oats, sorghum etc
- **Oilseeds** – canola, soybeans, sunflower etc
- **Other unprocessed food not elsewhere classified**

**Substantially and elaborately transformed**

- **Processed meat**
  - Beef, veal, sheep, lamb, goat, pig meat etc
  - Poultry – chicken, duck, turkey, geese etc
- **Bacon, ham and smallgoods**
- **Processed seafood**
  - Pieces, fillets, dried, canned, preserved fish and shellfish
- **Dairy products**
  - Milk and cream processing
  - Ice cream
  - Other dairy products – butter, cheese, milk powders etc
- **Processed fruit and vegetables**
  - Canned, bottled, dried, juiced, preserved, frozen etc
- **Oil and fat**
  - Canola oil, sunflower oil, cottonseed oil, lard etc
- **Flour mill and cereal food**
  - Flour mill products
  - Cereal food and baking mix
- **Bakery products**
  - Bread, cakes and pastries
  - Biscuits
- **Other food**
  - Sugar
  - Confectionery
  - Other processed food not elsewhere classified
- **Beverages and malt**
  - Soft drink, cordial and syrup
  - Beer and malt
  - Wine
  - Spirits
## Selected Australian food industry statistics

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*a* 2003-04 values. *na* Not available.

*Source*: DAFF (2005a).

## Value chain for food in Australia, 2003-04

**Farm and fish food production**

- $32.2 billion
  - Meats 23%
  - Dairy 14%
  - Horticulture 7%
  - Flour and cereals 6%
  - Wine, beer and spirits 17%
  - Seafoods 6%
  - Grains 28%
  - Milk 9%
  - Other 23%

**Exports**

- $22.3 billion
  - Meats 26%
  - Seafood 3%
  - Wine 11%
  - Grains 21%
  - Dairy products 10%
  - Other 29%

**Imports**

- $5.9 billion
  - Beverages 19%
  - Horticulture 3%
  - Seafood 15%
  - Other 63%

**Food processing (2002-03 data)**

- $65.9 billion

**Retail food sales**

- $88.7 billion
  - Supermarkets and grocery stores 62%
  - Cafes and restaurants 13%
  - Takeaway food outlets 10%
  - Liquor retailing 6%
  - Other food retailing 9%

**Food and liquor retail sector**

- $44.4 billion
  - Supermarkets and grocery stores 62%
  - Cafes and restaurants 13%
  - Takeaway food outlets 10%
  - Liquor retailing 6%
  - Other food retailing 9%
food processing sales and service income was $66 billion; and farm and fishing food production was valued at $28 billion.

In 2003-04 the value of retail food turnover increased to $89 billion and the value of farm and fisheries production rose to around $32 billion.

Nationally the Australian food industry employed over 1.5 million people, or nearly one in six employees Australianwide, in 2003-04. This included around 375 000 people in agriculture and fisheries production, 171 000 people in food processing and 1 million people in the food wholesaling, retailing and service sectors (ABS 2005).

The total value of food exports in 2002-03 exceeded $22 billion and provided an annual net trade surplus (over food imports) of $16 billion. Values in 2003-04 remained around these levels. The food sector is one of the few sectors in Australia, outside of mining, to generate a trade account surplus.

In the decade to 2002-03 the value of food production from Australian farm and fisheries industries grew by approximately 15 per cent in real terms. Over the same period, the value of Australian food exports increased by over 40 per cent (in real terms), reflecting the impact of the sharp depreciation of the Australian exchange rate in the late 1990s and increased export volumes. However, while export income growth has occurred across most sectors, growth in all sectors has not been consistent.

A detailed overview of Australian food exports and imports, by sector, over the period 1989-90 to 2003-04 is provided in figure C.

The industries that have contributed significantly to the absolute growth in Australia’s food export earnings include grains, meat, wine and dairy products (figure C). In addition, growth in the value of exports of live animals, fresh chilled seafood, fresh chilled horticulture products, oilseeds, dairy products, flour mill products, confectionery and wine has been notable.

In contrast, sectors that have experienced increased competition from imports include processed seafood, processed fruit and vegetables, oil and fat, bakery products, soft drink, cordial and syrup, and beer, malt and spirits (figure C).

The impact of the sharp appreciation of the Australian exchange rate in 2002-03 and 2003-04, in addition to the 2002-03 drought, is also evident in the data presented in figure C.

