



**Australian Government**

**Department of Agriculture,  
Fisheries and Forestry**

# **The Australian Baking Industry**

## **A Profile**



**BRI AUSTRALIA LTD**



# The Australian Baking Industry A Profile



Prepared for the Food Policy and Communications Section,  
Australian Government Department of Agriculture, Fisheries and Forestry

by **BRI AUSTRALIA LTD**

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The project was conducted by BRI Australia Ltd in June 2003. The BRI Australia team who contributed to the project are Terry Gallagher, Tony James, Trish Griffiths and Dr Ken Quail. Peter Flottman of Synecon Pty Ltd was appointed by BRI Australia to assist with the project.

Staff in the Food Policy and Communications Section of the Department's Food and Agriculture Business Group managed the project. Dr Michelle McGranahan edited and reviewed the final report and provided supplementary analysis. Dr Hanna Jaireth provided project advice and oversight and assisted with the editing of the final report.

Comments on draft versions of the report were gratefully received from Perry Smith, ABARE, Dr Dennis Bittisnich, Food Regulation and Safety, and other Departmental staff.

# FOOD AND AGRICULTURE BUSINESS GROUP

The Australian Government Department of Agriculture Fisheries and Forestry is the Commonwealth agency with portfolio responsibility for food production and processing policy. The Food and Agriculture Business Group facilitates integrated policy development, innovation and stakeholder engagement across the agriculture and food industries.

The Food Policy and Safety Branch of the Group, which includes the Food Policy and Communications Section, develops and implements policy with the aim of facilitating a globally competitive, innovative and export oriented food processing and beverage industry. The section works cooperatively with, and has regard to the mandates of the National Food Industry Council (NFIC), National Food Industry Strategy Ltd (NFIS Ltd), the Primary Industry Ministerial Council's food sub-committee, and industry.

The section is also responsible for disseminating information to food industry stakeholders on issues of interest and importance including sectoral profiles, international and domestic trends, emerging issues, statistics, developments in food policy and programs, and decisions by government and food agencies.

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# ACRONYMS AND DEFINITIONS

<b>ABS</b>	Australian Bureau of Statistics
<b>AIB</b>	American Institute of Baking
<b>AQF</b>	Australian Qualifications Framework
<b>AQTF</b>	Australian Quality Training Framework
<b>ASB</b>	Australian Society of Baking
<b>Bake off bakeries</b>	Bakeries that use frozen doughs, par-bakes and pre-mixes and finishes the baking process prior to sale.
<b>BIAs</b>	Respective Baking Industry Associations in each state of Australia
<b>CBT</b>	Competency Based Training
<b>Corporate plant bakeries</b>	Multi-national companies including Goodman Fielder, George Weston Foods and Arnotts
<b>FMCA</b>	Flour Millers Council of Australia
<b>FSANZ</b>	Food Standards Australia New Zealand
<b>Full production</b>	24/7 Plant bakeries such as Tip Top or Buttercup, Michel's, Arnotts
<b>GF</b>	Goodman Fielder
<b>GI</b>	Glycaemic Index
<b>GMO</b>	Genetically modified organism
<b>Greenfields mega bakery</b>	A site that has no previous development on it – building the development from scratch
<b>GWF</b>	George Weston Foods
<b>HACCP</b>	Hazard Analysis and Critical Control Point
<b>Home bake</b>	Ingredients provided for consumers to bake at home (either their oven or a bread making machine)
<b>IR</b>	industrial relations
<b>ISB</b>	in store bakeries (such as in Coles and Woolworths)
<b>NATA</b>	National Association of Testing Authorities, Australia
<b>NIP</b>	Nutrition Information Panel
<b>OHS/OH &amp; S</b>	Occupational Health and Safety
<b>Par-baked</b>	Partially baked products. The baking is usually completed on site prior to sale.
<b>Pre-mixes</b>	Combination of most if not all the dry ingredients needed for bread, cakes and biscuits prior to developing the dough.
<b>Proprietary brands</b>	The brands owned by the big corporate companies including Tip Top, Helgas and Tim Tams
<b>R&amp;D/RnD</b>	Research and Development
<b>RTO</b>	Registered Training Organisation
<b>RPL</b>	Recognition of Prior Learning
<b>Scratch bakeries</b>	Bakeries the cover the whole baking process from combining singular ingredients through to the end product
<b>SKU</b>	Stock Keeping Unit/Individual product line
<b>SME</b>	Small to medium enterprise
<b>Soft data</b>	Information obtained through interviews, anecdotes.
<b>Specialty breads</b>	Ethnic breads such as middle eastern flat breads, Turkish breads, foccaccia, bagels etc.
<b>Toll manufacturing</b>	Manufacturing under contract for another business
<b>VTAB</b>	Vocational Training Accreditation Board
<b>Warm spot</b>	Pre-mixed and frozen doughs
<b>Wholemeal</b>	A meal which is usually milled by combining flour with milled bran
<b>Whole grain</b>	A percentage of unmilled grains mixed into the dough
<b>Wholesale bakeries</b>	Sales made to other businesses as well as to the general public



# 1 EXECUTIVE SUMMARY

**The Food and Agriculture Business Group of the Australian Government Department of Agriculture, Fisheries and Forestry commissioned this report to develop a cross-sector profile of the Australian baking industry, post milling, across three main categories: bread products, cakes and pastries, and biscuits.**

The project was conducted by BRI Australia Limited in June 2003 and the findings are presented in this report, which includes a compilation of publicly available industry statistics and industry commentary on the current situation. BRI Australia's project approach and methodology is described in Appendix A.

The baking industry itself has never maintained consolidated statistics and, in the context of this project, the availability, currency and relevance of information were found to be highly variable, frequently unsubstantiated and/or conflicting with other sources. The makeup of the industry also provides some insight into why this is the case.

The baking industry in Australia is complex and remains in overall terms a mixture of high industry concentration at the corporate level and a range of highly fragmented small to medium sized enterprises in all three main product sectors. At both wholesale and retail levels, the industry is extremely competitive and fractious. Given that businesses are operating in a mature domestic market with exports only accounting for 1.4 per cent of total turnover, market dynamics are increasingly about reinvigorating and reshaping market share through product launches and re-launches, aggressive branding (retail and wholesale) and reducing manufacturing, distribution and marketing costs.

Total turnover of the industry was estimated at \$5.1 billion in 2001–02. Australia's consumption of baked products remains relatively static with overall growth reflecting increases in population. Some sub-categories, such as wholemeal and wholegrain products, have not increased as would be expected despite increasing public awareness of nutrition and healthy diets. The traditional staples of white sliced bread, sausage rolls and pies and chocolate biscuits still account for over 62 per cent, 41 per cent and 18 per cent of total volume in their respective sectors.

From a manufacturing perspective, the industry is continuing to rationalise its capacity at the corporate level, with recent closures of bakeries and biscuit manufacturing plants. Many of these closures were in regional areas. National franchises, especially in the bread sector, are increasingly drawing market share away from the major players.

Evolving purchasing patterns and retailing trends suggest that the success of retailing the concept of baking through franchises will continue to challenge branded products that are highly dependent on supermarket chains for market share for at least for the next 3–5 years before reaching market maturity. The emergence of bakery cafes as a new segment and the proliferation in the availability of baked products at convenience outlets also signals a new level in the trend to greater product differentiation and variety as well as a return to a more intimate and neighborhood style shopping experience.

While there are common issues across the product sectors in the outlook for business, in particular the costs of regulatory compliance and market growth prospects, there are few common business models. The two largest players in the baking industry, George Weston Foods and Goodman Fielder have historically been vertically integrated businesses. While both are working towards centralised production and distribution, Goodman Fielder's sale of its flour milling assets in 2002 is taking a markedly different approach to managing the input side of the business. Retail franchises are fostering a growth in decentralised production and taking variable approaches to the number of product lines and offerings.

The biscuit industry is seeing an increase in toll (contract) manufacturing for local and global name brands. Smaller independent wholesalers operating in the foodservice industry vary widely in terms of their distribution and logistics arrangements and control over the supply chain.

## **1.1 ISSUES FOR THE INDUSTRY**

### **Employment**

Overall employment in the industry has remained relatively static at around 25 000 from 1997 through to 2002.

Professional development and skills in the industry have been steadily changing from more traditional baking skills to the skills required to run manufacturing establishments with a high level of automation. This has been largely caused by industry deregulation, improvements in production technology and the availability of premix formulations, resulting in a reduced reliance on skilled bakers.

Training programs currently focus on the compliance and food safety aspects of the industry and the maintenance of minimum standards rather than the development of artisan skills. Many independent businesses now consider themselves more to be processors rather than bakers.

### **Research & Development**

Research and Development (R&D) in the baking industry has undergone significant change both in terms of research targets and funding. The concentration of industry ownership has resulted in a large component of industry R&D being maintained in-house. In many cases the ingredient suppliers drive the R&D and advances in ingredient and premix technology have provided greater flexibility and less technical demands on the smaller bakeries. With commercial companies largely managing the research effort, information on product and machinery developments has become extremely guarded however there are concerns that duplication is occurring in some areas as a result.

Public Sector R&D still occurs through institutions such as Food Science Australia but this has tended to focus on related technical issues on inputs rather than baking research itself.

## **Regulatory compliance**

The costs of compliance with public interest government regulation and other business costs, which include GST, workers compensation and public liability insurances affect all industry sectors. In addition to these the baking industry is also dealing with the industry-specific compliance costs of the new Food Standards Code, labelling requirements, food safety and occupational health and safety which have been difficult to pass on to the consumer through higher prices.

## **Consumer/Nutrition**

Public awareness regarding healthy diets and nutrition has generally increased in the past decade, driven by government and private initiatives. Perceived consumer trends towards healthier, nutritious foods are not readily validated by baking industry statistics, however there is an increasing trend to differentiate staple lines with products such as low fat bakery treat snacks, rice crackers, low fat cake mixes and functional white breads (with dietary fibre, omega-3 fatty acids etc). There is also a strong correlation between consumers' perceptions of 'natural fresh' products, which are believed to be less processed, and the increase in non-proprietary white breads.

## **Eco efficiency**

In the late 1990s the industry sought to address energy consumption levels in the baking industry. However while energy remains a relatively low cost component of the business, broader industry progress has stalled. There have been some individual initiatives in recent times including a showcase energy efficient bakery established by Bakers Delight as well as projects to measure and manage energy within supermarket in-store bakeries. From an environmental perspective however industry still tends to be driven by the cost of energy rather than consumption.

## **1.2 BRI AUSTRALIA – KEY RECOMMENDATIONS**

BRI Australia provides the following recommendations for consideration:

### **A coordinated industry approach to health and nutrition**

The general market image of baked products and some media negativity is impacting on the prospects for any growth in the consumption of cereal-based foods nationally. We recommend that industry should consider a coordinated national approach to raising the profile of the baking industry and the nutritional value of baked products generally.

### **Development of an industry data collection model**

This project has highlighted the fact that there is a high degree of inconsistency and/or lack of relevant data within the industry, particularly in the non-bread sector. We recommend the development of an independent data collection model that can provide a consistent and comprehensive analytical base for broader industry benefit.

## **Review ABS classifications**

Feedback from industry suggests that ABS classifications do not necessarily reflect how the baking industry measures itself. We recommend a review of classifications in conjunction with the baking industry to provide statistics of more relevance to the sector.

## **Review on the decline in industry skills**

Despite the consensus that the industry skills base is in decline there is still an apparent disconnect between training providers and the industry's willingness to act. We recommend a review be undertaken to develop a coordinated approach to the delivery of industry training and encouraging new entrants to the industry.

## **Increase the emphasis on energy best practice and environmental management**

We recommend the baking industry should reinvigorate the outputs of the Energy Efficiency Best Practice Program commissioned by the Commonwealth Department of Industry, Science and Resources in 1999 (see Chapter 5), with a view to increasing the emphasis on the need for more efficient energy resource usage. This should include setting up more permanent measures and data capture which could be incorporated in the industry data collection model proposed above.

## **Raise the profile of export opportunities and support programs**

With a mature domestic industry the need to grow exports is increasing. While there is already federal and state government support available through export grants and trade facilitation, such as Food Victoria and the National Food Industry Strategy, we believe it would be beneficial for the industry to develop a coordinated and proactive approach to further raise the profile of market opportunities for baked products as well as the types of export assistance that can be provided.



## 2 Industry Structure and Performance

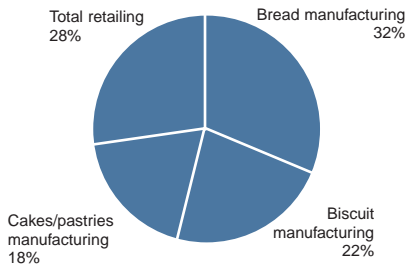
### 2.1 OVERVIEW OF THE BAKING INDUSTRY

Australia's baking industry is comprised of three sectors – bread, biscuits, and cakes and pastries. Operators in each sector can be broadly classified as manufacturing for the wholesale and/or export market only, or combined manufacturing and retailing. In the latter case, the manufacturing activities may be simple, involving only the baking of pre-prepared doughs.

There is a paucity of reliable data on the baking industry in Australia. The Australian Bureau of Statistics collects data on the manufacturing industry, which includes the baking industry. The 2000–2001 collection (ABS 2002) was conducted as a survey of manufacturing management units, a change from previous collections, which were based on surveys of manufacturing establishments. Data is also no longer available at the state level. Information on manufacturing establishments in this report is based on industry estimates.

Australia's baking industry is operating in a mature market. Turnover in the manufacturing industry was estimated at almost \$3.7 billion in 2001–02, representing 3.5 per cent real growth<sup>1</sup> from the previous year (preliminary estimates, see Table 2.1). Retail sales of bakery products accounted for a further \$1.4 billion. Therefore total sales for the industry is estimated at \$5.1 billion in 2001–02 (Figure 2.1).

Figure 2.1 **TURNOVER IN THE AUSTRALIAN BAKING INDUSTRY, 2001–02**



#### **Total Industry turnover \$5.1 billion**

Source: IBISWorld 2003a, 2003b, 2003c, 2003d

Annual growth in turnover for bakery manufacturing has fluctuated between 1997–98 and 2001–02, with negative real growth recorded over two consecutive years, 1999–00 and 2000–01, and overall growth has remained static over this five-year period. A fall in turnover for the biscuit sector and the cakes and pastries sector contributed to this trend. Only the bread sector has shown a continuous increase in turnover since 1997–98, averaging 2.9 per cent real growth per annum, however this is lower than growth in inflation. The retail turnover for all bakery products has shown an average annual real increase of 2.7 per cent over the five-year period 1997–98 to 2001–02.

<sup>1</sup> For the purposes of this study, growth was estimated in real terms from constant prices. Note, the data presented in Table 2.1 is in current prices.

**Table 2.1 Summary statistics for the Australian baking industry**

		1997-98	1998-99	1999-00	2000-01	2001-02
<b>BREAD MANUFACTURING</b>						
Turnover	\$m	1265.1	1309.2	1370.5	1503	1600
Gross product	\$m	410.1	475.2	537.3	684.2	720
Employment	number	9616	9416	10272	11830	11000
Exports	\$m	1.9	3	2	3.3	4.9
Imports	\$m	0.2	0.2	0.3	0.2	0.2
Total Wages	\$m	342.3	370.9	375.7	442.1	425
Domestic Consumption	\$m	1263.4	1306.4	1368.8	1499.9	1595
<b>BISCUITS MANUFACTURING</b>						
Turnover	\$m	1014	1031.2	999.1	1086	1123.7
Gross product	\$m	574.1	514.9	370.4	398.1	431.9
Employment	number	5384	4736	4529	4400	4450
Exports	\$m	61.2	58.2	60	62	63
Imports	\$m	57.6	61.6	80	78	83
Total Wages	\$m	169.4	154.1	127.6	207.6	200
Domestic Consumption	\$m	1010.4	1034.7	1011.1	1102	1143.8
<b>CAKES/PASTRIES MANUFACTURING</b>						
Turnover	\$m	1031.6	1070.8	1077.8	876.5	934
Gross product	\$m	343	389	400.6	328.2	345
Employment	number	9793	9300	9810	9338	9500
Exports	\$m	9.3	7.6	17.4	11.9	2.9
Imports	\$m	62.3	76.2	80.7	91.7	89.9
Total Wages	\$m	242.1	255.7	263.3	226.8	250
Domestic Consumption	\$m	1084.6	1139.4	1141.1	956.3	1021
<b>TOTAL MANUFACTURING</b>						
Turnover	\$m	3310.7	3411.2	3447.4	3465.5	3657.7
Gross product	\$m	1327.2	1379.1	1307.7	1410.5	1496.9
Employment	number	24793	23452	24611	25568	24950
Exports	\$m	72.4	68.8	79.4	77.2	70.8
Imports	\$m	120.1	138	161	169.9	173.1
Total Wages	\$m	753.8	780.7	766.6	876.5	875
Domestic Consumption	\$m	3358.4	3480.5	3521	3558.2	3759.8

**Table 2.1 Summary statistics for the Australian baking industry (cont)**

		1997-98	1998-99	1999-00	2000-01	2001-02
<b>BAKING INDUSTRY RETAILING</b>						
Turnover	\$m	1101.8	1197.4	1230.6	1305	1415.1
Gross product	\$m	391.9	408.1	439.8	463	496.1
Employment	number	26890	27084	27300	27600	N/A
Total Wages	\$m	299.5	304.9	321.9	342	N/A

Source: IBISWorld 2003a, 2003b, 2003c, 2003d

The bread sector makes the largest contribution to the turnover in manufacturing, with 44 per cent of sales in 2001-02 being bread products. Sales of biscuit products and cake and pastry products account for 31 per cent and 25 per cent of sales respectively.

