



Department of  
**AGRICULTURE  
FISHERIES &  
FORESTRY -  
AUSTRALIA**



# Australian Food Statistics

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## 2002

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This report was produced by ABARE for the Department of Agriculture, Fisheries and Forestry – Australia.

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# Foreword

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I welcome the third edition of *Australian Food Statistics*. This edition provides a wide ranging set of data on food industry production and trade throughout the supply chain from the farm gate to retail sale. We have received valuable feedback from the first two editions of *Australian Food Statistics* (published in 2000 and 2001) which have helped us in updating and improving this edition.

This book is designed to meet the information needs of the food industry, policy makers and researchers in analysing and capturing the many opportunities currently presented to the industry. As in past years, *Australian Food Statistics 2002* provides data on all levels of food processing from raw agricultural product to highly processed food.

*Australian Food Statistics 2002* will play an important role in underpinning the work of the new National Food Industry Council in its role to oversee the development of the industry and the implementation of the National Food Industry Strategy. Through the Strategy the Government and the food industries are working in partnership to address the challenges and opportunities of the emerging global food market. The National Food Industry Strategy will facili-

tate action by government and industry to enhance the competitiveness and profitability of Australia's food industry.

This edition also includes two papers that examine innovation in the food industry. Innovation is one of the four key themes of the National Food Industry Strategy and has been identified as the major source of competitive advantage through the development of innovative approaches to exporting and marketing, new processes and new products. A better understanding of the nature of innovation through the food chain is vital to identifying future opportunities and improved measurement of business performance.

By providing essential data *Australian Food Statistics 2002* continues to encourage the development of a sustainable and globally competitive Australian food industry.



MICHAEL J TAYLOR  
*Secretary*  
Department of Agriculture, Fisheries  
and Forestry – Australia  
May 2002

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Nilufar Jahan, Max Foster and Alastair Peat of ABARE prepared this report, with valuable assistance provided by Perry Smith and Richard Brownlee. AFFA staff involved included Gail Stevenson, Andrew Wallace and Annette Card.

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# Abbreviations

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kg	kilogram	2.20462 pounds
t	tonne	1000 kilograms
kt	kilotonne	1000 tonnes
Mt	megatonne	1 000 000 tonnes
A\$	dollar (Australian)	
\$m	million dollars (Australian)	
\$b	billion dollars (Australian)	
US\$	dollar (United States)	
US\$m	million dollars (United States)	
US\$b	billion dollars (United States)	
cif	cost, insurance and freight	
EVAO	estimated value of agricultural operations	
fas	free alongside ship	
fob	free on board	
GDP	gross domestic product	
nec	not elsewhere classified	
ABARE	Australian Bureau of Agricultural and Resource Economics	
ABS	Australian Bureau of Statistics	
AFFA	Department of Agriculture, Fisheries and Forestry – Australia	
FAO	Food and Agriculture Organisation of the United Nations	
WTO	World Trade Organisation	
UNCTAD	United Nations Conference on Trade and Development	

Small **discrepancies** in totals are generally caused by rounding.

**0** is used to denote nil or a negligible amount.

# Overview

## Australian food industry

The food industry is a core activity in the Australian economy, with cross sector involvement ranging from primary producers and their input suppliers, through to the processing, transport, export, import and domestic retailing sectors.

The purpose of this publication is to provide a statistical overview of the many aspects of Australian food industry and its place in the domestic economy and in the

world food market. These details are summarised in table 1.

### Food chain in Australia

The value chain for food in Australia in 2000-01 is illustrated in figure A. Employing the same method as reported in ABARE (2000), it is estimated that 57 per cent of Australia's food production was exported in 2000-01.

### Australian farm and fisheries production

The value of food production from the farm and fisheries sector was an estimated \$29 billion in 2000-01, compared with \$22.1 billion (in 2001-02 dollars) in 1989-90 (figure B). This represents an annual average growth rate of 3.3 per cent since 1989-90 in constant dollar terms. This growth largely reflects an increase in the value of horticulture production, a shift away from wool toward higher crop production (particularly wheat and oilseeds such as canola) and an increased value of meat production. The value of sugar production declined sharply between 1999-2000 and 2000-01 owing to poor world sugar prices, crop disease and adverse seasonal conditions in Queensland.

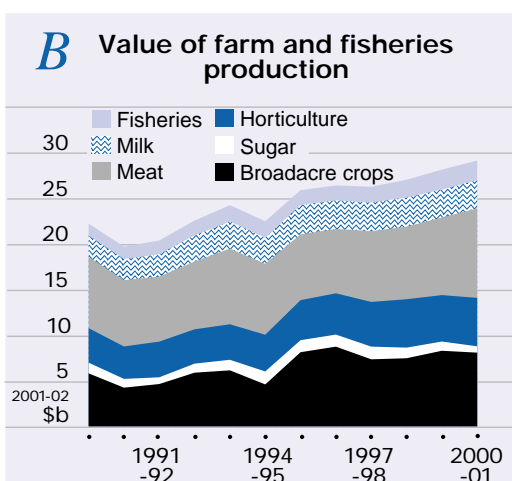
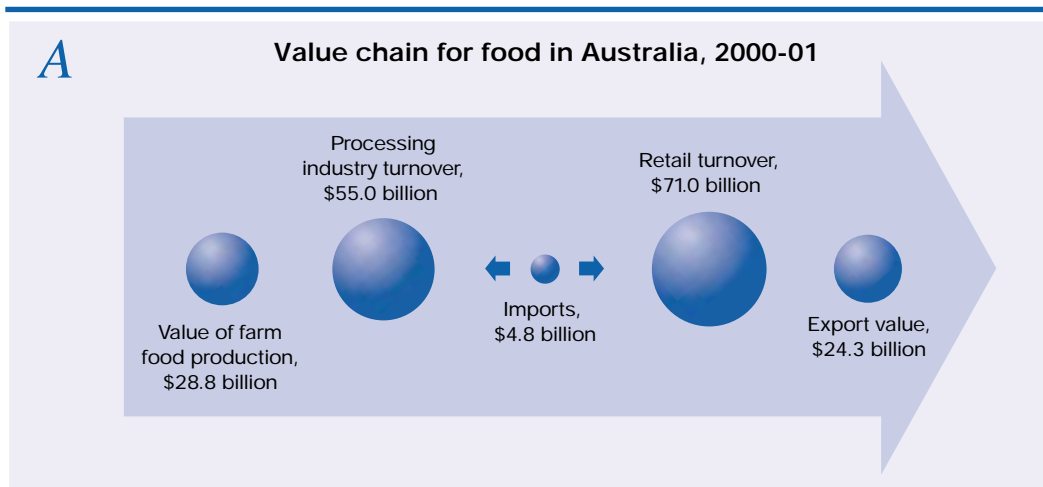
### Australian food processing

Total sales by the food processing industry were an estimated \$50.3 billion in 1999-2000, with around 22 per cent of this generated from exports. While total sales increased by only 2 per cent from 1998-99 levels, the total sales revenue generated from processed food exports rose by 23 per cent. The industry employed around 163 000 people and had direct wage and salary costs of \$6.1 billion in 1999-2000. Preliminary estimates indicate that the sales turnover of the

## 1 Overview of the Australian food industry

		1998 -99	1999 -2000	2000 -01
<b>Australia</b>				
Value of farm and fisheries food production	\$b	24.6	26.2 a	28.8 a
Sales turnover, food processing	\$b	49.3	50.3	55.0 p
Value added, food processing	\$b	13.8	13.9	14.3 p
– share of GDP	%	2.3	2.2	2.2
Employment				
– farm	'000	308	310	na
– food processing	'000	166	163	na
Food and liquor retailing turnover	\$b	63.9	67.1	71.0
– share of total retailing	%	46.0	45.0	46.0
Value of food exports	\$b	18.7	20.2	24.3
– share of total merchandise trade	%	22.0	21.0	20.0
– minimally transformed share	%	34.9	34.5	33.3
<b>World</b>				
Value of food imports	US\$b	423	415	397
Australia's export share				
– total	%	2.6	2.9	3.3
– minimally transformed food	%	3.2	3.7	3.9
– substantially transformed food	%	2.6	2.9	3.3

a Includes an imputed value for horticulture production in 1999-2000 and 2000-01. p Preliminary estimate.



Australian food processing industry increased to \$55 billion in 2000-01.

In industry value added terms the food processing industry contributed around \$13.9 billion in 1999-2000. (Industry value added represents the value added by an industry to the intermediate inputs added by the industry, derived as turnover less net inventory changes less intermediate input expenses — see ABS 2001.) This represents around 2.2 per cent of Australia's gross domestic product. While the meat, beverages and dairy sectors had the highest sales turnover in 1999-2000, with 22 per cent, 18 per cent and 17 per cent respectively, the beverages sector was the largest contributor to industry value added in 1999-2000, providing 22 per cent of the total, with wine production accounting for 10.8 per cent of

industry value added. Meat processing contributed 19 per cent of total food processing value added, dairy manufacturing 13 per cent and bakery industries 9 per cent.