Key issues and challenges

In identifying key issues and challenges facing the Australian food industry, and the food processing and retail sectors in particular, a reasonably well defined set emerges (AEGIS 2001; Allen Consulting Group 2004; DAFF 2002, 2005b; David Milstein and Associates 2004; Mellentin 2005; Sleep 2005). These include:

- the adequacy of investment in innovation and research and development (R&D);
- the extent of competition within the food industry, and particularly in the provision of retail and wholesale services;
- concerns about rapid industry rationalisation and integration across the supply chain and the impact that these developments might have on small producers and processors;
- concerns about the impact that ‘private labels’ may have on brand competition and the allocation of shelf space;
- concerns about food safety and quality;
- the potential environmental impacts of food production, processing and handling practices;
- evolving consumer tastes and preferences for healthier and more lifestyle-compatible meals;
- changing labor requirements in the food processing, distribution and retailing sectors; and
- potentially heightened biosecurity risks and the integrity of Australia’s pest and disease free status.

The Australian food industry — producers, processors and retailers alike — exists within a global economic food market. Many of the recent changes evident in the industry and the developments that are now unfolding reflect this. For example, producers and processors compete in global export markets as well as with importers in the Australian domestic market. The emergence of China over the past two decades as a competitor in processed food markets, in
In 2004-05 dollars

Australian food exports and imports, by sector

Live animals

Fresh/chilled seafood

Fresh/chilled vegetables

Fresh/chilled fruit and nuts

Grains

Oilseeds

Other unprocessed food

Meat

Processed seafood

Dairy products
Australian food exports and imports, by sector
In 2004-05 dollars

Processed fruit and vegetables

Flour mill products

Sugar

Other processed food

Beer, malt and spirits

Oil and fat

Bakery products

Confectionary

Soft drink, cordial and syrup

Wine

In 2004-05 dollars
Australia and elsewhere, has not changed the nature of these markets; producers and processors still ultimately compete on delivered costs and quality.

However, the emergence of China and other exporting countries like China has increased the intensity of competition. This is forcing producers, including those in Australia, to achieve yet further productivity improvements and cost reductions in response. This is not least of all because the average wage rate in China is around US$60 cents an hour compared with over US$15 an hour in Australia (Penn 2005).

Recent trade policy developments in Australia are also relevant. In addition to pursuing multilateral trade reform through the auspices of the World Trade Organisation, Australia is pursuing bilateral trade reform agendas with a number of key trading partners (McDonald, Nair, Rodriguez and Buetre 2005). Free trade arrangements have already been signed with Singapore, Thailand and the United States and are in various stages of development with China, Malaysia and the ASEAN group as a whole.

These agreements have the potential to deliver benefits to Australian food exporters through preferential or expeditious trade arrangements. However, it also follows that for some industries, domestic producers or processors may face increased competition from imports. This is particularly likely in the case of an arrangement with China where, as already mentioned, labor rates are lower than in Australia.

Research and development

In an environment where international food markets are increasingly interdependent, the development of new processes and technologies or innovative solutions to problems is critical to the future prosperity of the agriculture and food processing sectors. However, according to BIS Shrapnel (2003), in the four years to 2000-01, expenditure on R&D by the Australian processing sector declined by 2.9 per cent a year, compared with an increase of 3.3 per cent a year across all other industries, which has caused some industry observers to be concerned about underinvestment in new technology (Smith and Napier 2002; NFIS 2005).

In response to this the Australian Government launched the National Food Industry Strategy in 2002, a five year (2002–07) $102 million program to increase investment in innovation, increase export growth, and improve productivity, efficiency and skills in the Australian food industry.

However, many of the companies involved in Australia’s food sector, particularly in wholesale and retail services, are multinationals. Accordingly, it is not obvious that investment in R&D necessarily needs to occur in Australia. Rather, the important issue is the access that Australian companies have to new information and technologies, and the degree and speed with which Australian companies adopt and/or adapt innovations to remain internationally competitive.

Competition

Primary food production in Australia is characterised by a large number of relatively small firms. It is estimated that in 2001-02 there were approximately 120 000 commercial (predominantly family based) livestock, cropping and horticultural farms, and about 5000 commercial fishing firms in the food production industry (DAFF 2005b).

The food processing sector is made up of 3400 various sized firms (DAFF 2005b) or 7774 ‘manufacturing management units’ (Australian Bureau of Statistics’ Business Register). However, the largest twenty food processing firms are estimated to account for almost half of total industry turnover (DFAT 2005). Nevertheless, across different food processing sectors the number of suppliers varies considerably. For example, in the poultry meat processing sector there are three large processors accounting for most of the industry’s output, while in the red meat sector there are in excess of thirty processors.

In the food retailing sector, supermarkets dominate trade and are estimated to have accounted for 62 per cent of total Australian food and liquor sales in 2003-04 (table 2; ABS 2004). According to Soler (2005), this balance across the food retailing sector is not unusual in global retailing. However, the Australian supermarket segment itself is relatively concentrated by
world standards. Currently the Australian food retail market comprises five major supermarket chains (Coles, Woolworths, Foodland, IGA and ALDI) and a large number of smaller independent retailers (corner stores, farmers markets etc). According to ACNielsen (2004) the largest two firms (Coles and Woolworths) account for 62 per cent of total grocery sales. NARGA (2002) estimates this figure to be 76 per cent. However, Dimasi (2004) estimates the two firm level of concentration in the food, liquor and grocery market to be as low as 51 per cent.