The level of competition within and between sectors is intense, and each sector is relying on product differentiation, innovation and value adding to maintain or grow market share. In both the bread sector and cakes and pastries sector, value adding, as a percentage of turnover, has increased by 13.1 percentage points and 5.4 percentage points respectively over the four year period since 1997-98 (Table 2.2). This reflects an increase in retail value and a shift to premium products for both of these sectors.

**Table 2.2 Value adding in the baking industry, expressed as a percentage of turnover**

		1997-98	1998-99	1999-00	2000-01
Bread manufacturing	IVA \$m	410	475	537	684
	% of turnover	32.4	36.2	39.2	45.5
Biscuits manufacturing	IVA \$m	574	515	370	398
	% of turnover	56	49.9	37.3	36.6
Cakes/Pastries manufacturing	IVA \$m	343	388	401	328
	% of turnover	32	36.2	37.2	37.4

IVA – Industry Value Added

Source: AFFA 2001, 2002, 2003

The baking industry predominantly supplies the domestic market and only 2 per cent of sales in bakery manufacturing, or \$70.8 million, was derived from exports in 2001-02. Domestic consumer expenditure on bakery products was an estimated \$3.7 billion in 2001-02. Only 4.5 per cent (\$173 million) of consumer purchases were imported bakery products. Almost 50 per cent of exports and 90 per cent of imports were biscuit products, which partly reflects the perishable nature of the other bakery products.

Based on industry estimates, the baking industry currently has around 8,600 establishments, with approximately 55 per cent concentrated in the retail baking area (Table 2.3). The increasing importance and retail value of national franchises is evident with this sector now accounting for over 13 per cent of total retail outlets. Bakers Delight has the largest presence in the franchise market, accounting for 40 per cent of the total number of franchise stores (Figure 2.2). The distribution of establishments is consistent across all states and territories (Figures 2.3-2.7)

The level of employment in bakery manufacturing has remained relatively static since 1997–98 at around 25,000. However, in 2001–02 the employment level fell by 2.5 per cent, with more than 800 job losses occurring in the bread sector. In contrast, the level of employment in retail bakeries has been gradually increasing, with an annual growth rate of one per cent since 1997–98. These fluctuations in the level of employment are common in mature industries such as the baking industry.

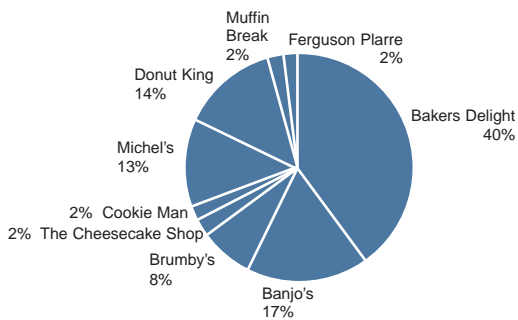
**Table 2.3 National distribution of establishments in the baking industry, by category**

	NSW	%	Vic.	%	Qld	%	WA	%	SA	%	Tas.	ACT	NT	Total
Wholesale cake	73	2.8	104	4.4	31	1.4	17	2.1	26	4.8	n/a	n/a	n/a	251
Wholesale bakery*	47	1.8	64	2.7	61	2.7	17	2.1	22	4.1	n/a	n/a	n/a	211
Plant bakeries	17	0.7	9	0.4	13	0.6	4	0.5	4	0.7	2	1	2	52
Franchise bakeries	193	7.5	279	11.8	192	8.6	103	12.8	63	11.6	37	11	8	886
Retail bakeries	1458	56.4	1253	53.2	1409	63.0	373	46.4	188	34.8	n/a	n/a	n/a	4681
Franchise cakes	85	3.3	15	0.6	39	1.7	36	4.5	19	3.5	n/a	n/a	n/a	194
Cake and pastries outlets	362	14.0	316	13.4	242	10.8	128	15.9	108	20.0	n/a	n/a	n/a	1156
Supermarket bakeries	348	13.5	316	13.4	248	11.1	126	15.7	111	20.5	14	n/a	n/a	1163
	2583	100	2356	100.0	2235	100.0	804	100.0	541	100.0	53	12	10	8594

Source: Industry estimates

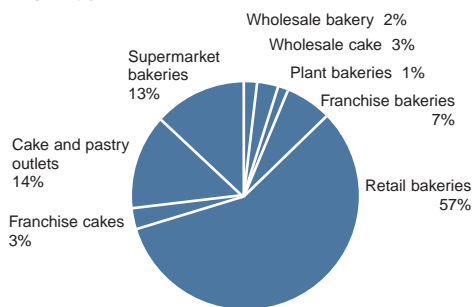
\* Excludes corporate plant bakeries

**Figure 2.2 DISTRIBUTION OF FRANCHISED ESTABLISHMENTS IN THE BAKING INDUSTRY**



Source: Industry estimates

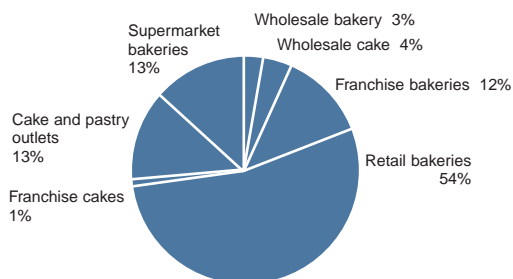
Figure 2.3 **DISTRIBUTION OF ESTABLISHMENTS IN THE BAKING INDUSTRY IN NEW SOUTH WALES, BY CATEGORY**



**Total number of establishments: 2583**

Source: Industry estimates

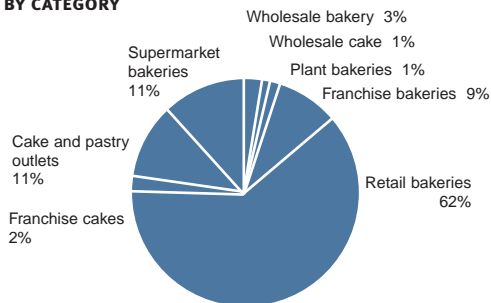
Figure 2.4 **DISTRIBUTION OF ESTABLISHMENTS IN THE BAKING INDUSTRY IN VICTORIA, BY CATEGORY**



**Total number of establishments: 2356**

Source: Industry estimates

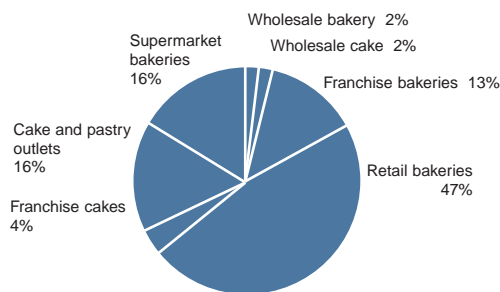
Figure 2.5 **DISTRIBUTION OF ESTABLISHMENTS IN THE BAKING INDUSTRY IN QUEENSLAND, BY CATEGORY**



**Total number of establishments: 2235**

Source: Industry estimates

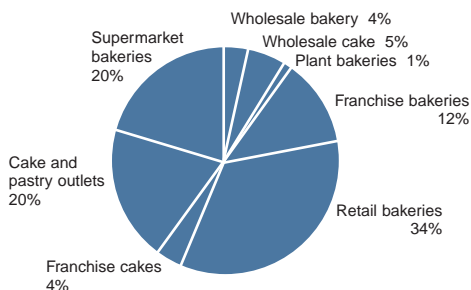
Figure 2.6 **DISTRIBUTION OF ESTABLISHMENTS IN THE BAKING INDUSTRY IN WESTERN AUSTRALIA, BY CATEGORY**



**Total number of establishments: 804**

Source: Industry estimates

Figure 2.7 **DISTRIBUTION OF ESTABLISHMENTS IN THE BAKING INDUSTRY IN SOUTH AUSTRALIA, BY CATEGORY**



**Total number of establishments: 541**

Source: Industry estimates

## 2.2 BREAD SECTOR

### Key Points

- Turnover in bread manufacturing in 2001–02 is estimated at \$1.6 billion.
- Annual growth in turnover is estimated at an average of 2.8 per cent between 1997–98 and 2001–02.
- The value of bread produced in on-site premises is estimated at \$1.0 billion.
- White bread remains the staple product.
- Premium breads now account for approximately 25 per cent of the white bread market.
- Industry rationalisation and consolidation is continuing.
- Significant restructuring has occurred in the past five years with the market now dominated by the larger in-store bakehouses of Coles and Woolworths together with the franchise sector of Bakers Delight, Brumby's and to a lesser degree Banjo's.
- Exports have grown in the past 5 years but still only account for less than one per cent of manufacturing turnover.

## 2.2.1 Characteristics of the bread sector

The Australian bread sector is dynamic and has been in constant change for a number of decades. The sector can be categorised into four groups, by business model – corporate plant bakeries, traditional hot bread shops, franchised hot bread shops, and supermarket in-store bakeries. Corporate plant bakeries produce bread for wholesale distribution and exporting, and account for the majority of bread production. Traditional hot bread shops have on-site manufacturing and retailing and are the second largest producers of bread products. Franchised hot bread shops represent a growing area of the bread sector with on-site manufacturing and retailing. Supermarkets have diversified into in-store bakeries to encourage purchasing across the supermarket and compete with franchised hot bread shops.

Competition between the on-site operations is strong which has forced the prices of their products down, often to the point where the products are cheaper than the packaged equivalent produced by corporate plant bread bakeries (Euromonitor 2003). Consequently the on-site operations are gaining market share while the plant bread market share is in steady decline.

Apart from bread loaves, the bread sector produces a range of products. These products include English muffins, rolls and buns, specialty bread, flat bread, buttered bread, crumpets and breadcrumbs.

### Sector performance

The total turnover in bread manufacturing was estimated at \$1.6 billion in 2001–02, which represents a 3.5 per cent increase from the previous year (Table 2.1). Overall, turnover for bread manufacturing increased by 2.8 per cent (in real terms) each year for the period 1997–98 to 2001–02.

The main growth in the sector, both in terms of volume and value of bread, is in the on-site operations. The turnover for these outlets was estimated at \$1.0 billion in 2000. Traditional hot bread shops recorded the strongest growth over the five-year period up to 2000, with almost 50 per cent increase in sales (Table 2.4). Franchised hot bread shops also recorded strong growth over this same period. It is currently estimated that Bakers Delight alone has an annual income in excess of \$300 million.

Value growth was stronger than volume growth in the five-year period up to 2000 (Table 2.4). This indicates consumers move towards higher priced premium bread products.

**Table 2.4 Volume and value of bread production, by category, 2000**

	Volume		Value		5 year CAGR	
	kt	% of total	\$m	% of total	Volume %	Value %
Plant bread	475	61	1578	61	-0.7	2
Franchise hot bread shop	108	14	344	13	10	13
Traditional hot bread shop	42	5	170	7	45	48
Supermarket in-store bakery	152	20	487	19	-3	-1
Total bread market	777		2579			

CAGR Compound Annual Growth Rate for the five years leading up to 2000

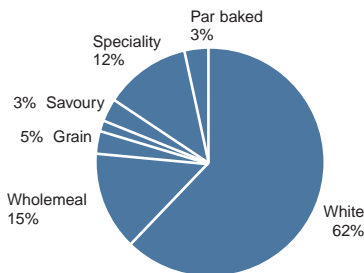
Source: Industry estimates

### Production and product segmentation

In 2000, plant bread bakeries accounted for 60 per cent of bread production (Table 2.4). Plant bread volumes have been in slow decline for almost 3 decades and are expected to continue to decline in real terms per capita over the next 5 years in response to increasing market share from franchises. IBISWorld estimated that the average decline over five year period to 2001–02 was approximately 2 per cent (IBISWorld 2003a).

White bread is still the highest selling product, accounting for 62 per cent of total bread sales in 2001 (Figure 2.8). Despite the growing awareness of the health benefits of high fibre diets, wholemeal and grain breads only account for 15 and 5 per cent respectively of bread sales.

Figure 2.8 DISTRIBUTION OF BREAD SALES, BY PRODUCT, 2001



Source: Industry estimates

In an effort to arrest declining market shares in the mature category of white bread, plant bakeries have continued to develop differentiated products in the premium end of the market. Typically these breads have an increased degree of functionality, such as high fibre content, and examples of these breads include Noble Rise and Helgas. Premium products account for 25 per cent of the white bread market.

Specialty or ethnic breads have evolved as a significant category over the past ten years. Breads in this category include Middle Eastern flat breads, Turkish, foccacia, roti breads and bagels. In 2001 specialty breads accounted for 12 per cent of the total value of bread sold (Figure 2.8).

Other products such as crumpets and English muffins have held a steady market share of approximately 5 per cent each between 1999 and 2002 (based on supermarket scan data, Table 2.5). Muffins in particular have been marketed as a meal alternative with innovative toppings and fillings.

**Table 2.5 Distribution of selected bread product purchases in supermarkets, by retail value**

	1997	1999	2002
Loaf bread	70.5%	69.7%	74.3%
English muffins	n/a	5.4%	5.5%
Crumpets	4.7%	4.9%	5.7%
Rolls and buns	1.2%	7%	4.4%
Specialty bread	3.8%	3.9%	3.2%
Flatbread	n/a	n/a	3.9%
Buttered bread	n/a	n/a	1.7%
All bread products Grocery Value \$m	599	664	818.1

*Note: Supermarkets account for 63 per cent of the consumer dollar*

*Source: Retail World 1997, 1999, 2002*

Data on key grocery brands from ACNielsen indicate that Tip Top and Buttercup are the highest selling bread brands. These brands were the tenth and eleventh best selling grocery product, respectively, by retail turnover, in 2001. The Helgas brand ranked as 51st highest selling grocery item. Overall, 10 per cent of bread sales, by value, are generic brands.

Non-proprietary breads are breads not manufactured by large corporate bakeries under specific brand names. Woolworths, Coles, and Bakers Delight have the largest share of this market, accounting for 22 per cent, 19 per cent and 16 per cent of sales respectively (Figure 2.9).

**Figure 2.9 MARKET SHARE OF NON-PROPRIETARY BREAD, BY RETAIL TURNOVER, 2001**

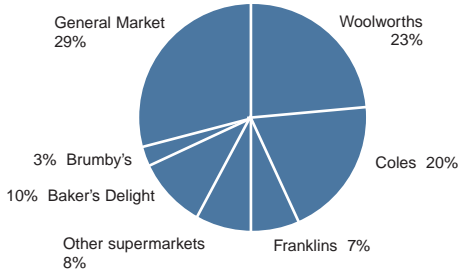


*Source: Industry estimates*

## Bread Retailing

At the retail level, more than half of all bread sales are made through supermarkets (Figure 2.10). Woolworths and Coles have the largest share of supermarket sales, accounting for 23 per cent and 20 per cent of sales respectively in 2001. The major franchise outlets are gaining retail market share from the supermarkets. Bakers Delight has 10 per cent share of this market, compared to Franklins supermarket, with 8 per cent of sales, and other supermarkets, with 7 per cent of sales.

Figure 2.10 **DISTRIBUTION OF BREAD MARKET SHARE, BY RETAIL TURNOVER, 2001**



Source: Industry estimates

## Consumption

Changing consumer habits have had an important impact on the bread industry. Average apparent consumption of bread has declined by an average of 13.5 per cent each decade between 1958–59 and 1988–89 (Table 2.6). However, consumption of bread increased by 20 percent in the decade between 1988–89 and 1998–99 (see Chapter 7).

**Table 2.6 Average apparent consumption of bread per person**

		Average for 3 years ended					
		1948–49	1958–59	1968–69	1978–79	1988–89	1998–99
Bread	kg	64.0	69.1	59.5	47.7	44.4	53.4

Source: AFFA 2003

In the past two decades consumers increasingly shopped in supermarkets which offered more range, competitive pricing and convenience over small neighbourhood shops. However the proliferation of hot bread shops and franchises, strategically positioned in shopping complexes near supermarkets, and the growing trend towards out-of-home food consumption has resulted in a further shift in consumer habits. While supermarkets still account for over 63 per cent of the consumer dollar spent on food and grocery items, there is an increasing range of choice and convenience being offered at retail level, including café bakeries through to warm spot bakeries and patisseries at service stations.

## International trade

As the bread sector is focussed on supplying the domestic market, sales from exports account for less than one per cent of turnover in bread manufacturing. In 2001–02 exports of bread products were valued at \$4.9 million (Table 2.1). The perishable nature

of the product and economies of scale with logistics are the main obstacles for exporting, however frozen doughs and par-baked products are emerging as export opportunities particularly to Asian markets. IBISWorld (2003a) has estimated that the value of exports has been increasing in real terms by an average of 31 per cent annually since 1997–98, albeit from a very low base.