## Australian food retailing

Retail turnover of food and liquor was estimated to be \$71 billion in 2000-01, an increase of 5.8 per cent from 1999-2000. Sales by supermarkets and grocery stores increased by 6.4 per cent while those of restaurants, cafes and takeaway outlets increased by 11.1 per cent. The pattern of increases partly reflects the 10 per cent goods and service tax (GST) that came into force on 1 July 2000. GST applies to all restaurant, cafe and takeaway sales. Many fresh food items — for example, bread, meat, fruit and vegeta-



bles — sold at supermarkets and grocery stores are GST exempt.

Supermarkets and grocery stores are the most important food sales outlets (figure C). Food sales from cafes, restaurants and take-away food outlets increased by 5 per cent between 1999-2000 and 2000-01 and are assuming increasing importance in the Australian lifestyle, now accounting for nearly 23 per cent of food and liquor retail turnover. Food now accounts for about 46 per cent of total retail turnover.

## Australian food trade

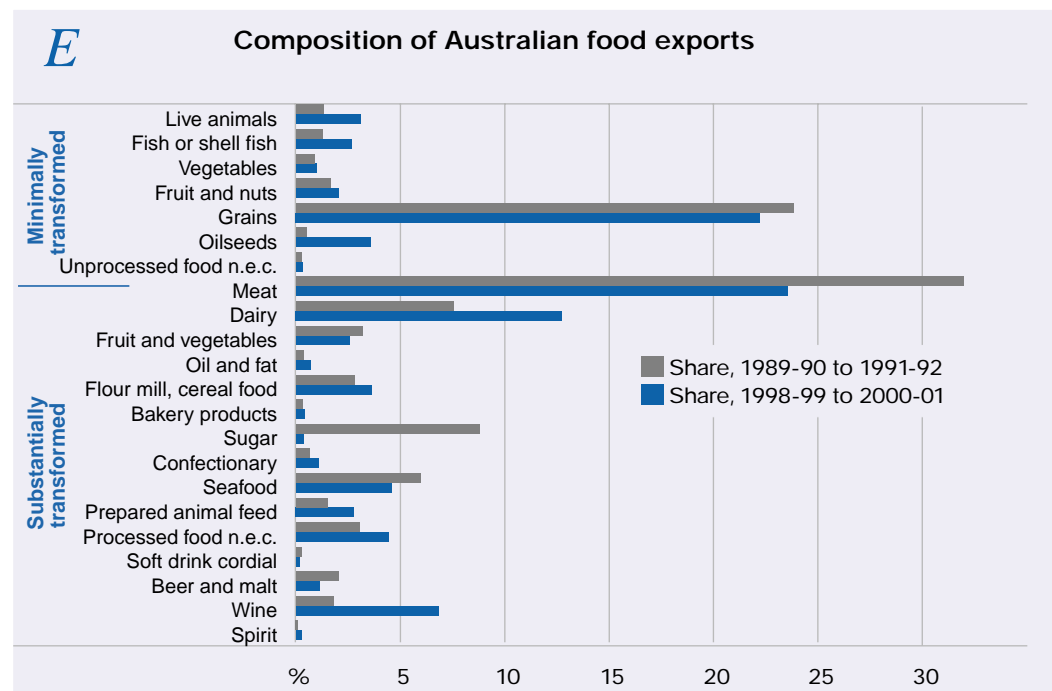
The value of Australian food exports rose by 20 per cent to \$24.3 billion in 2000-01. Strong growth was recorded in beverage exports (up 28 per cent), meat and grains exports. Weakness of the Australian dollar against many countries' currencies contributed to this improved trade performance by improving the competitiveness of exports and making imports more expensive. Food imports grew by only 4 per cent to \$4.8 billion, resulting in a net food trade surplus of \$19.5 billion.

Over the ten years to 2000-01, Australian exports in constant dollars terms grew at a



trend rate of 6.3 per cent a year (figure D). This compares with the trend rate of growth in food imports of 5.3 per cent a year over the same period.

While the main exports were meat, grains and dairy products, the food products whose shares in total exports increased most over this period were wine, live animals, dairy products, oilseeds and fresh seafood (figure E). The commodities for which export shares fell the most over the decade were meat and sugar.



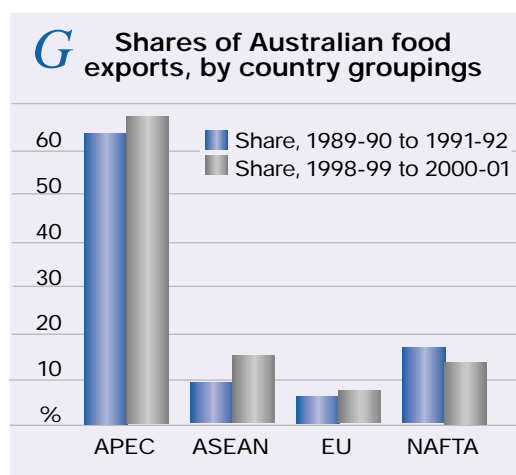


Japan and the United States remain Australia's most important destinations for food exports (figure F) but their shares of Australia's total food exports declined as exports became more diversified, with increased sales to a wider number of markets. Assuming greater importance as export destinations were the United Kingdom, New Zealand, Malaysia, the Philippines, Indonesia and Hong Kong.

Australian food trade is focused mainly on the Pacific rim countries with Asia Pacific

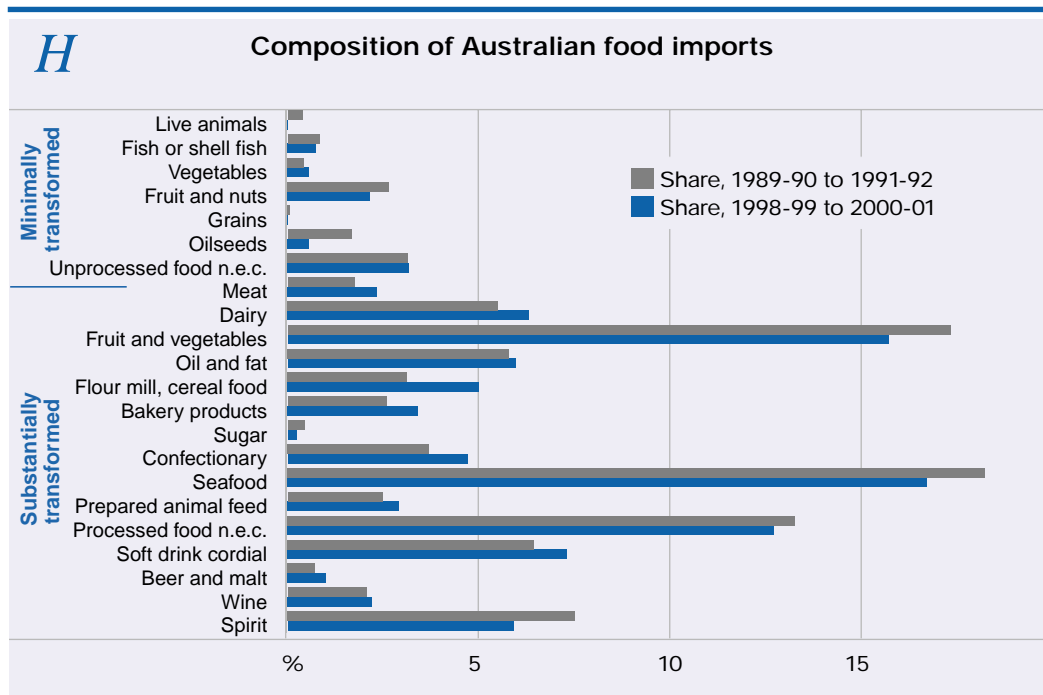
Economic Cooperation (APEC) member countries, accounting for around 67 per cent of Australia's food exports in the three years to 2000-01, compared with 64 per cent in the three years to 1991-92 (figure G). Most of this growth was accounted for by the Association of South East Asian (ASEAN) group of countries, many of which are also APEC members.

The bulk of Australia's food exports go by sea but air transport is also important, particularly with high value products where freshness is an important attribute demanded in the market place. In 2000-01, \$1.57 billion or 6.5 per cent of total food exports were air freighted. Fresh seafood — particularly lobster, tuna, salmon and abalone — made up slightly more than half of these exports. The other main components of air cargo exports were meat 22 per cent, live animals 7 per cent, vegetables 6 per cent, and fruit and nuts 6 per cent.