Among other OECD countries, comparable market shares (50–70 per cent) are typically only reached when the sales of the five largest food retailers are aggregated. For example, the five largest food retailers account for 80 per cent of total retail food sales in France, 64 per cent in the United Kingdom, 62 per cent in Germany, 58 per cent in Spain and only 32 per cent in the United States (Soler 2005).

However, as there are no barriers to entry to the Australian food retail sector, new entrants can and do provide effective competition to incumbent retailers. The arrival in Australia in January 2001 of the German based global food retail chain, ALDI and its subsequent expansion is a case in point. ALDI, has been able to exert competitive pressure on Australian food retailers through a low cost, no frills business model, based around a limited range of basic food items. Costs of in-store staff, product storage, handling and presentation are minimised and the products, while not traditional household brand names, are generally of a high quality.

Despite the success of ALDI, concerns still persist about industry concentration in the food retail sector and the potential for abuse of market power. Some empirical support for the presence of market power in Australian cereal, flour, beer and malt markets is provided by O’Donnell, Griffith, Nightingale and Piggot (2005). However, evidence for market power more generally in the Australian food market is inconclusive. For example, while Whitehall and Associates (2004) found that a high level of industry concentration in the food retail sector provides retail chains with more bargaining power in supply negotiations, they found no evidence of abuse of market power to the detriment of food product suppliers.

While there is no firm rule about the number of suppliers necessary for a market to be competitive, a rule of thumb commonly used is that five suppliers of roughly equal size is the minimum number to ensure sufficient competitive pressure to constrain any market power of firms in a market. However, the applicability of this rule of thumb will depend on the technologies in use, the size of the market and the barriers to entry.

### Rapid industry changes

It is also the case that retailers such as Coles and Woolworths compete in a global market, as do producers and processors, and they need to be equally responsive (as producers and processors are) to international as well as local trends and developments.

As a generalisation, food retailing in Australia may be described as a high volume, low margin business. As indicated in table 3, the large supermarket chains in Australia are estimated to operate on a gross margin (that is, net earnings before interest and taxation as a proportion of total sales revenue) of less than 5 per cent. Accordingly, even small reductions in total costs can have a large effect on final margins and it is this fact that encourages retailers to focus particularly on cost reductions as a means of increasing their profit margin.

Recently, however, Australian food retailers have been particularly dynamic and retailer...
rationalisation and cost cutting is reshaping the entire food value chain (Whitehall Associates 2004). Significant structural and operational rationalisation has occurred, focused on reducing costs along the entire food supply chain as a means of increasing profitability.

In particular, significant labor savings have been achieved through the process of supply chain integration or ‘cross-enterprise rationalisation’, which is now the centrepiece of large Australian food retailer operations (Wright and Lund 2002). Supply chain integration is described in more detail in box 2.

According to Wright and Lund (2002, pp. 7–8), supply chain integration is now at a level of sophistication in the Australian food sector that allows large food retailers to:

- identify optimum product mixes for individual supermarket stores based on precise point of sale and demographic information;
- automate store stock ordering, with reference to delivery data and sales forecasts;
- streamline delivery of food (particularly perishable) products; and
- ensure the automatic replenishment of high turnover stocks.

‘Just in time’ stock models have now given way to a model that delivers ‘perfect orders on time, accurate and complete every time’ (Wright and Lund 2002, p. 7).

Supply chain integration is also being combined with increased vertical integration as major retailers increasingly assume direct responsibility for managing and developing the distribution and wholesaling processes. For example, after several years of experimenting with outsourcing, both Coles and Woolworths have now resumed direct control of their distribution centres as the distribution centres are now considered too critical to the efficiency and timeliness of supply to outsource to a third party (Wright and Lund 2002, p.19).

Food retailers are also extending contractual arrangements downstream and developing exclusive supply arrangements directly with farmers, processors and distributors to facilitate greater control over stocks as well as the quality and price of products (Wright and Lund 2002).

As a result of these improvements being achieved in the retail and distribution sectors, processors now face a demand to reduce the time taken to replenish orders as well as increased volatility in orders. As a result, labor flexibility is now critical to the competitiveness of food processors.

Changes in workplace arrangements have allowed food processors to better match labor

### Box 2: Supply chain integration

Supply chain integration is a ‘whole of chain’ reform that promotes increased industry and firm level competitiveness through the functional integration of production, manufacturing, distribution and retailing. Critically, the key operational elements of the industry are linked into close long term supply relationships through the application of advanced information networking technology. These computer based networks are designed to minimise costs across the entire system and introduce significant flexibility into the business model (Cox 1999).