The value of imported bread products is also negligible, accounting for less than one per cent of domestic consumption, or \$0.2 million, in 2001–02. Data from IBISWorld shows that the value of bread imports has remained steady since 1997–98.

## **Employment**

The bread sector is the largest employer in the baking industry, with 11,000 employees recorded in 2001–02 (Table 2.1). The total employment level has fluctuated between 1997–98 and 2001–02, with the average annual growth rate for this period being relatively low, at 4 per cent. Productivity, estimated as the average turnover per employee, increased by 11 per cent in 2001–02 due to reductions in the total level of employment in the sector.

## **Issues and challenges**

The bread sector faces a number of key structural challenges, which include:

- an over capacity in manufacturing despite continuing rationalisation
- low barriers to entry in the growth sectors, such as hot bread shops and franchises, which may lead to an oversupply in this subsector
- plant bread market share in steady decline
- low brand loyalty for proprietary brands
- dependence and sensitivity to wheat/flour prices, particularly at large plant bakery level
- a high level of industry concentration at corporate level and a high degree of fragmentation at the lower end of the market
- high distribution costs.

### **2.1.2 Corporate plant bakeries**

The corporate plant bakery market is highly concentrated with two main companies, Goodman Fielder and George Weston Foods dominating the market place. Both of these companies are subsidiaries of foreign-based multi-nationals and account for over 90 per cent of plant bread production and 60 per cent of the total volume of bread sold (Table 2.4). In 2002 Burns Philp bought out Goodman Fielder. As the franchise and boutique sectors continue to expand, the balance is likely to shift in favour of smaller industry players. This is being reflected in a contraction of plant bakery output relative to total demand.

Corporate plant bakeries are driven by a need to reduce costs and a lack of effective price power. As a result, rationalisation of infrastructure and developing efficiencies in production are key business drivers. Rationalisation will continue to occur at plant

bakery level as the major companies continue to be pressured into reducing unit costs per loaf as market share is absorbed by franchises. In particular, further rationalisation of plant bakeries is expected at the regional level where a combination of deregulation and technological advances in the shelf life of products has enabled greater distribution efficiencies.

Despite tough business conditions, new investment in the industry still remains high.

- Goodman Fielder has announced a multi-million dollar investment in its Darwin bakery. This bakery is one of the few food manufacturing sites in the Northern Territory. This investment in new fully computerised equipment follows trends by other key players in the sector (Food Australia, 2003).
- George Weston Foods has announced the purchase of land at Chullora in Sydney to construct a mega bakery and distribution site. At a total cost of \$135 million this replaces the Fairfield site, which was destroyed by fire in 2002. The capacity of the new site will be 30 per cent greater than that of Fairfield.

### Production

Based on industry estimates, the volume of bread produced in plant bakeries was 689 million loaves in 2002 (Table 2.7). Between 1999 and 2002, the volume of bread produced in plant bakeries declined by 2 per cent in total. Over the same period, the average price per loaf increased by 12 cents to \$1.59 in 2002. As a point of comparison, other data from the ABS shows that the average price of a loaf of bread increased by 30 cents between 1999–00 and 2001–02.

**Table 2.7 Volume of bread produced in plant bakeries and average retail price of bread**

	1996	1997	1998	1999	2000	2001	2002	2003e	2004e
Bread volume									
(m loaves)	663.6	706.7	689.5	703.3	698.4	693.5	688.6	683.8	679
Av. price per loaf									
(\$)									
Industry estimate	1.38	1.41	1.44	1.47	1.54	1.57	1.59	1.63	1.65
ABS estimate	1.85*	1.91	2.62	2.38	2.56	n/a	n/a	n/a	n/a

\*ABS data is estimated on financial year; therefore the price is for 1996/97.

Source: Industry estimates; AFFA 2002, 2003

### Brands and Products

Goodman Fielder has twelve brands of bread products, which are:

- Buttercup, Country Bake, Country Split, Crumb Craft, Family Choice, Helga's, Molenburg, Riga, Sunicrust, Uncle Toby's, Vogels, Wonder White.

George Weston Foods has eight brands: which are:

- Tip Top, Sunblest, The White Stuff, White Hyfibre, 9 Grain, Noble Rise, UP, Burgen.

Both companies produce a range of products and overall the product range has remained relatively unchanged over the ten-year period 1994 to 2003, as shown in

Table 2.8. However the data in Table 2.8 does not take into account the development of sub-categories, such as premium white bread.

**Table 2.8 Product range distribution in 1994 and 2003**

Product	George Weston Foods		Goodman Fielder	
	1994	2003	1994	2003
White	60%	63%	55%	55%
Wholemeal	18%	16%	15%	16%
Grain	20%	17%	15%	14%
Fruit bread	2%	4%	n/a	2%
Rolls/Buns	n/a	n/a	9%	13%
Other	n/a	n/a	6%	n/a

Source: BRI Australia estimates/Industry estimates

### Geographic spread

Goodman Fielder has 22 bakeries and George Weston Foods has 11 bakeries. These bakeries are concentrated in Victoria, New South Wales and Queensland (Figure 2.11 and 2.12)

Figure 2.11 LOCATION OF GOODMAN FIELDER BAKERIES



#### Northern Territory

Darwin  
Alice Springs

#### Queensland

Cairns  
Townsville  
Rockhampton  
Maroochydore  
Wacol  
Burleigh Heads  
New South Wales  
Tamworth  
Newcastle  
Dubbo  
Moorebank  
Liverpool/Golden Bake  
Unanderra

#### ACT

Canberra

#### Victoria

Wodonga  
Mildura  
Moe

Clayton

Geelong

#### South Australia

Forestville Albert Park

#### Western Australia

Malaga

Figure 2.12 LOCATION OF GEORGE WESTON FOODS BAKERIES



**Queensland**

- Townsville
- Springwood

**New South Wales**

- Newcastle
- Chatswood
- Fairfield
- Orange

**ACT**

- Canberra

**Victoria**

- Bendigo
- Dandenong

**South Australia**

- Dry Creek

**Western Australia**

- Canning Vale

### 2.1.3 Franchise bakeries

The franchised hot bread sector represents the fastest growth area of the Australian baking industry. The two key franchises are Bakers Delight and Brumby’s, and while Banjo’s has a strong presence in Tasmania it does not comprise a significant share of the market elsewhere.

The strong growth in the franchised outlets can be attributed to strategic positioning of the stores, variety of product, and the visual effect of the on-site baking process, which is used as an evocative marketing tool to consumers. Over 75 per cent of Woolworths stores now have a Bakers Delight or other franchise within the immediate shopping vicinity, providing complementary shopping for consumers. Sources indicate that consumers will now tend to buy the staple white sliced bread at supermarkets and then purchase unbranded premium white products from the local franchise. The increase in the consumption of specialty breads, in particular white, is emerging as a stronger trend on weekends. Major franchises report their highest turnover is typically on Saturdays and Sundays.

Bakers Delight has continued an aggressive roll out of their chain stores over the past five years and is currently opening a new store on average every three days. The company also plans to extend their franchise off-shore in 2004 with the opening of stores in Canada. Brumby’s has also recently announced plans to expand their current base by a further 250 stores over the next five years at an investment of \$60 million (*Herald Sun* 2003)

Revenue for the franchise is generated through start up and ongoing licensing and marketing fees rather than the physical baking. In this sense the franchise approach is very much more about retailing than about the end product.

### Geographic spread

The three main hot bread franchises, Bakers Delight, Brumby's and Banjo's, have a total of 886 outlets Australia wide (Table 2.9). Bakers Delight has the majority of the market share, accounting for 67 per cent of outlets. More than 60 per cent of these outlets are located in Victoria and New South Wales. Brumby's has 254 outlets, with almost half of these outlets located in Queensland. Banjo's has a total of 35 stores, with only 9 located outside of Tasmania.

Both Bakers Delight and Brumby's have extended their presence outside of Australia and have an additional 37 and 17 outlets, respectively, located in New Zealand.

**Table 2.9 Distribution of franchised hot bread outlets in Australia**

State	Bakers Delight outlets	Brumby's outlets	Banjo's outlets
WA	59	44	0
NT	3	5	0
SA	56	7	0
QLD	74	116	2
NSW	171	21	1
ACT	9	2	0
TAS.	11	0	26
VIC.	214	59	6
TOTAL	597	254	35

Source: Industry estimates

### 2.1.4 Supermarket in-store bakeries

In-store bakeries are an important component of the supermarket as they influence purchasing decisions across the store. This type of bakery is now beginning to reach a mature stage of the business cycle, having grown from 551 stores nationally in 1994 to over 1,200 stores in 2003. Future growth is deemed limited and numbers are expected to flatten out over the next two to three years.

The supermarket in-store bakery market is currently valued at approximately \$400 million per annum. Woolworths and Coles dominate this market, accounting for more than 90 per cent of the output in the sector. Woolworths has an estimated 696 in-store bakeries of which 425 are full production bakeries; 200 to 214 are scratch bakeries; 120 are warm spot bakeries that use premixed or frozen doughs; and 35 to 50 are bake-off bakeries. Coles maintain an estimated 467 in-store bakeries nationally. Bi-Lo's presence in this sector is declining.

There are a number of factors influencing the profitability of the supermarket in-store bakeries. These include high utilisation costs of supermarket floor space, processing inefficiencies and labour costs. While the profitability of in-store bakeries remains marginal and not sustainable in the long term, industry sources estimate actual value growth (from SKU's carried in store) to be in the range of 13 to 18 per cent per annum (Industry estimates). The mix of what is actually produced onsite and what is brought in continues to change, including unbranded plant bread and increasingly the use of par-baked and thaw-bag products.

### Geographic spread

Predictably the distribution of Woolworths and Coles in-store bakeries is aligned with the population distribution as shown in Table 2.10.

**Table 2.10 Distribution of supermarket in-store bakeries**

State	Woolworths Bakeries	Coles Bakeries
WA	59	67
NT	0	0
SA	68	43
QLD	149	99
NSW/ACT	217	131
TAS.	n/a	14
VIC.	203	113
TOTAL	696	467

Source: Industry estimates

## 2.3 BISCUITS SECTOR

### Key Points

- Total turnover in biscuit manufacturing was estimated at \$1.1 billion in 2001–02.
- The market is highly concentrated and continues to be dominated by the major corporate Arnotts.
- Between 1999–98 and 2001–02, turnover in the sector has barely kept up with inflation, however value is growing in the indulgence and premium sub sectors.
- Over 75 per cent of the retail trade in biscuits is through supermarkets.
- Globalisation is impacting on the biscuits sector more than other baked products. The value of biscuit imports has increased from \$57.6 million 1997–98 to \$83 million in 2001–02.
- Exports were valued at \$63 million in 2001–02, and over half were to New Zealand.

### 2.3.1 Characteristics of the biscuits sector

The biscuit sector is highly concentrated with a limited number of production establishments. Two main companies – Arnotts and George Weston Foods – dominate the market place and account for approximately 70 per cent of turnover (IBISWorld 2003b). Both of these companies are owned by foreign parent companies, which reflects to some extent the impact of globalisation in this sector.

The size of the sector has reduced as a result of rationalisation and consolidation. The major companies with large-scale, concentrated production have taken over smaller operations. In 2002, Arnotts purchased Players Biscuits and Kraft purchased Lanes. The purchase of Lanes enabled Kraft to gain control of key Nabisco brands, which have been licensed to Lanes in Australia since 1991, and includes Ritz crackers, Premium crackers, In-A-Biscuit and Chips Ahoy! Cookies (Euromonitor 2003).

A growing trend in the biscuit sector is the use of toll or contract manufacturing. This has been driven by the growth in premium biscuits. One of the higher profile brands in this area is Dick Smith Foods, which has contracted Sanitarium to manufacture their brands. This trend signals a separation to some extent of the marketing function from manufacturing and a concentration on core business. It also signals the potential for a further contraction in the number of establishments in the industry.

In general, the large companies are concentrating on producing mainstream products where economies of scale can be achieved, while the smaller companies are specialising in lower volume niche products – premium or indulgence. Brand loyalty remains fairly high in this sector, fostered by a high concentration of retail trade through supermarket channels. Price also remains a key determinant particularly in the lower end of the market. Generic or house brands have steadily increased market share over the past five years and now have the fourth highest turnover in the sector.

#### Sector performance

Total turnover for the biscuit manufacturing sector was estimated at \$1.1 billion in 2001–02 (Table 2.1). This represents a 0.6 per cent real growth from the previous year. Turnover fluctuated between 1997–98 and 2001–02 due to competition from imported biscuit products and other snack foods, such as confectionery. Overall, the sector's performance did not keep up with inflation over this period, declining in real terms by 0.4 per cent per annum.

The value of biscuit sales at the retail level has shown stronger growth than volume of sales for the period 1998–2002 (18.9 per cent compared to 9.6 per cent; Euromonitor 2003). This indicates consumers' growing preference for the higher valued premium and indulgence biscuits. Sales in this biscuit category are estimated at around \$10 to \$12 million.

#### Markets and product segmentation

The sector supplies two main markets. The major market is the grocery wholesalers that distribute to supermarkets and other retailers, accounting for 70 per cent of sales. The

other market is hospitality and catering industries, accounting for 25 per cent of sales (IBISWorld 2003b).

Domestic consumer purchases of biscuit products were estimated at \$1.14 billion in 2001–02. Over 75 per cent of retail trade is through supermarkets. Data from Retail World shows that the value of biscuit sales in supermarkets in 2002 was \$945 million (Table 2.11).

Chocolate biscuits have consistently been the most popular biscuit sold since 1997, accounting for 18 per cent of sales in 2002. Flavoured snack biscuits and plain biscuits were the next highest selling biscuits, by value, accounting for almost 13 per cent and 12 per cent of sales respectively.

**Table 2.11 Distribution of biscuit category purchases in supermarkets, by retail value**

Category	1997		1999		2002	
	Rank	Share %	Rank	Share %	Rank	Share %
Chocolate	1	18.1	1	17.8	1	17.7
Flavoured snacks	4	12.8	4	12.5	2	12.8
Plains	3	14	3	12.6	3	11.8
Crispbread	6	8.7	6	10	4	10
Creams	5	11.9	5	10.8	5	9.3
Rice Crackers		n/a		n/a	6	9.2
Crackers	2	15.3	2	16.4	7	7.9
Cookies	7	7.3	7	6.9	8	6.4
Shortbread	8	5	8	4.8	9	3.4
Specialty		n/a		n/a	10	2.3
Rice & other grain cakes		n/a		n/a	11	2
Fruit	9	3.4	9	2.6	11	2
Wafers	11	1.8	11	1.8	12	1.7
Topped	10	1.8	10	2.1	13	1.6
Premium		n/a		n/a	14	1.5
Other		n/a		n/a		0.4
Continental		n/a	12	1.5	15	0.1
Total Biscuit Grocery Value		\$887.9m		\$980.5m		\$944.6m

Source: Retail World 1997, 1999, 2002

Data from ACNielsen shows that Arnotts Shapes was the highest selling biscuit brand in supermarkets in 2001, with a retail turnover in the range \$80 to 100 million. The brand also ranked as the 33rd highest selling grocery item. The second best-selling brand was Arnotts Tim Tams, with a turnover in the range of \$60 to 70 million and positioned as the 70th highest selling grocery item. Sales of TimTams were boosted in 2002 with the relaunch of white chocolate Tim Tams and Tim Tams Fingers (Euromonitor 2003).

As product lines expand, there is a crossover of the biscuit sector into the confectionery sector and snacks sector. There is evidence of an increase in global brands making their presence felt in the market place as companies seek to expand their brand presence into related areas through line extensions. These brands are most commonly being produced on a toll-manufactured basis. For example, Cadbury Schweppes have a line of chocolate biscuits which are manufactured by Greens Foods. Similar arrangements are in place for Danone and Griffins Biscuits.

### **International trade**

Globalisation is impacting on this sector more than other baked products. Imports of biscuits have increased from \$61.2 million in 1997–98 to \$83 million in 2001–02<sup>2</sup>. This represents 7 per cent real growth per year.

Export sales of biscuit products were estimated at \$63 million in 2001–02. Over half of the exports in 2001–02 were to New Zealand (\$42 million).

### **Employment**

Employment in the sector has remained fairly constant since 1999–00 following a decline in 1998–99. In 2001–02 the sector employed 4,450 people.

### **Research and development**

Most research is tending to be driven by an increasing need for product innovation rather than technical innovation. As ingredients are readily available to global companies and the technology presents a low barrier to entry, product innovation has become the key point of difference in this competitive market place.

## **2.3.2 Corporate biscuit manufacturers**

Arnotts is Australia's leading biscuit manufacturer, holding 54 per cent share of the market in 2002, by value, and producing more than 70 different biscuit varieties. Arnotts is likely to continue to increase its dominant position as George Weston Foods seeks to divest itself of its biscuit operations in 2003–04. George Weston Foods announced the closure of their Sydney plant in early 2003 and have consolidated their biscuit and cake operations to the Melbourne and Brisbane sites. They currently hold almost 8 per cent share of the biscuit market, by value (Table 2.12)

Kraft has emerged as an important competitor in the biscuit sector following their acquisition of Lanes. Prior to the acquisition, Kraft held only a small presence in the Australian market through the Oreo brand (Euromonitor 2003).