## Australian food imports

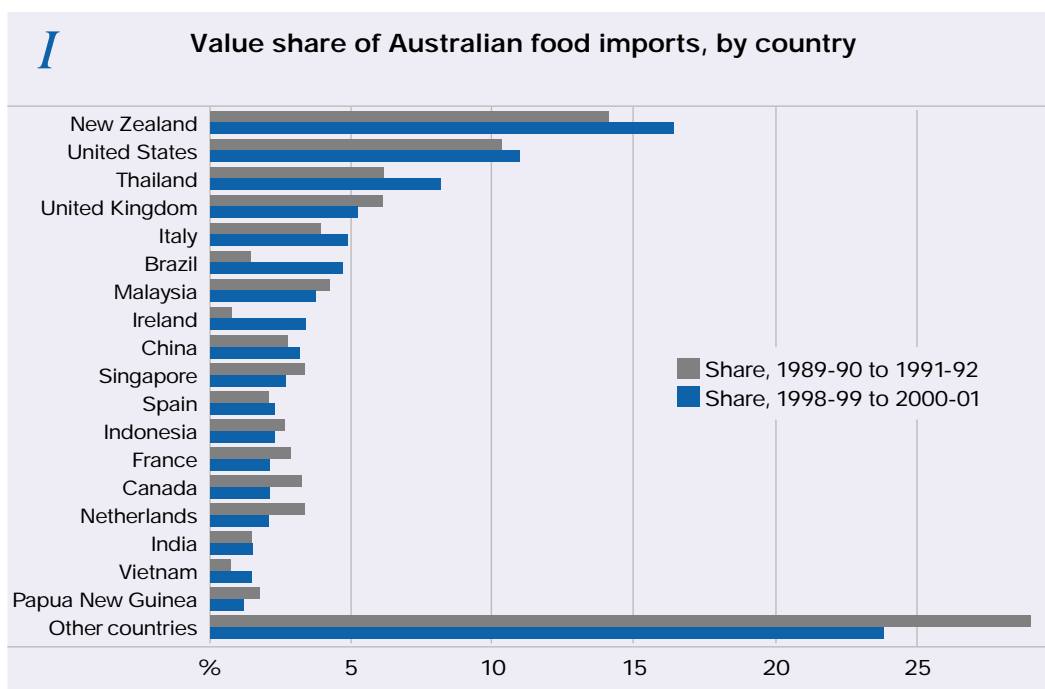
Processed seafood and processed fruit and vegetables are Australia's main food imports though their share of total imports declined over the past decade, with increased imports



of beverages and processed cereal and bakery products (figure H). Imports of oilseeds fell following the emergence of canola as a major broadacre crop in Australia, while fruit and nut imports also

declined with the emergence of new production in Australia.

Reflecting in part the Closer Economic Relations Agreement that exists between New Zealand and Australia, New Zealand



## OVERVIEW

is the main source of Australia's food imports and its share of Australia's total imports increased substantially over the decade (figure I). The United States, Thailand, Ireland and Brazil also markedly increased their shares of Australia's imports over the period.

## Drivers of the world food market

Food *consumption* patterns change in response to a variety of factors, including income, relative prices, demographic and cultural mix, lifestyle and taste changes. Changes occur in the foods eaten and where and how they are consumed. The pattern of world food *production* is dictated mainly by climate and natural resource endowments but also factors such as the labor costs and skills, political stability, innovation processes, and tariff and nontariff barriers to trade.

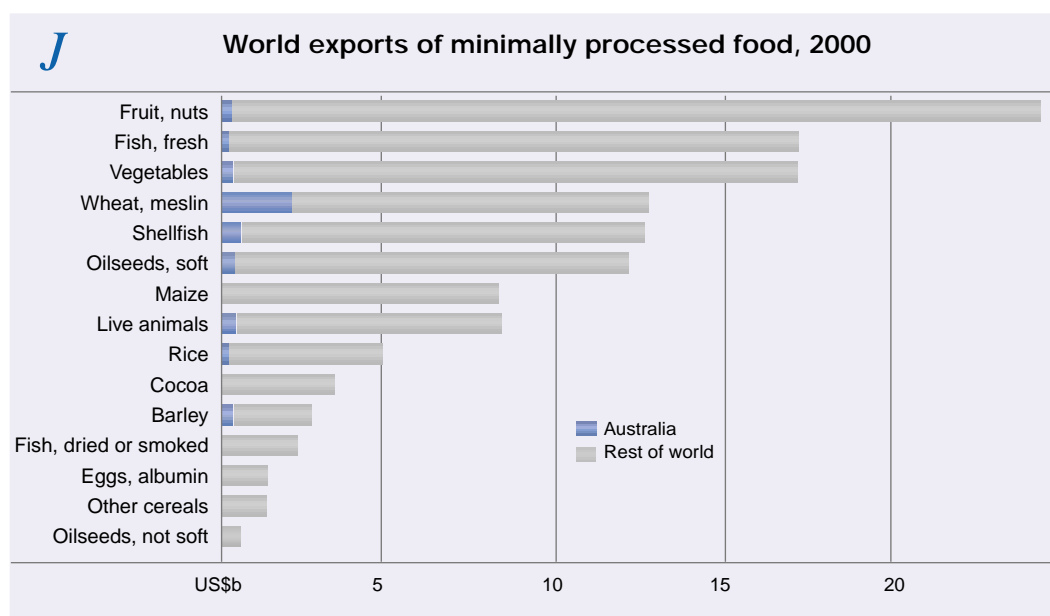
These supply and demand forces mean that the world's food industry — ranging from primary producers and their input suppliers, to processing, transport, export, import and domestic retailing sectors — is constantly evolving.

The food production chain throughout the world has been characterised by a continuous process of innovation that means

there is a significant downward trend over the longer term in prices for most food types, despite increasing global populations. Innovation has been an important factor in shaping the pattern of comparative advantage in world food production, enabling more innovative countries to overcome, or more fully exploit, their endowments of natural resources.

Governments in many countries have used a number of measures to protect domestic food industries disadvantaged by changes in comparative advantage. These measures include subsidy arrangements, such as the farm program in the United States or the Common Agricultural Policy in the European Union. Second, there are tariffs and a range of nontariff barriers also hindering trade. The World Trade Organisation arrangements are attempts to remove or lower these barriers.

A variety of climate and soil types provides Australia with the ability to produce a diverse range of agricultural products in response to the evolving demands and competitive forces in world food markets. A small population in relation to its agricultural resources means that the Australian agricultural food industry is export oriented. However, trade barriers do represent major restrictions to increasing Australian food exports, while producers are less insulated





than those in many other countries from fluctuations in world supply and demand conditions.

## Nature of world food trade

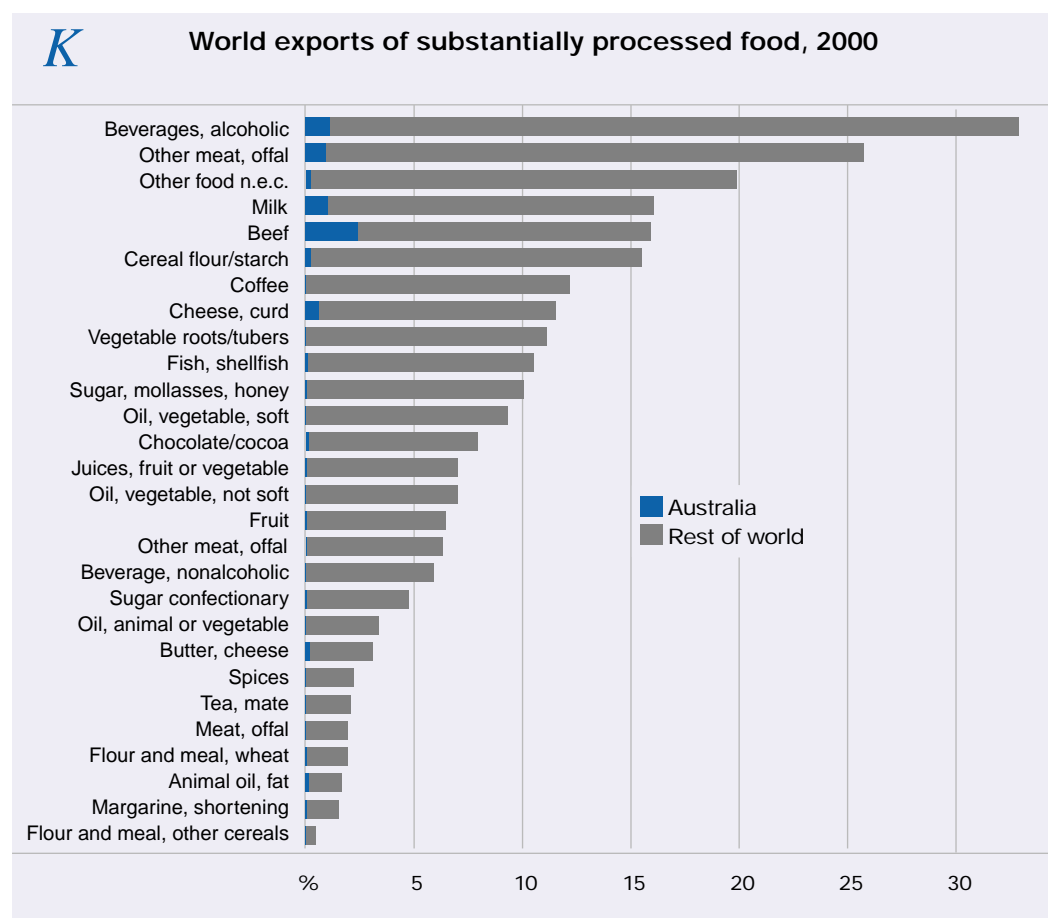
World trade in food was valued at around US\$397 billion in 2000, about 40 per cent of which is minimally processed, the rest substantially transformed. In value terms, the minimally processed products that are most traded worldwide are fruit and nuts, fish and shellfish, vegetables, grains and oilseeds (figure J). Australia ranked as the eleventh largest food exporter in value terms in 2000. However, Australia is ranked seventh in terms of exports of minimally transformed food. In world markets for unprocessed food, Australia's shares are largest for grains, seafood, live animals and fruit, nuts and vegetables.