This facilitates smoother flow of products throughout the food supply chain and allows food retailers to optimise stockholding and keep high-turnover stock continuously on their supermarket shelves. Moreover, computerisation and monitoring of operations across the entire system facilitates the identification and better management of inefficiencies throughout the chain.
with fluctuating labor demand and thereby largely eliminate the costs associated with underemployed labor. Key among these changes were: the introduction of more flexible working hours; the negotiated removal of labor overtime and penalty clauses; a reduction in permanent employees and a parallel increase in casual staff; and the increased outsourcing of casual staff requirements to third-party labor hire firms.

The adoption of similar labor and functional reforms in food distribution and warehousing has facilitated 24 hours a day, seven days a week response capability to meet retailer orders for stock (Wright and Lund 2002).

There is necessarily a tension between greater integration across the food supply chain (through supply chain integration, contracts and vertical integration) and competition issues (in the ACCC sense of competition). This is particularly the case with the levels of concentration that exist in the retailing and processing sectors in Australia. However, it still remains to be seen whether any additional government involvement is necessary or cost effective.

Private labels

‘Private labels’ or house brands are another emerging trend in the Australian food industry. Private labels are brands owned and produced on behalf of the retailer. When first introduced in Australia, house brands were perceived by consumers as predominantly less expensive and often lower quality alternatives to proprietary brand products. However, Australian food retailers are now embracing the concept of ‘premium private labels’. According to Ambler (2004), these offer consumers a quality equivalent to alternative proprietary brand products, and provide the retailer with greater product margins.

Both Woolworths and Coles plan to significantly increase their number and range of premium private labels, encouraged by the success of the concept in overseas markets (Bazoche, Giraud-Heraud and Soler 2005; Bonanno and Lopez 2005; Bontemps, Orozco, Requillart and Trevisiol 2005). For example, Coles has the aim of increasing the share of total packaged food sales accounted for by its private labels from around 10 per cent to 30 per cent by 2007-08 (Shoebridge and Whyte 2005). Coles’s strategy is based on a quality–price graduation that is aimed at offering a range of qualities across a particular product line at a price discount compared with proprietary brand products.

What the impact of a significant expansion in ‘private labels’ would have on the Australian retail food market is not clear.

Under normal circumstances the emergence of a new branded product that competes successfully with an existing product — because of a more competitive pricing structure or innovative marketing strategy — would provide little cause for concern. Sellers would have (as a rule) equal access to shelving space and the process of competition in any market is one of both creation and destruction. The value created and established in a brand (or any market valued asset) is always able to be challenged. In the long run, the suppliers that satisfy, and continue to satisfy, customer preferences succeed and the value of their brand (or asset) is preserved.

However, allowing Australia’s two largest food retailers to establish a cache of private brands with which to challenge established brands in their own supermarkets, potentially changes these dynamics.

Of particular concern would be any appreciable reduction in brand competition or the essential price discovery process that currently occurs in retail markets, leading to an increase in prices being paid by consumers. Another concern relates to how shelving space is allocated and what checks and balances might be needed to monitor noncompetitive practices.

Other issues

The Australian Government already plays a significant role in the Australian food sector. For example, Food Standards Australia and New Zealand already addresses food safety and labeling issues. The Australian Quarantine and Inspection Service is responsible for dealing with disease, Biosecurity Australia is responsible for biosecurity risk issues and the Australian Competition and Consumer Commission (ACCC) maintains a watch on market power and product claim and labeling issues.
Nevertheless, some commentators have suggested that there is also a role for government to address alleged undesirable consequences for small farmers and food processors of the changes in the food industry described here (Adamson and Hunt 2005; Hunt 2005; Jimenez 2005; Mudgil 2005; Perrett 2005; Shoebridge and Whyte 2005; White 2005). However, what the role of government might be in these circumstances, other than as it relates to food safety, competition policy or disease and biosecurity risks, is not clear.

Concluding comments

Australian food producers and processors compete in a global food market. With international markets becoming more interdependent, Australian producers and processors are increasingly coming under pressure from international competitors. Inevitably, innovation and adoption needs to be central to any industry response strategy.

The Australian retail food sector is also undergoing rapid change that is having dramatic implications across the entire value chain. Advanced information networking technology is allowing the functional integration of production, manufacturing, distribution and retailing. This is leading to significant improvements in flexibility and reductions in costs. Australian retailers are also further exploring ‘private brands’, which might be seen as a logical extension of the supply chain integration concept moving further downstream.

References


Mudgil, V. 2005, ‘Coles’ house brand strategy axes existing private labels’, Retail World, 4–15 April, vol. 58, no. 6, p. 5.