Arnotts now offers consumers the opportunity to purchase a variety of biscuit products online.

The key brands manufactured by Arnotts, George Weston Foods and Kraft include:

- Arnotts (Players) – Tim Tams, Kingstons, Monte Carlo, Jatz, Salada, Vita Wheat

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<sup>2</sup> Inconsistencies exist between data published in IBISWorld 2003a, 2003b, 2003c, 2003d and *Australian Food Statistics 2003*. *Australian Food Statistics 2003* estimates the value of imported biscuit products at \$106 million and exports at \$92 million in 2001–02.

- George Weston Foods – Ryvita Crispbread, Crackerbread, Wagon Wheels, Quatro, Chocolate Wheaten
- Kraft (Lanes/Nabisco) – Ritz crackers, Premium crackers, In-A-Biscuit, Chips Ahoy! Cookies, Captains Table

**Table 2.12 Corporate shares by value**

Company	1997	1999	2002
Arnotts	58.9%	57.8%	54.1%
George Weston Foods	11.3%	10.4%	7.6%
Lanes	8.2%	8%	7.5%
Sakata	n/a	1.8%	4.0%
Paradise	1.8%	2.2%	2.6%
FanTas.tic	n/a	n/a	2.5%
San esu	1.8%	2.0%	1.9%
Players	2.3%	2.9%	1.9%
Dick Smith	n/a	n/a	0.9%
Cadbury	1.1%	n/a	0.6%
Griffins	1.6%	1.5%	0.4%
Nestle	n/a	n/a	0.3%
Private label/generic	5.8%	6.1%	6.4%
Others	7%	7.3%	9.3%

Source: Retail World 1997, 1999, 2002

### 2.3.3 Independent biscuit manufacturers

Sakata, Paradise, Stuart Alexander and Kez's Kitchen represent the key independent biscuit manufacturers in the Australian market. In the savoury/crackers sub sector Sakata has successfully developed rice crackers from a smaller niche line and emerged as a market leader in the trend towards low fat product. Sakata's market share has grown by 122 per cent in the three years between 1999 and 2002.

Stuart Alexander and Kez's Kitchen specialise in high inclusion sweet biscuits marketed primarily through hotels, food service and retail outlets. Both companies are now successfully marketing their products in overseas markets and creating opportunities for other Australian manufacturers to capitalise on this success. Reflecting the growth and value of this sector, the Luken and May brand was purchased by international brand managers Stuart Alexander in April 2003.

The key brands manufactured by the independent companies include:

- Sakata – Sakata Rice Crackers, SnakaTas.
- Paradise – Cottage Cookies, Paradise crackers, Paradise Lites Crispbread
- Stuart Alexander – Luken and May, Bite Me
- Kez's Kitchen – Kez's Original

### 2.3.3 Franchised biscuit outlets

Franchised biscuit outlets represent external competition to traditional biscuit lines and an evolution in purchasing and consumption patterns. There are two main franchised biscuit companies in Australia – Cookie Man and Mrs Fields.

Cookie Man is an all-Australian concept that has been in business since 1958. Its operations are split evenly between retail franchising and the contract manufacturing of high inclusion biscuits for premium brands as well as generics for supermarkets. While the volume of manufacturing is higher, the profitability of both areas is similar.

The franchised outlets produce a wide range of premium freshly baked cookies, chocolate cookies, slices and brownies. Like many other franchised outlets, Cookie Man has had to constantly reinvigorate its image to stimulate growth, including the expansion to selling coffee at each outlet. The outlets are supplied with frozen doughs for baking on site.

There are currently 37 outlets located throughout Australia, with around half of these located in New South Wales (Table 2.13). A further seven new outlets will be established by the end of 2003 in Queensland and in Melbourne. The company intends to expand the number of outlets in Australia to around 60–80 stores by 2005. Other market expansion strategies include targeting smaller shopping centres, co-branding and deploying satellites in regional areas. For example, Cookie Man satellite displays may be included within an ice cream or a bakery franchise.

**Table 2.13 Distribution of Cookie Man and Mrs Fields outlets in Australia**

State	Cookie Man	Mrs Fields
WA	5%	0%
NT	0%	19%
SA	16%	13%
QLD	11%	25%
NSW	57%	0%
ACT	8%	0%
VIC.	3%	43%
TAS.	0%	0%
Total number of outlets	37	16

Source: *Cookie Man 2003, Mrs Fields 2003*

Mrs Fields is the biggest fresh cookie company in the world with more than 750 outlets in 14 countries. There are currently 16 franchised outlets in Australia, located in Victoria, South Australia, New South Wales and Queensland (Table 2.13). The company specialises in baking a premium range of cookies, muffins, brownies, bagels, and associated products. The dough is manufactured by General Mills in Queensland and delivered frozen and pre-portioned to the outlets for baking.

## 2.4 CAKES AND PASTRIES SECTOR

### Key Points

- Total turnover in cakes and pastries manufacturing was estimated at \$934 million in 2001–02.
- There is an increasing trend in the use of premixes by manufacturers and franchises, as well as complete premixes by supermarkets.
- National franchises continue to show growth
- Health and nutrition are now starting to play a larger role in the market with growth in the low fat cake and muffin mixes.
- Growth in the pie market remains static overall with category growth in specialty and gourmet pies.

### 2.4.1 Characteristics of the cakes and pastries sector

The structure of the cakes and pastries sector is similar to the bread sector, with a high proportion of turnover generated by a small number of players. The market remains heavily concentrated at corporate level with George Weston Foods and Goodman Fielder accounting for over 80 per cent of cake production, while Simplot and Sara Lee hold similar positions in the pastry markets. The total number of players in the sector is expected to reduce as further rationalisation and consolidation occurs.

National franchise outlets represent a growing component of the sector and are gaining market share from the smaller independent retail outlets, particularly in the sweet pastry and donut sectors. Franchised outlets maintain a mixture of on-site and centralised production facilities with a range of retailing presentations from shops to kiosks. Increasingly the crossover in the retailing of product categories is also impacting on competition within the sector with a number of retail bakeries now offering a broader range of products. The main products include cakes, pastries, donuts, meat pies, sweet/fruit pies, and puddings.

While not occurring at all levels, industry comments suggest a marked increase in the use of premixes particularly in smaller pastry manufacturing establishments as a means of containing costs in the business.

#### Sector performance

The cakes and pastries manufacturing sector makes the smallest contribution to the baking industry in terms of turnover. Total turnover in cakes and pastries manufacturing was estimated at \$934 million in 2001–02, and represents 4 per cent real growth from the previous year. However, this estimate is likely to be an underestimate because it does not include turnover from bakeries with in-store preparation. Turnover has fluctuated over the five year period between 1997–98 and 2001–02, and overall the sector contracted by an average of 4 per cent per annum. This was largely due to a sharp decline in turnover in 2000–01, which coincides with the introduction of a GST in Australia. Cakes and pastries are considered discretionary items with consumption

varying with economic conditions. The sector also competes with a wide range of snack foods, often losing sales to perceived healthier products.

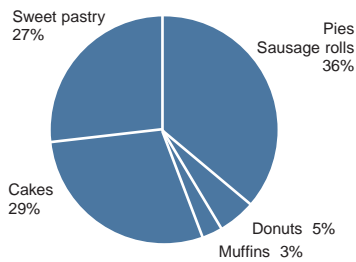
### Market and product segmentation

The manufacturing sector primarily derives revenue from the sale of cake and pastry products to grocery wholesalers, accounting for 75 per cent of sales. The remaining 25 per cent is sold to the hospitality industry (15 per cent) and specialty stores (10 per cent) (IBISWorld 2003c).

Staple pastry products such as meat pies and sausage rolls continue to represent a substantial sector of the market particularly through the foodservice sector, accounting for approximately 41 per cent of market share (Figure 2.13). There is evidence of growth within this sector for specialty pies, partly driven by the increase in home meal replacements as well as re-branding of traditional products.

Cakes and sweet pastries are the other major products purchased and account for 29 per cent and 27 per cent of retail sales, respectively.

Figure 2.13 **CAKE AND PASTRY SECTOR RETAIL SALES, BY PRODUCT, 2001**

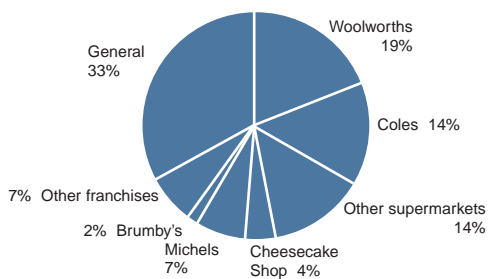


Source: Industry estimates

### Cake and pastry retailing

Woolworths and Coles have the largest share of the cake and pastry market, in terms of retail turnover (Figure 2.14). In 2001, their combined share was 33 per cent of retail sales. National franchises, including Michel's Patisserie, The Cheesecake Shop, Donut King and Muffin Break, accounted for 20 per cent of retail sales, and are increasing their market share.

Figure 2.14 **DISTRIBUTION OF CAKE AND PASTRY MARKET SHARE, BY RETAIL TURNOVER, 2001**



Source: Industry estimates

## Consumer patterns

Changing consumer consumption patterns as well as an increase in disposable incomes have had the strongest impact on the growth of the cakes and biscuit sector compared to other sectors of the baking industry. While this has led to some product substitution, such as croissants substituted for bread, it has also led to a decline in categories such as industrial packaged cakes, which are perceived to have an unhealthy image. Consequently health and nutrition are starting to play a larger role in the market. For example there is increasing demand for low-fat cake products. These products were estimated to be worth \$15 million per annum (Industry sources).

Convenience foods such as lunch box fillers, namely muffins and bakery treats, are reflective not only of a push for further product differentiation by manufacturers and retailers but also an increase in the number of dual parent working households.

## International trade

The export level for the cake and pastry sector is low with an overall decreasing trend. This reflects the perishable and fragile nature of the product and the industry focus on supplying the domestic market. In particular, exports fell by 77 per cent in 2001–02 to \$2.9 billion (Table 2.1).

Imports of cake and pastry products have been increasing, with a similar level of import activity as the biscuit sector. While the value of imports fell by 4 per cent in 2001–02 overall imports have increased in real terms by 7.5 per cent per annum between 1997–98 and 2001–2002. This growth partly reflects the ability of other countries to transport these products using technologies that are not as advanced in Australia.

## Employment

The manufacturing component of the cakes and pastries sector is the second largest source of employment in the baking industry. In 2001–02 approximately 9500 people were employed in manufacturing, which represents 1.7 per cent real growth. Productivity, estimated as the average turnover per employee, increased by 2 per cent between 2000–01 and 2001–02.

### 2.4.2 Corporate cake and pastry manufacturers

There are four major players involved in cake and pastry manufacturing – George Weston Foods, Simplot, Goodman Fielder and Fowlers Vacola. The market share held by each of these companies is changing as a result of ongoing rationalisation and consolidation. Simplot has sold their cake and pudding manufacturing enterprise, including the ‘Big Sister’ brand, to Fowlers Vacola. George Weston Foods is also likely to sell its cake manufacturing arm due to high costs and an inability to redevelop inner-city sites. As at April 2003 all George Weston Foods cake operations had been transferred to Brisbane to be integrated into their baking division.

The key brands manufactured by each of these companies include:

- George Weston Foods – Top Taste, Homestyle
- Simplot – Four ‘n’ Twenty, Herbert Adams, Nannas
- Goodman Fielder – Pampas, White Wings
- Fowlers Vacola – Big Sister

### 2.4.3 Independent cake and pastry manufacturers

The main independent cake and pastry manufacturers in Australia are Goldsteins, Bakewells, ReadyBake, Balfours, and Patties. Bakewells produce the well known Mrs Macs pies and Balfours produce the Bakehouse Range brand.

### 2.4.4 Franchised cake and pastry outlets

Franchised cake and pastry outlets are a growing area of the sector. The major companies include Michel’s Patisserie, Muffin Break, The Cheesecake Shop, Sara Lee and Donut King. Most of these chains sell coffee and other beverages to generate further sales. Krispy Kreme, a US based donut franchise with over 4,500 outlets, has made its first foray outside North America with the opening of a store in NSW in June 2003. A further 30 outlets are planned to open in Australia.

Michel’s Patisserie has grown from 2 stores in 1988 to over 200 stores in 2003 (Table 2.14). Their business strategy is based on centralised bakery operations to enable competitive retail pricing. Outlets are usually established in high pedestrian traffic areas. The product range includes gateaux, cakes, fruit flans, quiches, pies, croissants and pastries, custom made cakes and special occasion cakes. The outlets also sell coffee and other beverages.

**Table 2.14 Distribution of Michel’s Patisserie outlets in Australia**

State	No of outlets
NSW/ACT	148
Vic.	28
Qld	22
SA	13
WA	1
Total	212

Source: Michel’s Patisserie 2003

The Muffin Break franchise started in 1989 in Queensland and has grown with more than 140 shops throughout Australia. On average 25 stores are opened each year. All products are made on-site.

The Cheesecake Shop manufacturers, retails and wholesales a range of desserts and savouries. Franchising began in NSW in 1993 and there are now more than 180 outlets throughout Australia. Products are made on-site.

Sara Lee has opened 12 company-owned Sara Lee Bakery Shops, distributed along the east coast of Australia. The shops were primarily established to maintain the high quality reputation of Sara Lee baked goods by providing a channel through which not quite perfect goods are sold at discounted prices directly to consumers.

Donut King, under the Retail Food Group, started in 1981 and currently has 218 outlets. A further 30 new stores are planned for establishment in 2003–04.



## 3 Industry Suppliers

### Key Points

- The ingredient supply market is becoming increasingly competitive and price driven.
- A significant component of product research and development is being done by ingredient suppliers rather than baking manufacturers themselves.
- Australia is a globally competitive producer of yeast.
- Flour milling capacity has increased by 80 per cent in the last ten years and utilisation is globally competitive at in excess of 85 per cent.
- Most research and development in machinery is focussing on improved OH&S compliance rather than product differentiation.

### 3.1 INGREDIENTS

The ingredients supply market is highly concentrated, comprised of both large multinational companies and small local manufacturers and resellers. A number of the multinational companies also trade in global ingredients markets. The key players in this market are:

- Kerry Pinnacle, Danisco, Bakels/Lesaffre, Burns Philp, Unilever, Fermex, HJ Langdon and Co, and Scalzo Food Industries.

There are also a number of specialist ingredient companies concentrating on a more limited range of products.

Ingredients companies sell unbranded products directly to manufacturers and/or sell branded products to consumers. The range of ingredients sold to the bakery sector is extremely broad and includes prepared and partly prepared products, including:

- milk/cream/ice cream
- flour
- sugar
- fats/emulsified bread fats, specialised bun fats
- oils
- stabilisers
- enzymes
- flavours
- yeast
- improvers
- shortenings
- bread improvers
- cake, sponge and bread premixes
- meat/savoury fillings
- fruit/dried and prepared fruit fillings

In the absence of data on baking mix manufacturing alone, combined cereal food and baking mix manufacturing data from the Australian Bureau of Statistics<sup>3</sup> is used as an indicator of trends in this industry. The total turnover in 2000–01 was \$2.2 billion, which is a 3 per cent real decline from the previous year. Annual reports of the major ingredients companies do not break down performance to a divisional level to provide an indication of local turnover in ingredients.

Product innovation and branding are key strategies to gain market advantage in the ingredients industry. Consequently research and development is becoming increasingly important and is conducted both in Australia as well as offshore by the parent companies of local subsidiaries.

Branding strategies are becoming a means of alleviating price pressure and building margins. Industry sources suggest that the market is becoming heavily price driven, impacting on margins in the business at retail and wholesale levels. This partly reflects the global nature of the ingredient business with alternative supply sources. Australia still remains competitive as one of the lowest cost producers of baking ingredients (yeast and improvers) compared to offshore plants. While bread prices have largely kept up with inflation, the price of yeast has not (Table 3.1).

**Table 3.1 Price comparison for bread and yeast between 1980 and 2003**

1980	2003
Yeast – 63c per kilo	Yeast –\$1.00 per kilo
Loaf Bread – 63c	Loaf bread –\$2.54

Source: Industry estimates

Expanding on the popularity of the retail bread mix market is the development of a ‘home bake’ category franchise. ‘You Can Bake It’, is a Perth based home baking ingredients and accessories chain. The first store opened in Willetton, WA in 1998 and there are now 13 stores, including one in Holt, ACT. A further 20 franchised outlets are planned to open in NSW and Victoria by the end of 2003. They focus on a preservative-free range, stocking 60 different varieties of bread, cake, muffin, scones and hot cross bun mixes.

### 3.2 FLOUR

Flour production in 2002 was estimated at 2,077 million tonnes (Table 3.2). There are four key flour millers in Australia – Manildra, Weston Milling, Allied Mills, and DanPark.