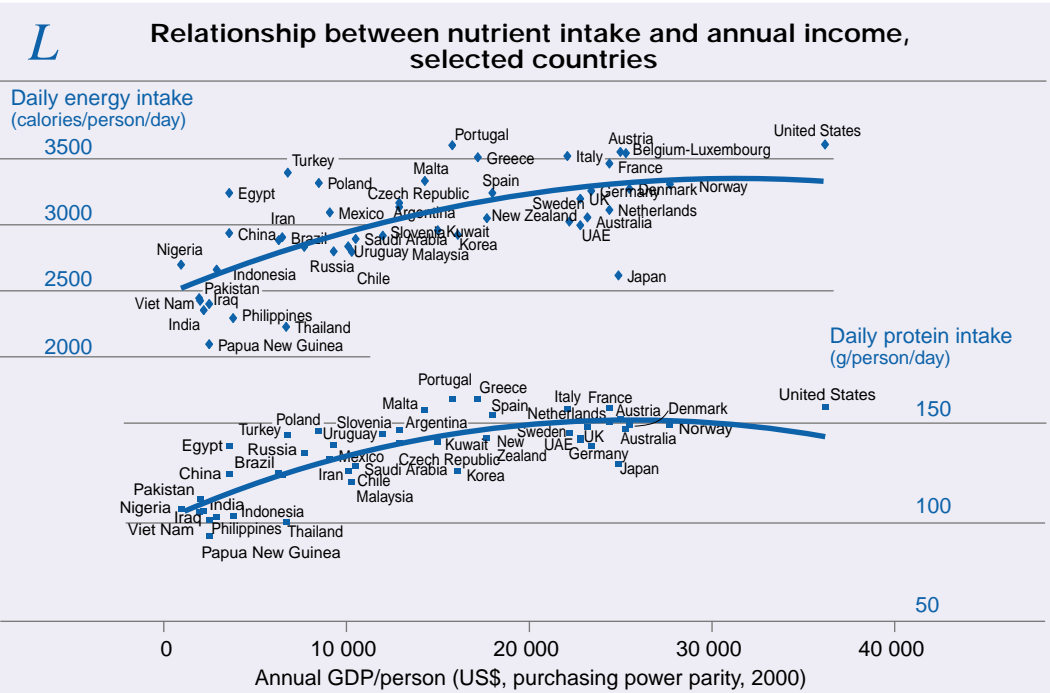
Similarly, Australia has only a limited share of the major substantially transformed products traded internationally — ranked tenth by value as an exporter (figure K). With processed foods exports, Australia's largest shares of the world market lie with beef and other meat, alcoholic beverages (mostly wine), dairy products and sugar.

In the main, the largest food exporters in the world are also the main importers (table 2). With the exception of Japan, most of the main importing countries are located in western Europe and north America. Their wealth gives them the ability to purchase a wider variety of the food types that are produced more competitively elsewhere, such as tropical fruit.

## World food consumption

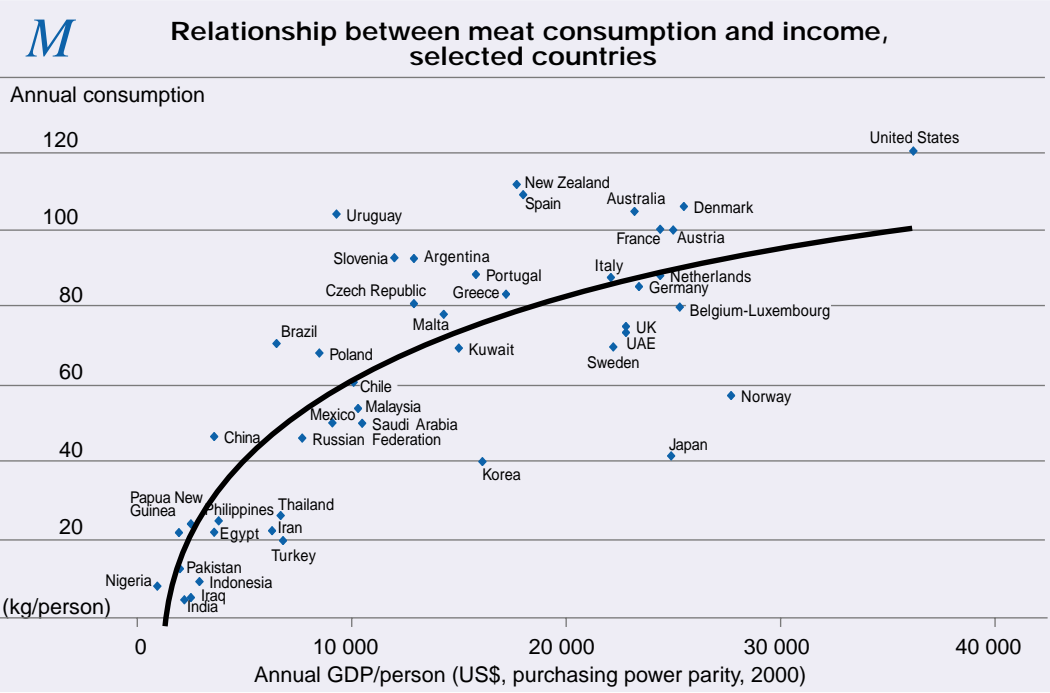
As can be seen from figure L, there is a strong positive relationship at the country

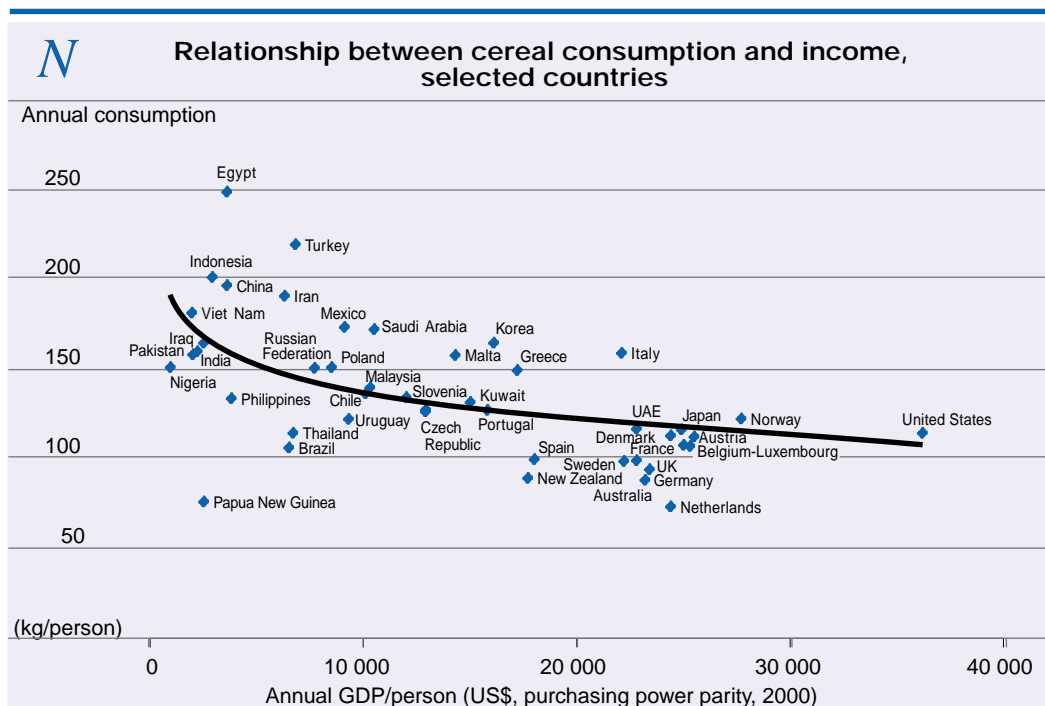




level between nutrient intake and income levels, though the rate of increase declines. Generally the higher the per person income of a country, the higher is its intake per

person of energy and protein from food. While there is generally a strong relationship between consumption of foods and incomes, the nature of that relationship may





## 2 Main food trading countries, by value of trade, 2000

Exporters			Importers		
Rank	Country	Share %	Rank	Country	Share %
1	United States	12	1	United States	13
2	France	9	2	Japan	12
3	Netherlands	7	3	Germany	8
4	Germany	6	4	United Kingdom	6
5	Canada	5	5	France	6
6	Belgium	4	6	Italy	5
7	Spain	4	7	Netherlands	4
8	Italy	4	8	Belgium	4
9	United Kingdom	4	9	Spain	3
10	China	4	10	Canada	3
11	Australia	4	27	Australia	1

differ widely between foods and between countries. For example, from figure M, which shows the per country consumption of meat and gross domestic product per person, it can be seen that meat consumption per person generally rises as income per person increases but at a decreasing rate. By comparison, consumption of cereals (figure N) per person generally declines as income per person increases.

## References

- ABARE 2000, 'Estimating the proportion of agricultural production exported', *Australian Commodities*, vol. 7, no. 4, December quarter, pp. 595–6.
- ABS 2001, *Manufacturing Industry, Australia, 1999-2000, Preliminary*, Canberra, March.

# Food processing

## Innovation in the industry

*Perry Smith and Kelly Napier*

### Introduction

The National Food Industry Strategy, announced in September 2001, has as its key focus sustaining the competitiveness and profitability of Australia's processed food industry over the medium term. This is to be addressed through a series of five year strategies covering development of product and service innovation; development and implementation of an international food market entry strategy; and a strategy to build more competitive supply chains, improve food safety and quality systems (AFFA 2001). Improvements in food industry innovation underpin this strategy.

The purpose of this article is to examine the role of innovation in the recent economic performance of the food industry, and to examine some of the major influences on innovation in food processing.

### Innovation in the food industry

The objective of innovation for a firm in any industry is to increase the benefits from its activities relative to the resources used in them. For food, innovation encompasses the changes to processes or services in the supply chain that enhance the net market value of products. It can include innovative outputs, such as new products, or innovative use of inputs that enhance value adding activities through the supply chain.

Innovation in an individual firm or industry is usually considered in two main subgroups:

- **process innovation**, which addresses activities that reduce the costs of manufacture of a particular good — it can cover the inputs used, the transformation processes, and the use of byproducts from the process that would otherwise be discarded; and

- **product innovation**, which relates to the development of new goods or derivatives of existing goods.

Innovation in the provision of infrastructure services (such as telecommunications and the internet), in approaches to public health and quarantine issues, and in research and information provision could also have major impacts on the adaptability of food industries to changes in economic conditions and to technological changes.

### Is the food processing industry innovative?

It is difficult to isolate the impact of innovation in an industry because innovation is ongoing and rarely discretely measurable. However, some general overall assessment may be made through examining how the food processing industry has performed in adapting to changes in economic conditions and market opportunities.

Changes to industry value added provide one measure of the economic performance of an industry sector. Industry value added is derived from sales turnover *plus* changes in inventories *less* intermediate input expenses (ABS 2000). Sales turnover, employment and industry value added in 1999-2000 by the major food processing industry classifications are summarised in table 1.

The measure of industry value added shown in table 1 does not include labor and capital costs (ABS 2000, p. 50). To examine trends in the food processing industry, changes in total sales revenue *less* the cost of purchased inputs *less* total labor costs (incorporating wages and salaries, employer contribution to superannuation, workers compensation costs, payroll and fringe benefit taxes) were compared in constant dollar terms over the period 1994-95 to 1999-2000.

## 1 Australian processed food industry, 1999-2000 – key statistics

	Sales turnover	Share of total sales	Employment	Wages and salaries	Industry value added	Share of industry value added
	\$m	%	'000	\$m	\$m	
Meat	10 958	21.8	48	1 614	2 626	18.9
Dairy	8 348	16.6	17	771	1 872	13.4
Fruit and vegetables	3 632	7.2	11	457	975	7.0
Flour and cereals	3 561	7.1	8	298	1 052	7.6
Bakery products	3 440	6.8	25	767	1 308	9.4
Other foods	10 477	20.8	35	1 376	2 743	19.7
Beverages and malt	8 972	17.8	18	743	3 114	22.4
Oils and fats	934	1.9	1	84	226	1.6
Total food and beverages <sup>a</sup>	50 321		163	6 110	13 916	

<sup>a</sup> Excludes tobacco manufacturing. Information on the oils and fats industry was not available separately.  
Source: ABS (2000).

This variable is termed 'gross operating surplus' in this article. The period examined was determined by the availability of consistent data definitions used by the Australian Bureau of Statistics.

Over this period, the food processing industry showed stronger increases in gross operating surplus than would be suggested by changes in total sales (table 2).

Compared with 1994-95, sales turnover of the processed food sector in 1999-2000 increased by nearly 8 per cent in constant

dollar terms, while gross operating surplus increased by 14 per cent. This would suggest that the food processing industry was innovative in adapting to market opportunities over the period.

The greatest gains in sales turnover in the period were in the beverage and malt manufacturing sector, with sales nearly 22 per cent higher, and dairy product manufacturing, with sales 18.5 per cent higher. Meat sector sales in 1999-2000 were nearly 2 per cent above 1994-95 levels, while other food

## 2 Changes in food manufacture, 1994-95 to 1999-2000 – key indicators

Percentage change in 1999-2000 dollars

	Sales	Exports	Purchased inputs	Total labor cost	Gross operating surplus
	%	%	%	%	%
Meat	+2.0	+4.8	-9.4	+27.6	+6.0
Dairy	+18.5	+16.4	+20.3	+25.0	+11.0
Fruit and vegetables	+6.9	-24.8	+4.6	+5.7	+12.6
Flour and cereals	+6.2	+8.9	nas	-0.7	+22.8
Bakery products	+5.2	+5.1	-3.5	-6.4	+29.0
Other foods	-7.7	-7.7	-10.1	+3.8	-8.7
Beverages and malt	+21.8	+28.0	+28.0	+12.0	+16.7
Total	+7.8	+12.0	+4.1	+12.3	+14.1

nas Not available separately.

Source: ABS, *Manufacturing Industry 1999-2000: Preliminary Data* (and previous series).

manufacturing (which includes sugar and confectionary, seafood processing and industries not elsewhere classified) were nearly 8 per cent below the earlier levels, when compared in constant dollar values.

When changes in the value of purchased inputs and in total labor costs are taken into account, the gross operating surplus of other food processing sectors improved strongly over the period. The bakery products sector achieved the greatest increase in gross operating surplus (29 per cent), while its sales increased relatively modestly (5 per cent). Flour mill and cereal food manufacturers achieved a large increase in the gross operating surplus (23 per cent) on the basis of a small increase in sales. By comparison, there was only a small increase in the gross operating surplus in the meat industry (6 per cent), and a lower growth in gross operating surplus than in sales in the beverage manufacturing sector.

### Recent trends in selected industries

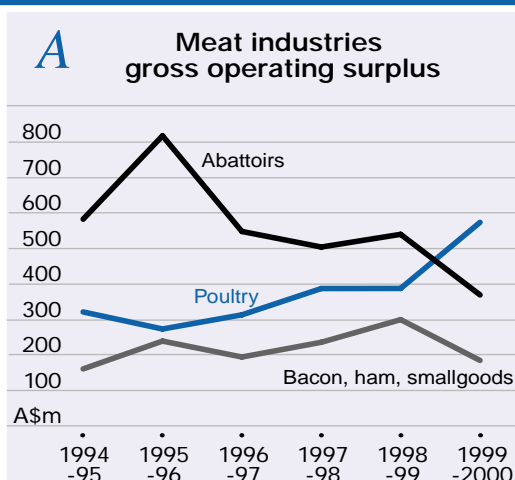
The processed food sector comprises a diverse collection of industries, with wide differences in their operations and in factors influencing their economic performance. An overview of several of these industries is provided here to illustrate the different drivers of changes in gross operating surplus and some of the key areas where innovation may be constructively focused.

#### Meat processing industries

Despite falling in relative importance between 1994-95 and 1999-2000, the meat processing sector (comprising meat processing, poultry processing and bacon, ham and smallgoods manufacture) remains the largest part of the food processing industry. However, there were major differences in the economic performance of the constituent industries and in the factors influencing that performance. Figure A shows changes in the gross operating surplus of each of these industries in constant dollar terms from 1994-95 to 1999-2000.

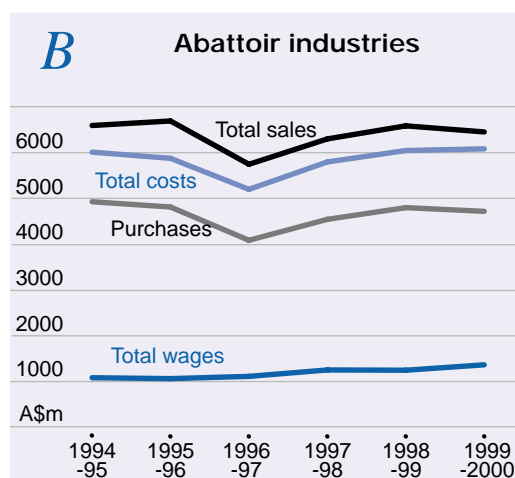
#### Abattoir industries

Over recent years, abattoir operators have experienced difficult trading conditions,



resulting in closures of a number of facilities, particularly in 2001-02. The industry faced significant cost-price pressures over the second half of the 1990s and this was reflected in lower profitability. After peaking at \$818 million in real terms in 1995-96, the gross operating surplus had fallen to \$370 million in 1999-2000.