Flour milling capacity in Australia has increased by 80 per cent over the last 10 years to an average of 10 tonnes of flour per hour. As with the baking sector there has been continual rationalisation and consolidation of smaller mills from 66 in 1976 to 31 in 2002 (FMCA 2002). At the same time, capacity utilisation has improved markedly.

<sup>3</sup> ABS 2002.

**TABLE 3.2 National flour mill capacity**

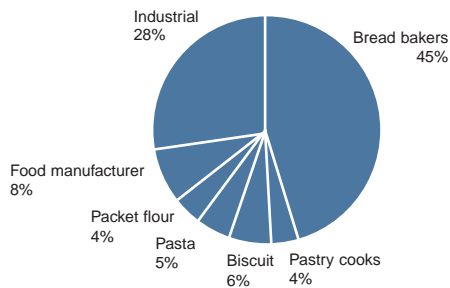
	Units	1996	1999	2002
Annual flour production	m tonnes	1653	1956	2077
Annual flour capacity	m tonnes	1811	1879	2042
Capacity utilisation	%	91	104	102

Source: ABS 2002/FMCA 2002

## Consumption

The National Flour Mix survey indicates that Bread Bakers flour comprises around 45 per cent of total national flour production (FMCA 2002, Figure 3.1). Other consumption categories have remained relatively static in the past 5 years with the most growth (3 per cent) occurring in flour for industrial uses such as starch and gluten. Overall the statistical relationship between flour and baked products remains largely unchanged.

Figure 3.1 **DISTRIBUTION OF FLOUR USAGE IN AUSTRALIA IN 2002**



Source: Flour Millers Council of Australia 2002

## Bread flour premixes

The proliferation of hot bread shops/franchises and supermarket in-store bakeries has prompted substantial growth in the premix supply market. An extension of this market is the supply of bread mixes sold at retail level for use in bread making machines. National premix volumes grew from 272 000 tonnes in 1999 to an estimated 306 000 tonnes in 2003. In 2000 it was estimated that Goodman Fielder held an estimated 55 per cent market share of the in-store bakery and franchise sector and 53 per cent of the retail bread mix market through its Uncle Tobys lines (Industry sources).

## Transfer Pricing

The margins of corporate plant bakery operations have fluctuated in response to the price of flour purchased from internal companies through 'transfer pricing'. At times this has meant profitability in a vertically integrated operation could be over or understated depending on which entity absorbs a higher level of costs. For example, volatile wheat prices may impact on the milling division of a business but may not translate through to the bakery operations. While Goodman Fielder is no longer a vertically integrated milling and baking business the issue of contracted flour supplies is still a sensitive issue. New owner Burns Philp recently announced it was examining the five-year flour supply

agreement between Baking Australia and Allied Mills in an effort to further reduce costs in the business (Just Food 2003).

### 3.3 MACHINERY

The machinery manufacture and supply market is highly price driven with local producers facing stiff competition from imported products. At the lower end of the market these are mostly being supplied from Taiwan, Malaysia and China.

Actual turnover of the industry is difficult to determine with crossovers of bakery equipment supply into the catering and foodservice industries and most machinery suppliers and agents servicing both baking and foodservice sectors. However sales of mainstream equipment to the retail bakery sector alone for mixing to slicing machinery is estimated to be approximately \$42 million per annum. The franchise sector accounts for more than 20 per cent of these sales (Industry estimates).

The industry can be broadly divided into two categories: retail bakery equipment (servicing the independent and franchise sector) and industrial bakery, larger, automated equipment (servicing larger independents and corporate plant bakeries). In the retail sector there are approximately 14 key equipment suppliers, manufacturers and resellers representing local and imported products. One local manufacturer accounts for over 90 per cent of equipment supplied to franchise stores in Australia and approximately 45 per cent in the independent sector.

Developments in equipment are mostly focussing on labour saving, automation and compliance regarding OH&S issues, in particular the installation of machinery guards. This trend is consistent with overseas developments. Companies seek to develop customised (purpose specific) designs to create competitive points of difference in the market, with equipment research and development being maintained in-house.

The equipment manufacturing industry is concerned about the conformity of some imported machinery to Australian standards on issues such as guards, operating manuals, electrical wiring. An oversupplied market and the price pressure of imports have compromised the supply of quality equipment. Typically, there is a higher degree of consistency in the quality of machinery purchases and replacement programmes in the franchise and in-store bakery markets. Smaller independents and individual retail outlets are under pressure to minimise costs are possibly exposed in this area.



## 4 Employment and Training

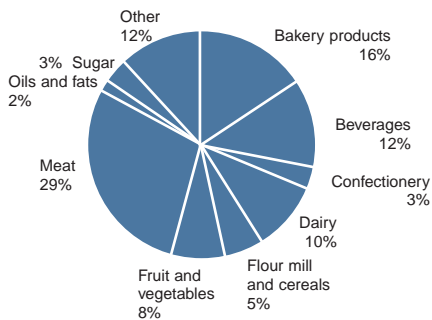
### Key points

- The bakery manufacturing sector is the second largest employer in Australia's processed foods industry.
- Employment has remained relatively static in total across the three sectors for the past six years.
- Structural shifts in the industry have impacted on the delivery of public training courses provided through TAFE institutes.
- Franchises and in-store bakeries are increasing their demand for customised courses.
- Legislative drivers for training to manage food safety, labelling and OH&S are now stronger than the demand for skills based training.
- Technology developments in ingredients and premix formulations as well as automation have also fostered a decrease in the industry skills base.
- Industry perceives a general disconnect between the courses offered and requirements of the industry.

### 4.1 EMPLOYMENT

The bakery manufacturing sector is the second largest employer in Australia's processed food industry, accounting for 16 per cent of employment (Figure 4.1). In 2000–01 the level of employment was in the range 25,000 and 28,000<sup>4</sup>. The main source of employment is in bread manufacturing, with approximately 12,000 employees. The biscuits sector and cakes and pastries sector have approximately 9,000 and 7,000 employees respectively. Overall employment has remained static across all sectors of the industry in the last five years (1997–98 to 2000–01).

Figure 4.1 DISTRIBUTION OF EMPLOYMENT IN THE PROCESSED FOOD INDUSTRY



Source: ABS 2002

<sup>4</sup> ABS data published in AFFA 2001, 2002, 2003 shows a higher level of employment in the bakery manufacturing sector compared to data published in IBISWorld 2003a, 2003b, 2003c for the 2000–01 financial year. For the years 1997–98 to 1999–00 the trends between the two data sets is consistent. Data from AFFA 2001, 2002, 2003 is presented in this chapter as it is broken down to a state level.

The level of employment in each state has fluctuated for each sector, with most of this activity occurring in NSW (Table 4.1). The key trends include:

- bread sector: NSW has shown the largest increase in employment, from 2,864 people in 1997–98 to 3,545 in 1999–00
- biscuits sector: employment decreased in NSW by 332 people between 1997–98 and 1999–00
- cake and pastries sector: employment increased in NSW by 405 between 1997–98 and 1999–00, and also increased in Queensland by 318 over the same period.

**Table 4.1 Distribution of employment in the baking industry across each state**

	1997–98	1998–99	1999–00
<b>Bread sector</b>			
QLD	1750	1682	1990
NSW	2864	2858	3545
VIC.	2371	2184	2256
TAS.	312	n/a	n/a
SA	1058	1138	1038
WA	955	n/a	n/a
NT	n/a	n/a	n/a
<b>Biscuits sector</b>			
QLD	1544	n/a	1343
NSW	1213	961	891
VIC.	1891	1631	1728
TAS.	n/a	n/a	n/a
SA	714	621	n/a
WA	22	n/a	n/a
<b>Cakes and Pastries sector</b>			
QLD	1293	n/a	1611
NSW	2451	2285	2856
VIC.	3468	3014	3322
TAS.	Na	Na	n/a
SA	1090	1097	n/a
WA	1201	1245	1035
NT	n/a	n/a	n/a

Source: ABS 2002

The level of employment in cereal and baking mix (ingredients) manufacturing has fluctuated between 1997–98 and 2001–02 and is estimated at 7049 people in 2001–02 (Table 4.2)

**Table 4.2 Employment in the cereal food and baking mix industry**

Employment	1997–98	1998–99	1999–00	2000–01
QLD	525	736	338	n/a
NSW	2042	2201	2374	n/a
VIC.	1793	2232	1995	n/a
TAS.	n/a	n/a	n/a	n/a
SA	n/a	n/a	n/a	n/a
WA	181	n/a	n/a	n/a
National total	5750	5911	5477	7049

Source: ABS 2002

Note: The sum of available state employment data does not necessarily correlate with national total

## 4.2 TRAINING

The baking industry has undergone major changes over the last 15 years that have impacted on vocational training and employment. Key issues include:

- a decline in the use of public courses available through TAFE institutes
- a decline in the number traditional of apprentices offset by an increase in the implementation of in-house training packages by large plant bakeries
- a general decline in the availability of skilled employees
- the relative attractiveness of alternative employment in areas other than baking
- lack of career path development (particularly in owner operated businesses) and management orientation in any training
- an imbalance between business management and product skills in the sector.

Professional development and skills in the industry have been steadily changing from more traditional baking skills to the skills required to run manufacturing plants with a high level of automation. This has been largely caused by industry deregulation and improvements in production technology, resulting in a reduced reliance on skilled bakers. Many businesses now consider themselves more as processors than bakers and have correspondingly changed their training requirements.

National franchises and in-store bakeries have also placed more pressure on the continuing use and type of public course training. Competing franchise models have increased the demand for customised training courses that are designed for a specific purpose. While these are still often provided through TAFE institutions, the demand is now at the base skill level of Certificate I and II level. There is a decreasing number of employees being trained at Certificate III level and above. Appendix B lists training packages endorsed by the National Training Quality Council and describes the Australian Qualifications Framework.

### 4.2.1 Apprenticeships

In general, franchised bakeries and supermarket in-store bakeries are the largest employers of apprentices. Bakers Delight is the largest employer of baking apprentices in Victoria (Industry Sources). Industry sources indicate there are few, if any apprentices now trained through corporate plant bakeries. Instead large plant bakeries have implemented in-house training equivalent to an apprenticeship. Issues of commercial confidentiality mean that most larger bakeries handle skills development in-house or in conjunction with high end technical experts.

A high attrition rate among apprentices in the baking industry was noted in 1993–94 when only 43 per cent of apprentices in the food industry completed their training. By comparison, 62 per cent of apprenticeships in all industries nationally completed their training (estimated by industry sources to be up to 80 per cent in some states in recent years).

While the figures are ten years old, the reasons cited for the high attrition rate remain valid. These include the pressures of working in the industry, general lifestyle issues such as early working hours and apprentice wages, as well as the availability of employment. Apprentices regard working conditions as a problem and cite alternative employment as a reason for leaving. Employers regard key issues to be unsuitable recruits and their dislike of the work and/or training, as well as the quality of training.

Of the employees that remain in the industry, the main reasons given are job security, job satisfaction, and the opportunity to travel. These are followed by wages, creative scope and the ease of getting jobs in the industry once trained (DETYA 2001).

### 4.2.2 Emerging Trends

Interviews with representatives of TAFE and Baking Industry Associations suggest the following strategies to address the issues with retaining employees in the long term:

#### **Quality of training**

The implementation of the Australian Quality Training Framework (AQTF) has resulted in a shift in demand from training provided by private Registered Training Organizations (RTOs) to the established TAFE Institute Programs linked to a perceived higher level of quality assurance.

#### **Focus on Industry partnerships**

Some enterprises perceive legislative drivers (food safety, labelling, OH&S) for training are more important than skills training, although this is not necessarily the case. Industry as a whole recognises the need to develop technical skills but perceives the RTOs respond to the legislative drivers as these attract larger class sizes, rather than tailoring courses to more specific requirements. This has led to recognition of a need for partnerships between education institutions and industry to develop more relevant training for each sector of the baking industry.

### **Shift away from traditional apprenticeships**

There is an increasing need to develop apprenticeship training and skills in areas not traditionally provided in apprenticeship programs, particularly in relevant business and management training. The proliferation of franchised baking outlets is providing increased opportunities for employees in the baking industry to manage and/or own a business, which requires skills beyond those traditionally provided for bakers. The outline for the training package for food processors includes an extensive range of units in business and management competencies. However, these may not be adequately represented in some current training institutions.

### **Research into measurable benefits of training to industry**

Industry consultation suggests that in order to develop greater responsiveness and relevance of training there is also a need to place a greater emphasis on measuring the actual benefits of training to industry.

### **Impact of technology on the industry**

Technology is having an increasing impact on the industry and vocational training needs to reflect this change. For example, partnerships between enterprises, RTOs and food manufacturing machinery producers may help to increase the level of understanding regarding detail of machine operation and its impact on the operator and supervisor.

## **4.2.3 Bread Baking Training**

The Training Package for food processing is developed by the National Food Industry Training Council in consultation with industry. It is signed off by the State Training Authorities in each state. TAFE develops courses and delivery procedures and utilizes baking associations at the state level to disseminate information on training packages to the industry.

Baking courses are provided by

- day release
- block release
- on the job training, or
- a combination of the above.

Resources are continuing to be spread thinly as funds available for training are reduced and the different sectors of the industry (plant, franchised and independent bakeries) require more diverse training.

### **Issues and Trends**

- Greater flexibility in training courses and overall offerings is needed. Core competencies in OH&S, hygiene, sanitation and food labelling will overlap but different business models (plant, franchised and independent bakeries) require tailored packages.
- There is a need for greater consistency in qualifications which could be addressed by the State Training Authorities through the AQTF quality assurance process.

#### 4.2.4 Pastries, Cakes and Biscuits Training

Development of training for pastry and biscuits manufacturing is limited at present. TAFE offers training in pastry and biscuits in plant manufacturing only. Training for pastry chefs employed in hotels and restaurants is offered through other training institutes and is also covered under the Tourism and Hospitality Training Package.

TAFE customizes its training courses in pastry and biscuits to a greater extent than in the other courses it offers in the baking industry. TAFE will go to the client site, assess the training needs and provide the training to fit in with the business they are working with. This training is usually carried out on the premises of the employer, often after shifts. This is a good model for the flexible, customised delivery which could be developed across the industry.

This system achieves a 90 per cent completion rate for the courses. This rate reflects the high degree of ownership by the client company driving the courses and the training.

Candidates mainly train in Certificate I and II Food Processing – Certificates III and IV are designed for supervisors and high positions, and there are not as many middle and upper management positions in plant manufacturing. However, most bakers in a plant baking environment would be trained to Certificate III level.

A great deal of Recognition of Prior Learning (RPL) is taken into account prior to commencing on site learning. Certificate I and II courses are usually completed in about a year. All students are trainees; there are no apprentices in plant manufacturing for pastry and biscuits. Companies appear to be more interested in training so their staff can do the job, as compared to obtaining the qualifications.

##### Training Issues

The pastry and biscuit sectors only accept a limited number of students in public courses. While lower numbers are completing training it is also acknowledged that a higher level of education will be needed to do the job. For example changes in plant operations mean students will take on more responsibility and at some point move into a supervisory or management role. These managerial skills could be developed under the management and supervisory competencies available in the current Training Package framework but appear to be under-represented in current courses.



## 5 Eco-Efficiency and Energy Usage

### Key Points

- The bread baking industry consumes in excess of \$30 million of energy per annum.
- A significant component of energy cost occurs within the independent sector where there is a high degree of variability in the ability of bakeries to achieve efficiencies.
- The industry overall has had an ad-hoc approach to energy management.
- Franchises may be better positioned than other sectors to manage energy through uniformity of processes.

The Australian baking industry produces only approximately 0.2 per cent of the total greenhouse gas emissions generated by the Australian manufacturing industry. The cost of total energy consumed is estimated at \$30 million plus per annum. Energy costs typically represent about 3 per cent of the total cost of baking and about 6 per cent of controllable costs. Total energy costs to the plant baking sector are estimated at \$12.5 million per annum with energy costs for the franchise and independent sector at approximately \$18.5 million per annum.

An Energy Efficiency Best Practice Program (EEBPP) study of the Australian Bread Industry was conducted in 1999<sup>5</sup>. The study showed a significant relationship between the scale of production and the energy intensity of production. The largest users of energy, per mega-joule, in the sector were franchises and independent bakeries (Table 5.1). There is a large difference in energy usage between franchises and independents. Typically franchised operations are more efficient because they have more consistent operating practices, newer equipment and less variability in product type and split.

**Table 5.1 Average energy use in the baking industry**

Industry segment	Organisation	Market share	KPI Average (MJ/kg dough)	Estimated achievable savings (10 per cent)
Corporate	Goodman Fielder	52	2.19 average	10
	George Weston Foods		2.04–3.03 range	
In-store <sup>6</sup>	Woolworths	17	Range Franchise-Small independent	20
	Franklins			
	Coles			
Franchise	Bakers Delight	8	2.32–3.2 MJ/kg flour	20
Independent	Small independent	23	4.87–7.1 MJ/kg flour	20
Large independent			2.19 MJ/kg Dough using majors data	10

Source: DISR 1999

<sup>5</sup> The study was conducted by Energetics and BRI Australia, for the Commonwealth Department of Industry Science and Technology (DISR 1999).