Abattoirs have relatively low margins and are vulnerable to cost-price pressures. Over the period 1994-95 to 1999-2000, purchased inputs (mainly stock for processing) and labor costs represented around 94 per cent of total sales revenue (figure B). In that period, industry sales revenue fell by around 2 per cent in constant dollar terms while the cost of purchased inputs generally tracked sales, ranging from 71 to 74 per cent of sales revenue. However, increased labor costs



reduced processing margins, resulting in a fall in industry gross operating surplus.

Total labor costs in the abattoir sector increased by 26 per cent in constant dollar terms over the period 1994-95 to 1999-2000. Higher employment was the main factor (up 16 per cent to 31 800) but higher direct and indirect labor costs also contributed. Direct labor costs per employee increased by 5.5 per cent while indirect labor costs (workers compensation, superannuation and payroll taxes) rose from 15.3 per cent to 17.2 per cent of labor costs between 1994-95 and 1999-2000. While workers compensation was the largest indirect cost, superannuation costs increased the most.

The potential to improve the value added by the abattoir industry is likely to depend on improving plant utilisation rates to achieve size economies, or on increasing sales. A rationalisation in the number of processing plants (from 354 in 1994-95 to 292 in 1999-2000) had an impact on industry concentration and, presumably, utilisation rates. The largest 10 per cent of establishments in terms of sales turnover accounted for 55 per cent of turnover in 1995-96 and 63 per cent by 1998-99. Similarly, the top 20 per cent of establishments accounted for 77 per cent of turnover in 1995-96 and 81 per cent in 1998-99. This concentration suggests that there were a large number of abattoirs with small plant turnover that could face ongoing problems in achieving size economies.

The sales revenue of the abattoir industry depends significantly on export markets, with the proportion of sales obtained from exports rising from 52.4 per cent in 1994-95 to 55.8 per cent in 1999-2000. Accordingly, overseas market conditions, currency exchange rates and market access issues are all important considerations in addressing cost-price pressures in the industry.

Deterioration in the relationship between overseas meat market prices and auction prices for livestock has been cited as the cause of recent abattoir closures in Queensland.

Prospects for a significant longer term expansion in abattoir throughput depend on achieving reductions in livestock production costs. A study of farm sector productivity between 1977-78 and 1998-99 (Knopke, O'Donnell and Shepherd 2000) found that

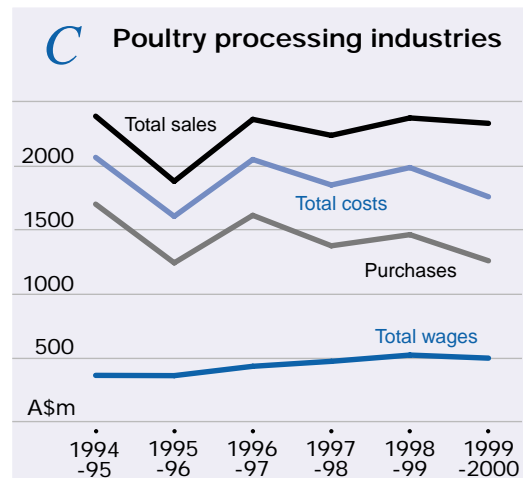
the livestock industries had low annual growth in output and also relatively low productivity gains, ranging from 0.6 per cent a year for sheep to 2.1 per cent for beef, below those of other broadacre activities.

### *Poultry processing*

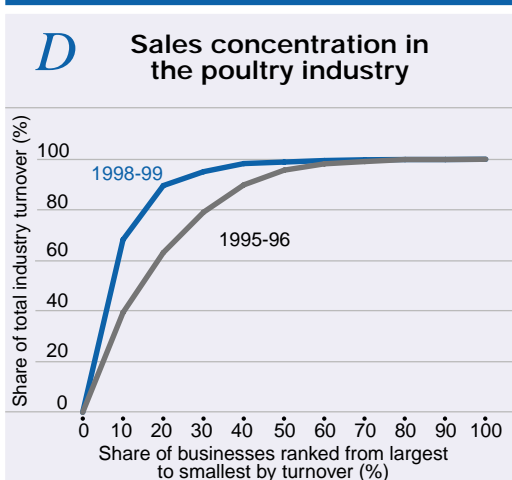
Not all meat processing industries face the same pressures. The gross operating surplus of the poultry processing industry increased by 78 per cent in constant dollar terms between 1994-95 and 1999-2000, to \$574 million (figure A). Most of this increase occurred between 1998-99 and 1999-2000 when it rose by 48 per cent, but it strengthened throughout the period examined. While the total value of sales declined in constant dollar terms over the period (figure C), the main source of growth in gross operating surplus was a reduction in the cost of purchased inputs. The unit value of chicken on farm is estimated to have fallen by around 20 per cent in constant dollar terms over the period (ABARE 2001).

Poultry production is highly integrated between the farm and processing levels, with significant cost economies being achieved as production increased consistently over the period to meet growing domestic consumption. Over recent years, poultry meat production has been increasing at around 6 per cent a year (ABARE 2001).

With increased sales, employment in the poultry processing industry increased by around 20 per cent between 1994-95 and 1999-2000, to 13 300, while total labor costs increased by 36 per cent in constant dollar







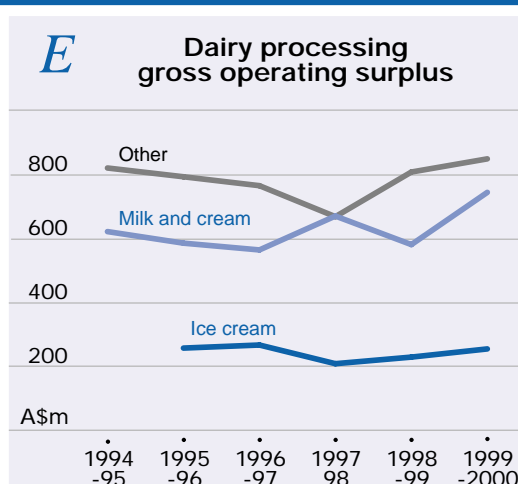
terms to \$500 million. Indirect labor costs remained relatively stable as a proportion of total labor costs, falling from 14.0 per cent in 1994-95 to 13.6 per cent in 1999-2000.

Economies of size have been a major factor behind growth in gross operating surplus. Concentration in the poultry processing industry has increased sharply, presumably to achieve size economies (figure D). In 1995-96 the top 10 per cent of firms accounted for nearly 40 per cent of industry sales turnover, while the next 10 per cent of firms accounted for a further 24 per cent of industry turnover. By comparison, in 1998-99 the top 10 per cent of firms accounted for 68 per cent of turnover and the next 10 per cent a further 21 per cent.

### Dairy processing

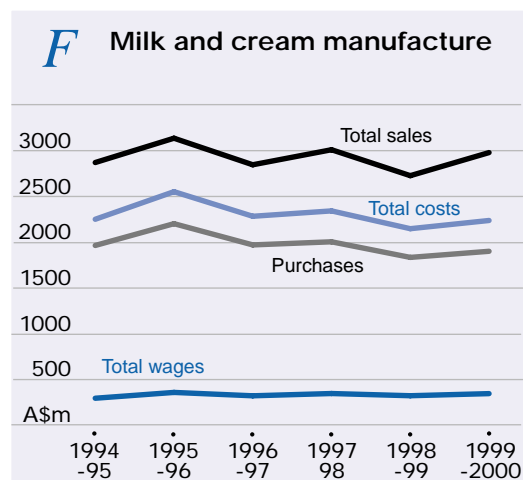
The dairy processing industry comprises the milk and cream processing and sale, dairy product manufacturing and ice cream manufacturing sectors. Like milk production, the dairy processing industry has undergone significant rationalisation, with acquisitions, mergers and strategic alliances of dairy processing enterprises to improve the efficiency of their operations. Around 120 dairy processing companies were operating about 206 establishments in 1999-2000.

The two main processing sectors, market milk and manufactured products, provide an interesting contrast between sales and gross operating surplus. While the manufactured products sector accounts for over half, and market milk processing around 36 per cent of total industry revenue, market

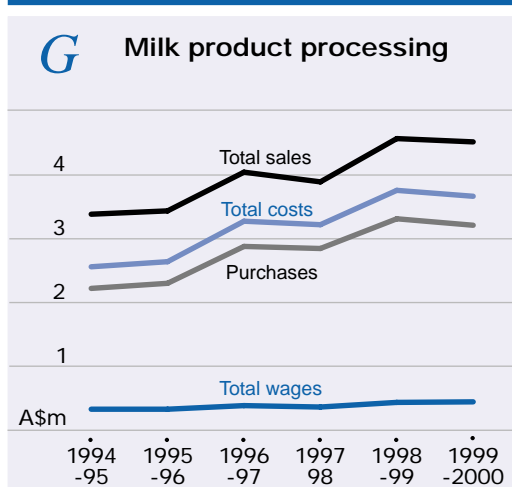


milk processing has become a more profitable activity despite a relatively static domestic market. Figure E shows changes in the gross operating surplus of dairy manufacturing industries between 1994-95 and 1999-2000.