<sup>6</sup> At the time of writing it was not possible to identify the cost of energy to in-store bakeries as they are not measured separately within the supermarket environment.

## 5.1 BARRIERS TO CHANGE

The energy management strategies employed within each industry segment are either carried out on an ad-hoc or informal basis. In particular, plant bakeries tend to only implement energy saving changes with quick returns and/or low up front costs. Barriers to adopting energy efficient management strategies differ between sectors and include:

- the low relative cost of energy to total operating costs
- lack of greenhouse drivers and incentives
- lack of resources and competition for capital
- general awareness and access to assistance to implement energy efficiency strategies.

## 5.2 COMPARISONS WITH OVERSEAS BAKERIES

In 1999 there was little material difference between energy practices in the United Kingdom and Australia (Table 5.2). Energy usage in bakeries in the United States cannot be directly compared with Australian bakeries as they use a sponge and dough baking process, which is more energy intensive than Australia's no-time dough process.

**Table 5.2 Comparison on energy usage in bakeries in the UK, United States and Australia**

Indicator	Unit	UK	United States	Australia
Average bakery size	(tonnes per annum)	58.4	13.4	17.5
Total energy intensity	(MJ/kg)	2.46	3.45	2.19
Fuel energy intensity	(MJ/kg)	1.9	2.82	1.73
Electricity energy intensity	(MJ/kg)	0.56	0.63	0.43

Source: DISR 1999

## 5.3 ENERGY EFFICIENCY DEVELOPMENTS

Since 1999 the energy industry in Australia has continued to deregulate. There have been no subsequent studies of energy usage in the industry however BRI Australia has been commissioned to produce public communications documents on 'Good Energy Practices' for the baking industry to improve the awareness of the need for great energy efficiencies within all sectors. Industry sources indicate however that the key driver for most bakeries, in particular the larger plant operations, is still the procurement cost rather than the consumption of energy.

In June 2002 Bakers Delight opened a showcase bakery at Macsot NSW. The aim of the 'Energy Efficient Store' project was to reduce greenhouse gas emissions and energy use by up to 40 per cent by improving the efficiency of equipment practices and building designs. Research and technology benefits gained from the project to date have included design improvements to retail baking ovens such as door seals, use of solid doors, extra insulation and foil blanketing which have alone reduced overall energy usage by 28 per cent (Industry sources).

Supermarkets are currently considering initiatives to improve the management of energy within in-store bakeries as well as other related environmental issues including wastage.



## 6 Regulatory Impacts

### Key Points

- The *Food Standards Code* (the Code) is intended to provide more informed choice and safer and healthier foods for consumers, and greater capacity for food businesses to innovate.
- While offering greater flexibility to manufacturers, the Code remains complex and provides a comparative advantage to large food businesses who have requisite implementation systems.
- Compliance with the Code is varied and costly – larger enterprises have been able to successfully implement the requirements whereas small businesses have continued to struggle. Implementation and compliance costs are likely to be passed on to consumers. Better tools for communicating regulatory requirements to small businesses are needed.
- Baking manufacturers are being required to adopt food safety systems by their customers, as an entry price to doing business, and increasingly by regulatory agencies who are legislating mandatory food safety programs for all food businesses.
- Costs for implementing and auditing food safety programs can be considerable and may disproportionately affect small manufacturers. Common audit criteria are being developed to address the problem of multiple audit costs.

In recent years the baking industry has adjusted to considerable changes to the legislative environment in which it operates. Some aspects of these changes, such as the new tax system (GST), trade practices legislation, workers compensation insurance schemes, and OH&S legislation are common to all businesses and have been imposed on every sector. However, changes to the *Food Standards Code* and, in some states and territories, the introduction of food safety programs, are specific to the food industry. These food industry specific changes are discussed with particular reference to their impact on the baking sector.

### 6.1 FOOD STANDARDS CODE

#### 6.1.1 Background-Food Regulation Review and changes to the *Food Standards Code*

The *Food Standards Code* (the Code) comprises legislative standards that apply to all food sold in Australia. Standards in the Code are developed by Food Standards Australia New Zealand (FSANZ) and adopted by referencing legislation in all Australian states and territories and by New Zealand. The Code is divided into chapters that incorporate standards that apply to all foods generically (e.g. labelling provisions, food safety standards), or specifically according to product/commodity type (e.g. dairy products, cereals, fruit and vegetables). The Code underwent a significant shift in emphasis in 2000 following a review of pre-existing standards and the linkage of New Zealand into

the food regulatory system. Changes to the Code were first mooted more than 10 years ago by predecessors of FSANZ and were spurred by the 1995 review of competition policy by the Council of Australian Governments and the 1998 Blair Report on Food Regulation Review. A number of problems and constraints with the old Code and food regulatory system were identified in these reviews including:

- arbitrary prescriptiveness and divisions in the old Code – standards were not based on the specific objectives for establishing food regulations and various product specific standards inhibited innovation in the food industry and could be considered trade barriers
- standards did not explicitly protect and promote public health and safety – food poisoning incidents such as the Garibaldi salami contamination and World Star bakery pork rolls highlighted that food regulatory reform was reactive and dependent on failings in the system
- inefficiencies and extra compliance costs for industry and consumers due to overlap of governments at different levels (municipal to federal), and in agencies at the same level
- lack of consumer confidence and transparency in the decision making process, particularly for novel foods and additives
- labelling provisions were inconsistent and did not provide clarity both for consumers and for industry implementation – hence driving up costs
- enforcement was too heavily focussed on product standards that do not have distinct public health and safety outcomes
- enforcement action and penalties differed significantly between jurisdictions – adoption over time of a model Food Act should ensure a level playing field in all jurisdictions.

In reviewing standards in the old Code, FSANZ (and its predecessor the Australia New Zealand Food Authority – ANZFA) applied specific objectives including:

- the protection of public health and safety
- the provision of adequate information to enable consumers to make an informed choice
- the prevention of misleading and deceptive conduct.

In developing standards regard was also given to:

- standards being based on scientific risk analysis
- consistency where possible with international standards
- the facilitation of competition and innovation in the food industry
- the promotion of fair trade.

During review of standards in the old Code, the milling and baking sector participated in a series of public reviews through the Food Legislative Consultative Committee (FLCC), an industry body representing small and major millers and bakers. Over 160 submissions were made by this body concerning the content of standards in the new Food Standards Code.

### 6.1.2 Features of the new code

The new Code has been in operation since December 2002, after having operated in parallel with the previous Code for a period of two years. The majority of prescriptive commodity standards (which ensured quality if not safety) have been removed in favour of more complete consumer information to be provided on food packages and, in some cases on unpackaged food, at the point of sale. One example of the removal of a prescriptive commodity standard is where the previous Code required the minimum amount of rye flour in rye bread to be 30 per cent. This requirement has been removed from the current Code and this allows greater flexibility in the manufacture of rye breads. While providing greater flexibility the new Code requires greater information to be provided to consumers about the quality and composition of most packaged products. Packaged bread for example must contain a nutrition information panel and, where ingredients are emphasised on a label, the percentage of that ingredient must be declared. Thus, the amount of rye flour in a rye bread (typically 18 per cent, but not prescribed) must be disclosed on the label, or by verbal advice if requested over the counter. Bakers are therefore now free to make a light rye bread (say 12 per cent rye) if there is consumer demand, but are required to declare the percentage of rye flour in the product.

While nutrition information panels and percentage labelling requirements provide greater consumer information they can be an onerous requirement for manufacturers (such as a patisserie) whose product range is wide and innovation is rapid to suit seasons and food fashions.

The new Code's labelling requirements also include additions or strengthening of requirements for:

- allergenic ingredients (e.g. milk, nut, egg, sulphites, fish, soy, gluten ingredients)
- date marking
- food recall information
- disclosure of irradiated and genetically modified (GM) ingredients
- country of origin labelling.

There was also a change in the definition of processing aids, so many additives such as enzymes, non-stick agents, and some antioxidants that do not perform a technical function in the final food but were classed as additives, can now be omitted from the ingredient list on the label.

### 6.1.3 Compliance and costs to the industry

All of the large food manufacturers that participated in a survey undertaken by FSANZ in June 2002 had heard of changes to the Food Standards Code/Food Regulations. These manufacturers had made significant progress towards the transition from the old Code to the new requirements, and therefore had a good understanding of the changes and the implications for their business. Small food manufacturers were similarly aware of the existence of the Code/Food Regulation. However, fewer small manufacturers (about half of those participating in the research) were aware of the specific changes, or the implications to their business.

While the majority of the food industry support the flexibility the new Code allows, most regarded the mandatory nutrition panels and percentage labelling as onerous and small businesses have found these provisions difficult to comply with.

Most companies in the FSANZ survey reported that compliance with the Code involves a number of direct and indirect costs and envisage that these costs would be passed on to consumers. These costs included:

- the development and printing of new labelling artwork, larger labels to accommodate extra information, and often added costs of new labelling machinery where labels are produced internally
- loss of economies of scale for label printing until the new labelling is ready (manufacturers have been forced to order and re-order small label print runs through the two year transition period as new labelling issues arise and are resolved)
- nutrient composition analysis for nutrition panels
- hiring of lawyers and consultants to interpret and rule on labelling requirements where interpretation of the Code and/or the interpretation guidelines is unclear
- substantial time and personnel resources invested in learning about and implementing the new labelling requirements
- sourcing and tracing ingredient compositions and information from suppliers for ingredient declaration, allergen and GM ingredient labelling
- planning and infrastructure, and the development of new systems, processes and devices in order to implement and maintain compliance.

In the baking sector sharp divisions in the cost of compliance with the new Code have been identified. Major companies such as George Weston Foods have quoted costs such as \$1.5 million over two years, with no increase in sales or market share, and delays or inhibitions to new product launches (Food Australia 2003). Similarly, Goodman Fielder estimated the costs to its Australian operations to be \$3.5 million in one year, exclusive of GM labelling requirements (F Lee, Goodman Fielder, 2003 pers. comm., 30 June 2003). These costs include abnormal write-offs of label stocks, hiring of contract food technologists, internal education and trade implementation of the more demanding labelling regime.

Large enterprises employ professionally qualified food technologists who use computer programs, international databases and accredited laboratories to compile the labelling information. Smaller bakers do not have these skills or knowledge and can use consulting services such as BRI Australia's LabelRight and NIPs products. There are also free nutrition panel calculators on FSANZ's web site, or commercial packages available, however the baker must still have the requisite food technology knowledge to use these resources.

Industry comments in the FSANZ survey also show that there is a low awareness of how enforcement of the new standards will be conducted or where complaints should be directed. Food businesses assumed that enforcement will be in response to consumer complaint and industry competitors.

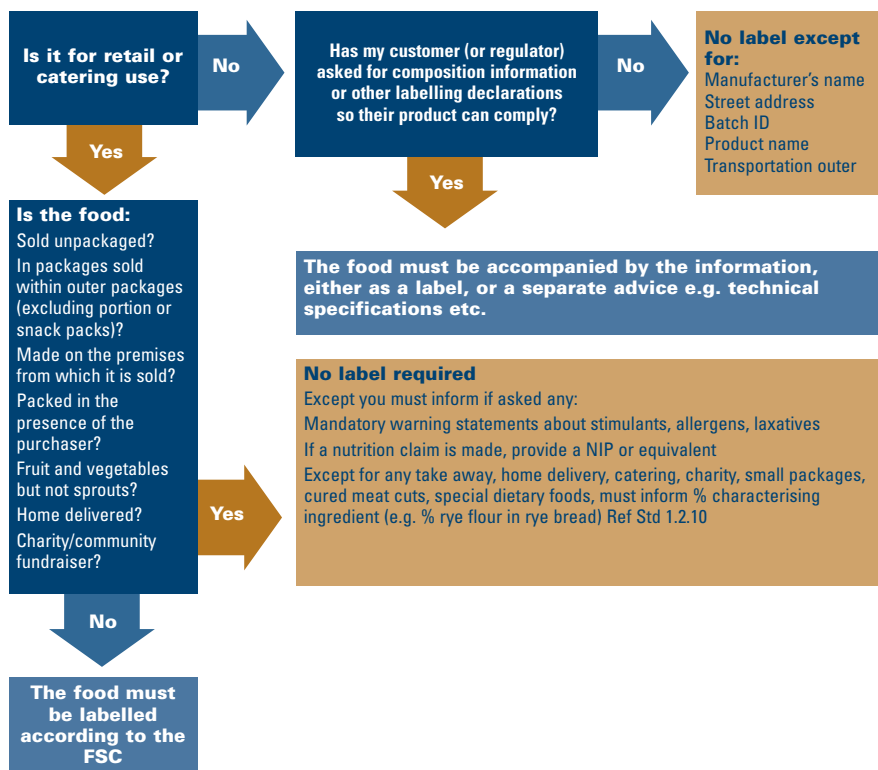
For all these problems though, industry see a number of benefits accruing from the new Code including:

- an opportunity to revamp and redesign their product labels
- an opportunity for marketing advantage, particularly with regards to lower fat products and ‘quality’ issues highlighted from percentage labelling
- an opportunity for manufacturers to strengthen their integrity with consumers and increase trust and consumer confidence (e.g. allergen labelling)
- greater flexibility as the Code is less prescriptive than the old Code, which could be worked to a manufacturer’s advantage
- an opportunity for manufacturers to know more about their products, foster relationships with suppliers, and establish some ‘company vision’ views and procedures on issues such as allergens and GM ingredient labelling
- greater harmonisation between Australia and New Zealand (for manufacturers that trade in both countries).

### 6.1.4 Communication of changes to regulation

The intent of the changes to the Code was to provide safe, healthy eating choices to the consumer. The medium for provision of this information in the baking sector varies depending on whether the food is sold in a package, or whether it is exempt from displaying a label for the reasons shown in Figure 6.1. This decision tree shows the complexity that is found in the new Code.

Figure 6.1 LABELING REQUIREMENTS UNDER THE NEW FOOD STANDARDS CODE



While the major baking industry bodies were aware of the changes to the Code, a significant proportion of small baking enterprises remain poorly informed of the changes and in many cases are simply not adhering to them. Beyond the baking industry associations there are limited avenues for regulators to reach small to medium baking enterprises. However, FSANZ has developed a number of user guides and fact sheets to assist business implement the reforms and also an industry advice line (Ph: 1 300 652 166) to assist small business in particular. The FSANZ web site also hosts a free nutrition panel calculator that allows food businesses to calculate the information required for nutrition panels.

A key communication priority for regulators is small manufacturers and suppliers, particularly those who are not members of industry-based associations. Small businesses could be addressed potentially through information networks, similar to that which exists for larger businesses through industry associations. One means of establishing such a network is through coordinated liaison with state health authorities and local councils who have responsibility for enforcing the Code. This would have the advantage of also providing a vehicle for communicating information on enforcement issues.

## 6.2 FOOD SAFETY SYSTEMS & AUDITS

Increasingly state and territory governments are moving towards a requirement for all food businesses to have a food safety plan in place commensurate with the level of risk their foods pose. Currently only Victoria has this as a licensing requirement. Other jurisdictions are likely to follow Victoria's lead in mandating food safety programs over the next few years.

Supermarkets, caterers and multi-national manufacturers have been the major driver in the adoption of food safety plans. Their supplier accreditation processes require certification by a third party auditing body. All costs are borne by the supplier, and new entrants to the market must usually have a history of 12 months to 18 months satisfactory audits before commencing supply. This commercial imperative has made food safety management plans mandatory for baking wholesalers. Audit fees may total \$1000 to \$2000 per annum, but internal compliance costs could run between \$5000 and \$100 000 per annum, depending on the size and extent of food safety risks of the establishment. The short supply of qualified auditors remains a problem for the baking sector.

Industry and government are working together to address the problem of multiple audits by developing nationally agreed food safety audit criteria. This work is being funded by the Australian Government under the National Food Industry Strategy's Food Safety and Quality Systems Initiative.



## 7 Consumer/Nutrition

### Key Points

- Apparent bread consumption in Australia has increased by 20 per cent since 1988.
- Increasing consumer interest in health has had an effect on the types and varieties of breads available.
- Wholemeal and mixed grain breads have not increased in sales – instead ‘functional’ white breads are driving the nutritional aspect of the bread market.
- There are still significant gaps between Government health recommendations on bread consumption and consumer practice.
- The bread industry faces barriers to growth with competition from convenience breakfast and snack foods and a mixed image of bread as a healthy product.

There are two main sources of published data on consumption of bakery products in Australia: the Apparent Consumption of Foodstuffs statistics series, produced by the Australian Bureau of Statistics (ABS 2000), and the National Nutrition Survey, a joint publication between the ABS and the (then) Department of Health and Family Services (ABS/DHFS 1995).

The Apparent Consumption of Foodstuffs is a measure of the food supply available for consumption after allowing for all other uses and losses. It is not a measure of intake, which can only be estimated by dietary survey, and is limited to bread consumption only. This data is not regarded as highly reliable and is no longer collected. The last collection was in 1998–99.

Until 1988–89 the apparent consumption of bread was based on bread production data collected by the ABS as part of the Manufacturing Census. This data became less meaningful as the industry became more diverse and the proportion of independent bakeries increased. Not only was the accuracy of the information, collected by questionnaire, debatable but also the Census did not include establishments with less than four employees, or in-store bakeries.

Since the early 1990s, the apparent consumption of bread has been based on flour statistics, that is, ‘flour used for breadmaking’, converted to bread with a wastage factor applied. Until 1993 these statistics were collected by BRI Australia Ltd (known at that time as the Bread Research Institute of Australia), but this process is now undertaken by the ABS.

The National Nutrition Survey is based on a survey of food intake over a 24 hour period, with a sample size of 13,858 adults and children. The raw data from the survey distinguishes between bread type, individual cakes, pastries, and different types of flour, however the published report does not show this level of detail. The last survey was conducted in 1995.

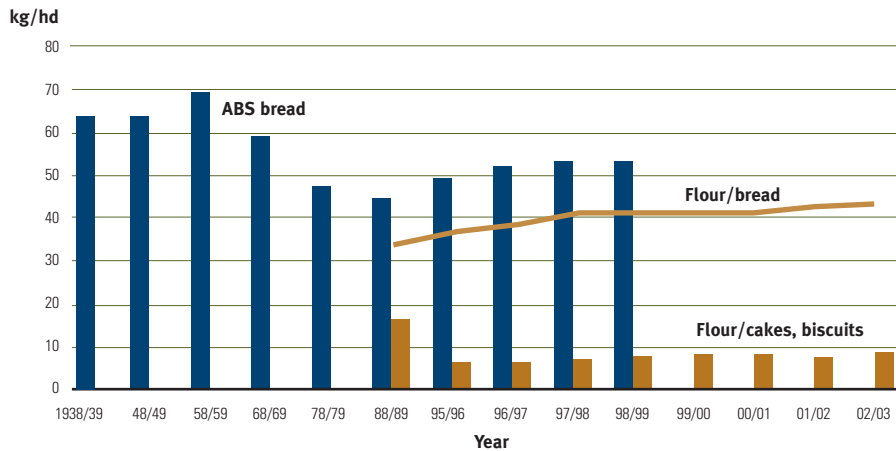
Food manufacturers also collect data specific to their products but since this is usually on a ‘commercial in confidence’ basis, it is not available in the public domain.

It is difficult to link whether consumption is related to health advice because there are so many other things that influence food consumption, including money, family habits, convenience and lifestyle. Consumer research studies commissioned by *Go Grains*<sup>7</sup> in 1998 and 2002 help to identify consumer awareness of the health benefits of bread and other grain-based foods.

## 7.1 TRENDS IN BREAD CONSUMPTION

The average apparent consumption of bread per person in Australia increased from about 50 kg per year in the late 1930s to peak at 69 kg per year in the late 1950s. Following this period, consumption declined by 13.5 per cent per decade until the mid-1980s. In the decade between 1988–89 and 1998–99 consumption of bread increased by 20 per cent to 53.4 kg per person, the highest level for over twenty years (Figure 7.1).

Figure 7.1 **BREAD CONSUMPTION AND FLOUR USE IN AUSTRALIA, 1938–99**



Source: ABS/Flour Millers Council of Australia, BRI Aust Ltd

Note: The above graph shows ABS data on bread consumption up to 1999 – the last collection by ABS. The other graphs show the overlaps between ABS and Flour Millers Council data and demonstrate similar trends in overall consumption of bread

Declining bread consumption in the 1970s and 80s was not unique to Australia. Many other countries including Europe – where bread is considered an essential part of every meal and consumption is often double that in Australia – the United States and the United Kingdom, experienced similar trends. These countries, too, are experiencing a revival of interest in recent years.

Data from the 1995 National Nutrition Survey also shows a marginal increase, per capita, in the consumption of bread since the previous dietary survey in 1983. The 1983 survey showed that males aged 25–64 years consumed 113 grams per day of bread and females consumed 71 grams per day. In the 1995 survey this changed to 121 grams per day for males aged 19 or more years and to 84 grams per day for females.

<sup>7</sup> *Go Grains* is a joint initiative of BRI Australia Ltd and the Grains Research and Development Corporation and provides scientifically based information about the health benefits of grains and pulses.

Mixed dishes, where cereal is the major ingredient, such as pizza, commercial hamburgers, lasagne and fried rice, were the most consumed of cereal-based products on a daily basis in the 1995 survey. Males aged 19–24 years reported the highest average intake of these foods – more than double the highest female intake for those aged 16–18 years. Consumption of pastries and cakes was highest for those aged 65 years and over.

Since bread is eaten in almost all households the opportunities to engage new consumers are limited. Manufacturers tend to concentrate on inducing consumers to change to their brand from another brand as well as striving for an overall increase in the size of the market, thus increasing total consumption. There is always the risk that the introduction of new brands may adversely affect sales of existing brands. For example, the launch of a high fibre white bread may erode part of the existing market share for regular white bread.

Sliced and wrapped bread remains popular, offset by a trend towards specialty breads produced in hot bread shops and in-store bakeries. Wholemeal and mixed grain breads are popular but white bread still accounts for more than half of bread sales.

## **7.2 MARKET-DRIVEN CHANGES IN THE INDUSTRY**

Consumer interest in health has had a marked effect on various facets of the baking industry.

### **The types of bread eaten**

Wholemeal and mixed grain breads have increased in popularity and currently account for 20 per cent of bread sales. White bread accounts for more than half of all bread sold, but sales have declined from about 90 per cent in the early 1980s to the current level of 60 per cent. However consumer interest in health and nutrition does not appear to be fully reflected in increased sales of wholemeal or mixed grain breads, as would be expected. This is in part due to the development of new varieties of breads.

### **The variety of breads available**

Breads are now produced with specific health attributes, such as high fibre, soy and linseed, omega-3 fatty acids, high calcium and high fibre white bread, elevating these breads from commodity status to functional food. This opportunity was realised by the industry in part to target an ageing population who have higher disposable incomes. The growth in hot bread shops and small bakeries has also resulted in a wide range of breads. A significant proportion of the bread sold in typical hot bread shops is comprised of variants based on white bread (cheese/bacon, olive etc).

### **Industry innovation**

In addition to high fibre attributes, bread manufacturers have started to target health benefits beyond those attributed to nutrient and fibre content. The addition of nutrients, including iron and folate, omega-3 fatty acids, calcium and soy and linseed breads containing higher-than-usual levels of phytoestrogens, have played an important role in developing bread products that offer true health benefits to consumers.

### Designer breads

Premium ranges produced by specialised bakers include products such as sourdoughs and ‘bush-breads’ with native Australian ingredients. These products are promoted for their enhanced nutritional profile, but to date do not constitute a significant proportion of the market, possibly due to small-scale production and premium prices.

### The trend to fresh and natural

The trend to buy fresh and natural supports the growth of hot bread shops. The growth of supermarket in-store bakeries is also consistent with the supermarket trend to fresh and natural. Many people perceive bread baked by a small baker to be less processed and to contain fewer additives than packaged bread sold in a supermarket.

### Market segmentation/diversification

Bread manufacturers have different production capabilities and therefore respond differently to consumer needs than do smaller bakers. Larger bakers are restricted to producing products in larger quantity, but through their research and development capabilities are able to drive the development of innovative products. Smaller bakers and hot bread shops are better positioned to produce a greater variety of products, and in doing so, are challenging the market share of the major plant bakeries.

### Multicultural influences

The wide availability of an increasing variety of ‘traditional’ or ‘ethnic’ breads, including focaccia, baguettes, bagels and flatbread, reflects the multi-cultural nature of Australia’s population and its influence on our eating habits. The plant bakeries have added such products to their range, which has enabled them to compete with small bakers and hot bread shops. This trend is reflected in the 1995 National Nutrition Survey with a wide variety of breads being consumed.

## 7.3 BREAD AND HEALTH CONSIDERATIONS

Evidence from scientific research studies increasingly shows that wholegrain foods are essential in a healthy diet. Health authorities therefore encourage a high consumption of these products. The Dietary Guidelines for Australians encourage all Australians to ‘*eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain*’. However, based on the limited data available, there still appears to be a gap between public health recommendations and consumer habits.

Research findings show associations between consumption of wholegrain foods and reduced risks of lifestyle diseases such as heart disease, diabetes and some cancers. In view of the variety of factors that influence bread consumption, including money and family habits, it is not possible to determine if consumer awareness of the health benefits of grains is translated into higher consumption of wholemeal and/or mixed grain breads.

The *Go Grains* initiative identified a number of areas needing to be addressed in order to encourage higher consumption of bread and other grain-based foods (Yann et al. 1998):

- The majority of people (85 per cent) believe they already eat enough foods like bread and pasta.
- 48 per cent of people continue to believe that eating too many carbohydrates will be fattening.
- Less than 1 in 3 people associate bread with ‘grains’ (brown bread – 28 per cent; white bread – 25 per cent).
- Women in particular appear to be getting mixed messages about eating foods like bread and pasta. Some people are eating more of these foods to be healthy while others claim to be eating less for the same reason.
- Not all grain products are perceived to have the same nutritional value – the benefits of grains can be outweighed by the addition of other ingredients such as fat and sugar. Products where the grain is still visible such as mixed grain breads were perceived to be healthier than those where ‘you can’t see the grains’.
- There was no obvious relationship between eating more bread and being particularly interested in health, nutrition and diet.

A Newspoll survey commissioned by *Go Grains* appears to show some improvement (*Go Grains 2002*):

- Over two-thirds of respondents (69 per cent) rated the health/nutritional value of wholemeal/ multi-grain/ mixed grain bread as excellent or very good. This contrasts with white bread, which was rated poorest for health and nutritional value.
- When respondents were asked whether four statements about grain foods were true or false, over two-thirds of respondents felt regular consumption of grain foods did help reduce the risk of heart disease, that of developing bowel cancer and could also aid in weight loss or weight control. For the statement that grains could help reduce the risk of developing diabetes only 52 per cent of respondents believed the statement to be true and over a quarter of respondents (27 per cent) did not know. Overall, 34 per cent of the population believed all four statements to be true.

## **7.4 POTENTIAL BARRIERS TO INDUSTRY GROWTH**

There is a range of factors that have the potential to impede industry growth:

- The resurgence of interest in low carbohydrate diets for weight reduction is based on the myth that high carbohydrate foods are ‘fattening’ because of the high sugar content, and that by not eating carbohydrates the body uses up fat stores for its energy supply. Proponents of these diets aim to reduce or eliminate all carbohydrate foods (bread, breakfast cereals, pasta, rice etc) from the diet in the pursuit of thinness.
- Competition – there has been a huge increase in the number of competitor foods, especially in the snack food category, but also including breakfast cereals, rice and pasta.
- Breakfast habits –the trend to ‘breakfast skipping’ (adults and children) and the development of breakfast bars and ‘breakfast on the go’ convenience foods pose a threat to traditional breakfast foods like bread.

- Glycaemic Index (GI) – a relatively new concept relating to the rate of carbohydrate digestion. GI has captured the interest of the media and is commonly misreported. Foods like white and wholemeal breads have a high GI (rapidly digested carbohydrate), while mixed grain breads and those with oat or barley flour have low GI. High GI foods are commonly interpreted as ‘bad’ and low GI as ‘good’.
- Occasions of usage and bread-eating practices. If the habits of countries where bread consumption is high were to be adopted in Australia, this would involve a change in attitude that bread is not a side dish but is part of a meal. European countries view bread differently to Australia, England, and United States and as a result consume more bread.



## 8 Industry Research and Development

### Key Points

- The Australian baking industry has a strong track record in research and development.
- R&D funding has undergone significant change both in terms of research targets and funding.
- Concentration of ownership in the industry has led to the development of larger in-house R&D departments.
- A significant component of R&D is now conducted by ingredient suppliers.
- Advances in ingredient and premix technology have provided greater flexibility and less technical demands on smaller bakeries and manufacturers.
- A number of private and public research organisations serve the industry, the most significant of these being BRI Australia Limited.

### 8.1 BACKGROUND

The Bread Research Institute of Australia was formed in 1947 in response to a review of the wheat and baking industries. The activities of the Institute were funded from a voluntary levy on bakers' flour. During the period of the voluntary levy BRI Australia's research mandate was broad and generic. Examples of research included the following:

- The improvement of wheat quality for bread making. After significant wheat quality improvement was achieved, Australian wheat breeding programs took more responsibility for quality improvement.
- Development of the Australian Rapid Dough bread making process which became the main method of bread making used in Australia.
- Energy management for the baking industry.
- Process control systems.

The Australian Rapid Dough bread making process was a significant factor in the industry as it provided a number of benefits over the United States style sponge and dough technique. It is especially suited to the wheat varieties that have been developed for the Australian environment.

In 1993 the levy on the sale of bakers flour, which was collected by the flour millers on behalf of BRI Australia, ceased. The key factor driving this decision was the perceived inequity where the access and delivery of services was not linked to payment. This is best illustrated by the rise of the major milling and baking companies that had developed their own R&D capability but were also paying the largest total levies. At the same time, a small bakery with no R&D capability could draw heavily on BRI Australia's services.

Pre-competitive 'for the industry good' R&D has just about disappeared in Australia. It is worth noting that New Zealand still operates an industry R&D function funded from flour levies.

## 8.2 INDEPENDENT R&D

BRI Australia's research program is conducted on a contract service basis, with clients including RDC's and CRC's as well as private organisations. The research can be categorized in the following types of R&D:

- grain quality for the domestic baking industry
- wheat quality improvement for the export market – under investment of the Grains Research and Development Corporation
- ingredient R&D
- processing and equipment R&D
- product development
- health and nutrition.

## 8.3 PUBLIC SECTOR R&D

A range of public sector organizations are involved in R&D related to the baking industry. These include:

### **CSIRO Division of Plant Industry**

Most plant industries' R&D has been focussed on the fundamentals of wheat chemistry and its contribution to baking. Much of this work is applied to the improvement of wheat quality. A significant outcome of work completed by this group in the past was the development of vital wheat gluten, which has made a major impact on bread baking.

### **CSIRO Division of Food Science now Food Science Australia**

Baking research has not been a major focus of activities for the Food Science Division. However their skills have been introduced to specific issues particularly with reference to microbial shelf life studies and they have contributed to some ingredient and packaging work. Most recently this group developed the encapsulation technology to support the use of fish oil as a source of Omega-3 fatty acids.

### **CSIRO Division of Human Nutrition**

In recent years this group has been employed by major corporations to complete nutrition studies to support new products. These studies are conducted to show the efficacy of new health promoting products. A good example is the work on the source of dietary fibre provided by high amylase maize. In this case the research has been a mixture of public and private investment.

### **Universities**

On the whole universities have played a minor role in baking R&D. There are however some examples of contributions. One recent example was the program conducted by the University of Sydney to develop soft wheat for production in northern Australia. This project was an example of industry and public investment to help a specific company and a small number of wheat growers.

## 8.4 INDUSTRY INVESTMENT IN R&D

Most companies guard their R&D portfolios and the amount and type of R&D investment in the baking industry and therefore this information is not available to this study. Increasingly the R&D requirement is forced onto the supplier rather than the baking companies and is predominantly in product development in three areas:

- equipment product development – mainly for process control and production efficiencies
- ingredient product development – often focused on end products that tie a bakery into a specific ingredient company
- flour product development – similar to ingredient R&D in that the bakeries become more reliant on their flour supplier for advances in flours and premixes.





## 9 Industry Support

### Key Points

- Industry support overall remains fragmented reflecting the general state of the industry.
- Effective communication to the industry as a whole is perceived as extremely difficult.
- Access by the baking industry to statistics is limited and only the industry associations maintain limited data. This tends to limit the lobbying capacity of these bodies.
- There is a need for the industry to provide improved public communications on the image of the baking industry and the health benefits of increased consumption of baked products.
- National initiatives such as ANZBAKE – the network of Australian and New Zealand baking associations – are providing a useful platform to develop a more coordinated industry approach across a range of issues.

Support for the baking industry is provided by independent state-based baking industry associations (BIAs), except in the Northern Territory. Related associations include the Australian Society of Baking (ASB) and the recently formed Bakery Equipment Suppliers Association (BESA). The baking industry is seen as separate and distinct from other food industry areas such as the hospitality sector. As an example, pastry cooks tend to be classified as chefs rather than bakers and are usually catered for separately through institutions such as Master Pastry Cooks Associations. Other competing and/or complementary industry support is also provided through organisations such as the Australian Industry Group (the amalgamation of the Metal Trades Industry Association of Australia and the Australian Chamber of Manufactures), the Retail Traders Association and the Restaurant and Caterers Association.

Research from our interviews indicates that there is a degree of variability in two key areas between the BIA's including:

- *The extent of representation of the sector*  
In most states membership is predominantly made up of franchised and independent businesses with the exception of WA's small membership base, which is largely made up of corporate members. In general corporate sponsorship and support has declined.
- *The level of activity and focus of the associations is varied*  
While industrial relations, employment and OH&S are common areas of activity, associations in eastern states, in particular Victoria and NSW, are more actively involved in the promotion of the public image of the industry and the development of initiatives to promote local consumption and develop export opportunities. In the case of Victoria for example this extends to dovetailing with state government initiatives such as Food Victoria and the development of the Victorian Biscuit Manufacturers Association.