While total sales revenue from market milk processing increased by less than 4 per cent in constant dollar terms between 1994-95 and 1999-2000, the gross operating surplus increased by almost 20 per cent. By comparison, sales turnover of the manufacturing milk sector increased by 33 per cent over the period but the gross operating surplus rose by only 4 per cent. In constant dollar terms both the sales turnover and gross operating surplus of ice cream manufacturers were relatively unchanged over the period. Part of the improvement in the gross operating surplus of the market milk sector







came from lower input costs, which fell in constant dollar terms from 68 per cent of sales revenue in 1994-95 to 63 per cent in 1999-2000 (figure F).

While total sales of manufactured dairy products (except ice cream) have been rising strongly in constant dollar terms, mainly as a result of increased exports, growth in the gross operating surplus of processing has been more difficult to achieve. Faster growth in input costs than sales resulted in a fall in gross operating surplus from around 23 per cent of sales at the beginning of the period to around 18 per cent of sales. Total purchased input costs rose by 25 per cent between 1995-96 and 1996-97 and rose again by 16 per cent in 1998-99 as a result of higher manufacturing milk prices and increased milk intake respectively. While wage costs increased by 34 per cent between 1994-95 and 1999-2000, they remained stable in relation to total sales, at around 10 per cent of revenue (figure G).

### Wine making

The wine industry has been a major success story in Australia, with production almost doubling from 458 million litres in 1994-95 to 806 million litres in 1999-2000. The industry has been consolidating, with the number of wine producing establishments (which may include multiple wineries) peaking in 1995-96 at 371 before falling to 286 in 1999-2000 and further mergers since that time.

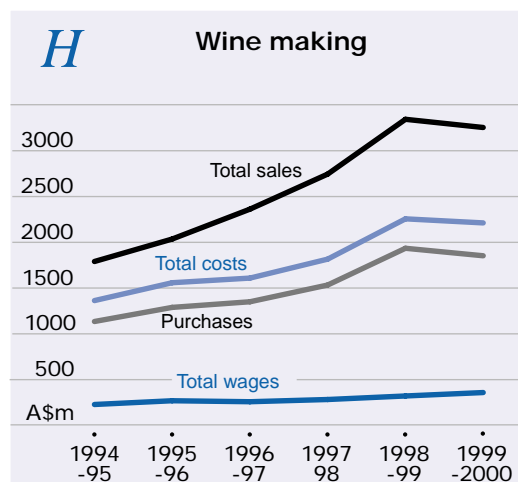
The gross operating surplus of the wine making industry increased by more than 80 per cent in constant dollar terms between

1994-95 and 1999-2000. Following growth in gross operating surplus of 30 per cent in 1997-98 and 18 per cent in 1998-99, a leveling of sales combined with higher costs resulted in a small fall in 1999-2000 (figure H).

The cost of purchased inputs rose more slowly than the growth in sales revenue over the period, with purchased inputs declining from 63 per cent to 57 per cent of sales over the period. While labor costs remained at around 16 per cent of total costs over the period, there was strong growth in employment. Between 1994-95 and 1999-2000 employment in the industry increased by 52 per cent to 9240, while wage costs increased by 57 per cent. Indirect employment costs rose by 2.1 per cent to 16.6 per cent of total labor costs in 1999-2000, mainly because of growth in superannuation costs.

While strong growth in export sales (of around 20 per cent a year in constant dollar terms) was a key factor behind the strong industry revenue growth, the domestic wine market remained the core business of the wine making industry, providing around 75 per cent of industry sales revenue in 1999-2000, down from 81 per cent in 1994-95. Over this period domestic sales revenue increased by around 10 per cent a year in constant dollar terms. In view of the increased production capability, the industry challenge is to maintain both domestic and export market growth.

The industry is relatively well structured to take advantage of economies of size, particularly in relation to export marketing. Sales turnover was highly concentrated in



1995-96, with the top 10 per cent of firms accounting for 70 per cent of sales and 79 per cent of exports. It had become more concentrated by 1998-99, when the top 10 per cent of firms increased to almost 80 per cent of sales and 90 per cent of exports.

### **Industry innovation**

These brief industry case studies show a variety of issues that require innovative solutions. In the abattoir industry the key focus was on achieving process innovation to improve labor utilisation and lower operating costs through economies of size. In the dairy manufacturing industry a major factor was to improve the profitability of export sales, through both process and product innovation. The wine industry challenge is to maintain sales growth on both the domestic and export markets, while poultry industry profitability continues to depend on innovation in growout and in maintaining the product innovation needed for continued market growth.

### **Factors influencing innovation**

The expected payoffs from either process or product innovation to an industry depend on the expected impact on the industry's value added (through lower costs or increased sales over its economic life), the costs of development and adoption of the innovation and their timing in relation to benefits, and the likelihood of success.

The payoffs to innovation will be influenced by the potential to capture benefits. The nature of the product, its markets and the industry's structure will all have important influences on the level and type of benefits and where they accrue. For example, an innovation that has potential to bring forward a large increase in production may have limited benefits to the total revenue of an industry if the market demand is unresponsive to prices. Increased production may result in falling market prices and lower industry revenue. Market impacts will determine the distribution of those benefits to consumers and others in the supply chain through price changes.

Many external factors influence the ability to capture the benefits of innovation by an

industry apart from the technical feasibility and financial factors directly surrounding its development. While the profit motive will always provide private incentives for firms to innovate, often there are factors external to the firm that will influence the successful adoption of innovation and the forms that such innovation may take. Some of these factors are examined in this section.

### **Rationale for government intervention**

A key role of government in a market economy is to establish appropriate property rights for goods and services. The general reasons for government involvement in research and innovation are based on the difficulties in establishing and efficiently applying the appropriate property rights required to capture the benefits of innovation, and the positive spillovers that may result.

Property rights, including those applying to both technical processes and intellectual property rights must be defined and enforceable to exclude nonowners from using them. Patents were developed to provide a form of rights that can be applied to intellectual property to facilitate the capture of the benefits that may flow from an innovation and consequently encourage private investment in the research and development that underpins innovation. If it is not possible or economically feasible to exclude users of an innovation then markets will fail to provide the optimal investment in its development.

A second feature, common to some research and innovation, is that there may be no rivalry in its use. The use of some forms of information by one individual may not reduce the amount available for others. Moreover, apportioning the contribution of different sources of intellectual property to an innovation may on occasion be extremely difficult to achieve. For example, basic research of various types may be prerequisites to various forms of innovation but the relative contributions may be difficult to establish. Some forms of research would not be undertaken because it is not economically feasible to capture much of the benefits.

When these conditions apply, the social benefits of an innovation may be greater than the private benefits. The inability of

firms to capture full benefits from innovation leads to an underinvestment in these activities in the absence of government involvement. Some of the benefits of the research underpinning innovation may spill over to other firms, other industries and society in general. The government involvement is needed to encourage investment toward the socially optimal level.

Other reasons for government involvement in food innovation may include public health, the existence of economies of size or complementarities in different types of research, or market imperfections elsewhere in the economy.

Market structure factors may have an important impact on the incentives to innovate and the forms that innovation may take. In industries supplying a highly competitive market there may be incentives to differentiate their product from those of competitors to capture the benefits of innovations. In highly competitive industries a cost saving innovation may result in short run profit but this profit will, in the longer run, attract new entrants to the industry, resulting in the dissipation of producer benefits. Product innovation by firms may result in the development of imitation products by competitors. However, consumers will be better off. In monopolistic industries there are often fewer incentives to innovate, except to protect the market power that they have.

### **Trade barriers and innovation**

Export markets are important influences on many of the food processing industries. Over 55 per cent of meat processing revenue, 40 per cent of milk manufacturing revenue and 25 per cent of wine sales come from export markets. Trade factors strongly affect the rate of innovation in the food processing industry through affecting the allocation of resources between industries.

Tariff and nontariff measures on exports can serve not only as barriers to trade and achieving efficiencies in processing, but can also influence both the levels and the forms that innovation may take in the food processing industry. In general, trade barriers that result in a reduction in competition also serve to reduce the intensity of innovation in the importing country (Edwarde 1998).

The existence of tariffs on processed, semiprocessed and processed forms of food are likely to have an impact on the exporting country's processing industry because it influences the level of processing that takes place before the product is exported. The significance of this impact will be determined by the relativity of the applicable tariffs on different product forms. Tariff escalation (increasing the tariff rates applicable for higher levels of value added) has a negative impact on the food processing activities of exporting countries as it aims to support the processing industries of the importing country by allowing imports of raw materials at low rates while applying higher tariffs to the processed product.

The lack of harmonisation of relative tariffs applicable to processed foods makes it difficult to determine an optimal level of processing. Processing may be geared to one market and be disadvantaged on others. The existence of preferential access arrangements, such as developing country status and regional trade agreements like ASEAN and NAFTA, also influence the potential payoffs from different processing strategies.