## 9.1 INDUSTRY ISSUES

Common themes that emerged from interviews with relevant associations and stakeholders included:

- A lack of a uniform approach to self-regulation. There is no single body to establish standards or measurements in the absence of a regulated system.
- Industry inefficiencies occurring in the sharing of research and development outputs. While it is acknowledged that the bulk of R&D in the industry is now conducted on a client specific basis, there are examples where duplication has occurred with work that could be considered pre-competitive.
- There has been limited work conducted on, or a platform for, benchmarking the industry to allow effective measurement of industry drivers. Work by BIA Victoria through the Bentley Benchmarking project is acknowledged however.
- The attractiveness of employment and the support for vocational training in the industry continues to be a concern.
- The availability and limited access to meaningful industry statistics to develop better industry policy.

## 9.2 GOVERNMENT INITIATIVES

There are a number of government initiatives available to companies in the baking industry. This includes:

- the Food Innovation Grants program, funded under the National Food Industry Strategy. This program provided dollar-for-dollar grants to food businesses for projects which focus on delivering commercial results through R&D and innovation in product, processing or technology (see also [www.nfis.com.au](http://www.nfis.com.au))
- the New Industries Development Program provides competitive based funding for small to medium sized enterprises in the agricultural, processed food, fisheries and forest industries to turn innovative business ideas into competitive, profitable and sustainable commercial ventures. Two types of grants are available:
  1. dollar-for-dollar grants for pilot commercialisation projects aimed at incubating innovative niche agribusiness ventures, and
  2. In-Market Experience Scholarships that enable emerging managers from small to medium agribusiness enterprises to gain first-hand experience in specific areas of business management and new markets (see also [www.ffa.gov.au/agribiz](http://www.ffa.gov.au/agribiz))
- the Australian Research Council Linkage-Project program funds collaborative research and development projects between university researchers and partner organizations that are undertaken to acquire new knowledge and that involve risk or innovation (see also [www.arc.gov.au](http://www.arc.gov.au)).

A full list of government grants is available at [www.grantslink.gov.au](http://www.grantslink.gov.au).

A new Cooperative Research Centre for Innovative Grain Food Products commenced in July 2003. Research is focused on the development of functionality in foods, including baked products, in response to the identified need to address health issues with food. The CRC has strong commercial backing and will invest A\$36 million over seven years. It

is expected to develop significant intellectual property for commercial partners as well as public health and community benefits. Partners in the new CRC include:

- the Grains Research and Development Corporation
- BRI Australia Ltd
- Council of Grain Grower Organisations Ltd
- Export Grain Centre Ltd
- Weston Technologies (A division of George Weston Foods Ltd)
- Puragrain Pty Ltd
- Southern Cross University
- Danisco Australia Pty Ltd

Other industry initiatives supported by the Australian Government also include the Australian Tax Office GST Baking Industry Start Up Assistance scheme promoted by the Baking Industry Association of Victoria.





## 10 International Comparisons

### Key points

- Australia is experiencing similar trends regarding the globalisation of the baking industry to the United Kingdom and the United States.
- The United States baking industry is also reaching a state of maturity.
- Australia's consumption preferences on a percentage basis of bread types appear closer to the United Kingdom market than European or North American markets.
- The trend towards more convenience products and out-of-home dining is a pattern affecting all western industrialised countries, prompting a shift in the purchase of baked goods, with loaf bread declining.

The world market for bakery products is part of the globalisation process. The impacts of globalisation on the Australian baking industry are similar to those in other countries where foreign ownership of baking and ingredient businesses and machinery suppliers, and offshore research and development, influence the way in which companies operate.

Industry issues such as food safety, labelling and OH&S are now common to varying degrees in all European Union markets and North America.

### 10.1 INDUSTRY STRUCTURE

Australia's industry is following the general global pattern of industry concentration however the impact of franchised bakeries appears to have been greater here in Australia possibly due to its relatively small market. Larger plant bakeries in Australia now constitute approximately 60 per cent of total bread sold (although this percentage is declining) compared to 73 per cent in the United Kingdom. The influence of corporate businesses is declining relative to other markets, however. The exception is the biscuit sector where Arnotts is ranked as one of the worlds largest biscuit companies. By comparison, the top five grains-based food companies in the United States in 2002 accounted for US\$136.5 billion in sales or more than 57 per cent out of a total of US\$239 billion from the top 27 ranked food businesses (Milling and Baking News 2002).

Similar to the situation facing in-store bakeries in Australia, the United States market appears to be reaching a level of maturity. In-store bakeries grew by 66 per cent from 1987 to a total of 31 400 in 2002. New bakeries and the remodelling of existing bakeries planned for 2003 totals 3500 however overall sales growth in this sector was 6.5 per cent or 1.6 per cent ahead of the compounded rate of inflation. Industry sources have linked slow sales performance with the greater focus on systems to cut costs rather than meeting customer quality and variety needs (Modern Baking 2002).

## 10.2 CONSUMPTION

As identified in section 7, the decline in the consumption of bread in the 1970s and 1980s in Australia was also reflected in declines in a number of other countries. On a per capita basis our consumption still lags substantially behind that of the United Kingdom and European countries generally. For example, Germany's bread consumption is projected to increase to 90kg per head by 2004.

Australia's consumption preferences on a percentage basis of bread types appear closer to the United Kingdom market than European or North American markets. The United Kingdom market by product type indicates that over 75 per cent of bread sold is white, 9 per cent brown and 13 per cent wholemeal (compared to 62 per cent, 5 per cent and 15 per cent respectively for the Australian market) (UK Federation of Bakers 2003).

By comparison, more than half of the bread consumed in Germany is mixed rye and wholemeal bread. Rye bread is also preferred in Denmark and the Netherlands (UK Federation of Bakers 2003).

In the United States, studies conducted in 2002 have shown that tortilla consumption has grown on average by 9 per cent in the past two years and is now only second in popularity to white bread accounting for 32 per cent or \$5.2 billion in total bread industry sales. It is estimated this sector will be worth \$6 billion by 2004 (Tortilla Industry Association 1993).

## 10.3 TRENDS

The trend towards more convenience products and out-of-home dining is a pattern affecting all western industrialised countries. It is also prompting a shift in the assortment of baked goods with an increase in quick snacks and small fast foods. Loaf bread sales are lagging in Europe while snacks in particular are growing. In the United States new bread product lines introduced in 2003 declined by 12.8 per cent over 2002 while cake mixes, cookies, pastry and baked products increased SKU's by 46 per cent, 63 per cent and 65 per cent respectively over the same period (Stagnito's New Products Magazine 2003).

The Australian home meal replacement market, having taken its lead from the United States, has not yet achieved market expectations and continues to lag behind United States trends.

In terms of nutrition and health, issues that have affected the Australian as well as offshore markets include Acrylamides, Genetically Modified Organisms, the use of fats and in the United States, an increasing focus on obesity-related health issues.

# Appendix A

## PROJECT APPROACH AND METHODOLOGY

### Objectives

The key objective of the project was to provide an overall picture of the Australian baking industry, including market trends and drivers, with state based information where available and international comparisons where feasible.

Related aims were:

- To provide industry with a profile and analysis of the baking industry from which strategies may be developed.
- To provide governments with information to aid in the development of food industry policy.
- To have a public document detailing statistics and analysis available for distribution to interested stakeholders, including key industry trends and drivers. No new research or surveys was called for with the project however it was expected the outputs of the project would be a combination of both hard and 'soft' data.

### Methodology

BRI Australia approached this project primarily on the basis of conducting a gap analysis and scoping study to determine the immediate extent of information available rather than the production of a definitive industry document. Typically, information tended to be more readily available and accessible in the bread sector than for biscuits, cakes, pies and pastries. An unintended consequence therefore is a weighting of information in this area.

The project was undertaken during the month of June 2003. Due to the limited time frame available for the project the following key steps were conducted concurrently.

#### Data sourcing

- Collation of hard data and desktop reviews.
- Formulation of data matrix.
- Desk top reviews.

#### Industry consultations

- Survey and interview a cross section of industry personnel (as per structure below).
- The BRI Australia proposal identified 46 separate industry contacts for possible interviews of which 28 face-to-face meetings and/or phone interviews were conducted.

#### Interpretation

- Overlaying data and interviews.
- Final Report.

## Baking industry classifications

For the purposes of collating data and conducting interviews, the baking industry was classified into the following manufacturing and sales segments:

Manufacturing	Sales	Ownership
Factory	Wholesale and export	Corporate (e.g. Tip Top, Arnotts)
Factory	Wholesale and export	Independent (scale from small to large)
In-store (on-site)	Retail only	Supermarket
On-site	Retail Minor wholesale	Franchise (hot bread shops/ patisserie/cakes)
On-site	Retail Minor wholesale	Independent (hot bread shops/ patisserie/cakes)

## Product Classifications

Broad product classifications were used to assemble information about the industry. These classifications largely comply with Australia and New Zealand Industrial Classifications (ANZIC) with the exception of biscuits where we included hot bake biscuits and cookies (from G5124). It should be noted that the baking industry and data research companies do not necessarily use ANZIC classifications in the collation and reporting of statistics.

### Bread products (ANZIC C2161)

- Bread loaves, bread rolls and buns, leavened bread, fruit loaves, muffins, crumpets, breadcrumbs.

### Cake and Pastry products (ANZIC ref C2162)

- Cakes, pies, pastries, donuts, puddings, slices, including frozen bakery products.

### Biscuits (ANZIC ref C2163 and G5124)

- Biscuits (except dog biscuits), hot bake biscuits, biscuit crumbs, ice cream cones, wafers, rusks, unleavened bread.

## Caveats

In preparing this report BRI Australia provides the following caveats:

### Proprietary Data

The project budget precluded the purchasing of proprietary information except where this was already available in the public domain and/or provided under license agreements.

### **Currency and relevance of data**

Journals, articles and 88 publications were sourced and referenced for this project. In addition to desktop and internet research, data were made available anecdotally through industry consultation. Of the physical data collated, registered and ranked, 47 per cent could be considered current i.e. 2000 to 2003, of which 59 per cent were journal or media articles that largely contained industry commentary without supporting statistics.

### **Availability of industry personnel for consulting interviews**

Whilst every effort was made to contact proposed interviewees, time constraints and the availability and willingness of industry contacts to engage in this project were constraints for the project.

### **Veracity and conflict of data**

A significant component of the data collated is presented as soft data and in a number of cases has no supporting qualifications to enable appropriate verification of what the data represents and how it may be interpreted. BRI Australia therefore presents this data on an 'as is' basis.

### **Data Sources**

Sources have been acknowledged wherever possible however generally this has only occurred where information is already in the public domain. Otherwise where confidentiality has been requested we have simply cited unidentified as industry sources.

# Appendix B

## TRAINING PACKAGES

### Food Industry Training Package

A training package was endorsed by the National Training Quality Council in January 2003 which covers the following sectors:

- Biscuits
- Pastry
- Cake
- Plant baking (bread)
- Edible oils and fats
- Retail Baking
- Flour milling
- Sales

Qualifications Covered by the Food Industry Training package include:

- Cert I in Food Processing (FDF10103)
- Cert II in Food Processing (FDF20103)
- Cert III in Food Processing (FDF30103)
- Cert IV in Food Processing (FDF40103)
- Diploma of Food Processing (FDF50103)
- Cert III in Food Processing (Plant Baking) (FDF30303)
- Cert I in Food Processing (Retail Baking) (FDF10803)
- Cert III in Food Processing (Retail Baking – Cake and Pastry) (FDF30503)
- Cert III in Food Processing (Retail Baking – Bread) (FDF30603)
- Cert III in Food Processing (Retail Baking – Combined) (FDF30703)
- Cert I in Food Processing (Sales) (FDF10903)
- Cert II in Food Processing (Sales) (FDF20903)
- Cert III in Food Processing (Sales) (FDF30903)

Traineeships are available for Certificates I-III in most states. Traineeships will be extended to cover Certificate IV and Diploma level programs during 2003

Source: [www.nfetc.com.au/ca.html](http://www.nfetc.com.au/ca.html)

## Australian Qualifications Framework

Certificates I – IV prepare candidates for both employment and further education training. Certificates I and II are largely new qualifications recognising basic vocational skills and knowledge and Certificates III and IV largely replace the outdated category of trade certificates.

Certificates I – IV:

- Define skills and knowledge required to meet nationally endorsed industry competency standards. These standards are developed and agreed by the industry parties (employer bodies, trade unions and enterprises).
- Competency standards are underpinned by generic Key Competencies (Mayer) that include
  - Collecting, analysing and organising information
  - Communicating ideas and information
  - Planning and organising activities
  - Working with others and in teams
  - Solving problems
  - Using mathematical ideas and techniques
  - Using technology
- May be gained through a wide range of pathways including
  - New apprenticeships (including traineeships)
  - School/institution based training
  - Recognition of prior learning (RPL) which include training programs or an accumulation of short courses

## Courses for Bakers and Pastry Cooks

### **Food Processing (Plant Baking) Cert III** (720 hours)

This course is for people who work or who want to work in the plant baking sector of the food processing industry in areas such as production or packaging level III. Students learn to work safely and effectively running and/or supervising processes and assisting others in their work in the plant baking sector. The course consists of a group of compulsory core modules, specialist elective group modules and optional modules, some specific to this sector of the industry and others covering general skills.

There are no formal educational requirements for this course.

### **Food Processing (Retail Baking – Bread) Cert II & III** (502 hours Cert II, 850 hours Cert III)

This course is for people who work or who want to work in the retail baking sector of the food processing industry in areas such as hot bread shops, cake shops, franchises and in-store bakeries. Students learn to produce and bake bread and yeast products. They also learn operational processes, and safe, effective work practices in the retail baking sector.

The course consists of a group of compulsory core modules, specialist elective group

modules and optional modules, some specific to this sector of the industry and others covering general skills.

There are no formal educational requirements for this course.

### **Food Processing (Retail Baking) Cert I** (217 hours)

This course is for people who work or who want to work in the retail baking sector of the food processing industry in areas such as hot bread shops, cake shops, franchises and in-store bakeries. Students learn about the retail baking industry and how to work safely and effectively, including operational processes and assisting others in their work in the retail baking sector. Depending on the students choice of modules they will also learn how to make a basic range of cakes, cookies, pastry and yeast products.

There are no formal educational requirements for this course.

### **Food Processing (Retail Baking – Cake and Pastry) Cert II** (420 hours)

This course is for people who work or want to work in the retail baking sector of the food processing industry in areas such as hot bread shops, cake shops, franchises and in-store bakeries. Students learn to produce and decorate a basic range of cakes, biscuits, pastry, and yeast products. Students also learn operational processes, and safe, effective work practices in the retail baking sector. The course consists of a group of compulsory core modules, specialist elective group modules and optional modules, some specific to this sector of the industry and others covering general skills.

There are no formal educational requirements for this course.

### **Food Processing (Retail Baking – Combined) Cert III** (1070 hours)

This course is for people who work or want to work in the retail baking sector of the food processing industry in areas such as hot bread shops, cake shops, franchises and in-store bakeries. Students learn to produce a range of breads, pastries and cakes and how to use baking equipment and machinery. Students learn to work safely and effectively, and monitor operational processes in the retail baking sector. The course consists of a group of compulsory core modules, specialist elective group modules and optional modules, some specific to this sector of the industry and others covering general skills.

There are no formal educational requirements for this course.

### **Food Processing (Retail Baking – Cake and Pastry) Cert III** (732 hours)

This course is for people who work or want to work in the retail baking sector of the food processing industry in areas such as hot bread shops, cake shops, franchises and in-store bakeries. Students learn to produce and decorate a range of cakes, biscuits, pastry and yeast products including specialty products such as gateaux, torten, petits fours, chocolate and sugar work. Students also learn operational processes, and how to work safely and effectively in the retail baking sector. This course is for people who work or want to work in the retail baking sector of the food processing industry in areas such as hot bread shops, cake shops, franchises and in-store bakeries.

There are no formal educational requirements for this course.

### **Baking Cert IV** (299 Hours)

This course is for people who want to become supervisors in the baking industry. Students learn how to supervise baking procedures in a range of settings, including bakeries, clubs, hotels, restaurants and guest houses.

Education requirements are Cert III level in baking, pastry cooking or bread making or equivalent. (sources: [www.aqf.edu.au/cert.htm](http://www.aqf.edu.au/cert.htm) and [www.tafensw.edu.au](http://www.tafensw.edu.au))

### **Skill Level Requirement Trends**

- The base skill level is at Certificate I and II level with a decreasing yet important number of employees required at Certificate III level and above.
- It is unlikely that enterprises require the majority of employees to be qualified at the Certificate III level, particularly as this has financial implications where skills and competencies are linked to wage rates.
- Small numbers for training required at AQF level IV and V are to be expected as the majority of training is required at Operator level.
- Principals of baking businesses possess baking skills but many are untrained in business skills.



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The Australian Government Department of Agriculture, Fisheries and Forestry is the Commonwealth Department with responsibility for the entire food production and processing chain. The Department is working with industry for improved international competitiveness, innovation and an export focus.