Government subsidisation of food processing input costs or outputs provide major disincentives for direct competition because they encourage higher production and lower prices than would be the case in a free market. There are numerous examples that directly affect the Australian processed food industry, such as subsidisation of fruit for canning in the European Union and subsidised processed dairy exports from the United States and the European Union.

Almost all milk powder and butter exports and most cheese exports from the European Union are subsidised. For the United States, almost all skim milk exports are subsidised. The extent of the subsidisation and its effect on world markets are substantial. The average EU subsidy to skim milk exports in 1998-99 was 42 per cent of the average domestic wholesale price. For the United States, subsidisation of the same product was 44 per cent of the domestic price (Shaw and Love 2001).

The existence of nontariff barriers to export markets, such as sanitary, phytosanitary and labeling requirements, may have a major impact on innovation. In the

development of an innovative product, the initiating processor very often faces considerable costs in gaining access to new export markets through the costs of testing and negotiation whereas subsequent exporters with imitation products can free ride on the access gained by the initiator.

The costs of determining import requirements and standards from trading partners could be seen as a barrier to innovation for small exporters. Australian exporters who find themselves faced with only a small export market to service may not undertake innovations because the costs of doing so will be spread over a smaller export market and will not be recouped in a sufficiently short enough period to make the innovation worthwhile.

Quantitative restrictions on market access, such as quotas, may also influence incentives for innovation. Process innovation may lower costs and increase rents to quota holders, but if specific to that market the cost of innovation will be spread over a smaller volume of product than under competitive market conditions. The existence of quotas may also discriminate against new innovative firms supplying that market unless such quotas are tradable.

### Property rights

The allocation of intellectual property rights needs to ensure sufficient incentive to innovate without being unduly restrictive. The WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) was introduced to establish such a framework, covering enforcement of trademarks, patents, copyright, geographic indications, designs and commercial secrets. Of particular relevance to trade in food is the protection of geographic indications and patents.

Geographic indications identify a good where the essential characteristic is attributable to its geographic origin (DFAT 2000). Under the TRIPS agreement, countries are required to prevent misuse of place names in labeling or promoting food products. The use of a place name to describe a product, such as Champagne, usually identifies both its geographic origin and its characteristics. However, there may be a tradeoff between the protection of place names and the trade disruptions that may occur where such

names have become generic descriptions. Any such use as a generic description currently requires negotiation with the country that wants to protect the geographic indication in question (WTO nd).

Under the TRIPS agreement, patent protection must be available for inventions for at least twenty years and must cover both products and processes. However, governments can refuse to issue a patent for a range of inventions, and can exclude plants and animals (other than microorganisms), and biological processes for the production of plants or animals (other than microbiological processes) but are required to provide some protection for plant and animal inventions, such as biotechnology and plant varieties, either by patents or by systems such as Australia's Plant Breeders' Rights Scheme.

Patents and their treatment under the TRIPS agreement will continue to be a key issue influencing food related trade, whether it be in the area of biotechnology and the development of new varieties, or in new and innovative methods of food processing, handling or storage. While some protection is required to ensure that innovation is profitable, this may need to be balanced against the social costs of monopoly power that can result. Research and development companies argue that patents are required to protect their investment in the research. Without such protection, the incentive to undertake the necessary research is significantly reduced. The arguments against this include the restrictions on patents and the exploitation of the resultant market power.

### The need for innovation

In summary, innovation in the food processing industry is an essential component of ensuring ongoing industry competitiveness. The benefits include market benefits to the industry, such as attraction of capital, and to consumers, in the range, quality and safety of products. While a broad approach to innovation is required because of the range of food industries and the variety of challenges they face, innovation must ultimately be assessed in the capture of net economic benefits. For some industries, a major focus may need to be on what other condi-

tions are required to ensure international competitiveness of food processing industries. Issues such as national competition policy may also need to be addressed if size economies in processing become an important factor in realising the benefits and maintaining that competitiveness.

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# Innovation dynamics

## The Australian processed food product system\*

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### Introduction

Innovation is now recognised as one of the keys to economic growth in the future. Understanding the dynamics of the development of innovation is central to successful policy development but cannot be seen using the traditional sector approach. AEGIS therefore uses an approach that sees the field as a 'product system' rather than a sector because the dynamics can only be understood by including the role played by strategies adopted by players not usually included.

The definition of the 'food industry' is complex, and includes the agricultural sector, as the supplier of basic inputs, the food processors, major segments of the logistics sector, the retailers of packaged and fresh food and the growing food services sector. Universities, other public sector research organisations and governments have also long been heavily involved in the system through their role in funding and performing research and development, especially in relation to food growing. More recently, the same organisations have become involved in research and development in areas further down the chain, in food processing and packaging. This activity is critical for innovation in the food product system and these groups need to be included.

The study drew on data provided by ABARE and the Australian Bureau of Statistics on the industry and refocused it to include the other players. The data were supplemented by fifty-two interviews with key players to assess their competitive strategies and the relationships and knowledge flows between them that are crucial to successful innovation. The interviews were conducted with senior staff in retail and food service firms, food and beverage processors,

logistics, transport, packaging and machinery firms and in public sector research and development (R&D) and training and regulatory organisations.

It is clear from the statistics that it is especially important to include in the analysis 'service' players since these account for more than half the contribution of the industry to gross domestic product, and their strategies increasingly drive innovation. The future will be codetermined by these groups and the 'producers' or food processing companies. AEGIS also studied the results of some shifts in technology, especially those relating to information technology as the principal technological mechanism in the tightening of relationships in the chain.

### International and domestic trends

Food plays a unique role in a country's social and economic systems. It is a critically important consumer item, being necessary to life, to health and increasingly to human enjoyment and life satisfaction. As a product, food needs to be consumed regularly and frequently and in most cases 'fresh'

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\* This paper provides an overview of a study conducted by the Australian Expert Group in Industry Studies (AEGIS) in 2001. AFFA provided a grant to AEGIS to use their experience in developing studies of the innovation dynamics of particular segments of the Australian economy, to focus on innovation within the Australian processed food industry.

This study was conducted at the same time as the development of the National Food Industry Strategy. This strategy was announced by the federal government in September 2001, including the commitment of funds to key innovation initiatives.

The full report can be downloaded from AFFA website ([www.affa.gov.au/foodinfo](http://www.affa.gov.au/foodinfo)).

(including products that have a specific 'use by' date). These characteristics are closely related to the economic and technological trends emerging in the global food system.

The international literature suggests that five major changes are having an impact on the organisation of the food product system worldwide. These are:

- recent major shifts toward internationalisation — a vast volume of mergers, acquisitions and increased trade;
- the increasing importance of brand ownership;
- critical shifts in power between food distributors (and major contract caterers) and food processing companies;
- the creation of much more ordered logistics systems, tied closely to major supermarket sales; and
- the growth of the food services sector as a distribution mechanism.

Internationally also there are trends in the types and constitution of 'novel' foods that are evident in the Australian market. Principal among these are the trends toward the creation of functional foods — nutraceuticals and mood foods and biotechnologically modified foods. Distribution is also beginning to be affected by business to consumer ecommerce.

Most of these trends are to some extent evident in Australia. We thus see in Australia a product system that is greatly affected by:

- international mergers and acquisitions, especially the sale of local businesses;
- overall decline in private sector R&D;
- altered relationships between processors and retailers or contract caterers;
- major business process changes, especially the spread of sophisticated computer networks to link players in different parts of the system;
- the role of logistics, especially packaging, as some of the most innovative parts of the system; and
- the growth of food services sector, now capturing one third of food spending in Australia.

The restructuring of the industry in Australia is part of a much broader restructuring and positioning worldwide. In 2000 the value of global mergers and acquisitions was US\$56 billion which was twelve times

the historical norm (Akason, Gething and Ruhl 2001). The major processors of food are concentrating and reducing in number and, despite what was said above about the shift in power to the retailers that is also occurring, are increasing in power in many markets. This is especially true of those that produce stable dry goods and/or specialise in small changes to major world brands.

To the concentration figures, however, there may be some countertrends. While the number of independent grocers is reducing fast almost everywhere (OECD 1998; Hauknes 2000), in 1998 in Australia 20 per cent of sales (dried/package goods) were made by independent food retailers (Joint Select Committee on the Retailing Sector 1999).

The number of restaurants, caterers and other food service outlets is increasing and capturing larger proportions of consumer food dollars. In the United States in the late 1990s the OECD reports that 48 per cent of sales and more than that in dollar value were with food service outlets of different kinds. While many food service firms are also large in scale, notably McDonalds, KFC and other high street names, there are vast numbers of small caterers, specialist food service outlets and restaurants that provide markets for specialist food producers, and usually specialising in niche areas such as the 'table ready' products that they sell both to providores and restaurants. Some niche producers of high grade foods are also moving to owning retail and restaurant spaces to showcase their own and similar products. In this countertrend in Australia, the food industry bears some similarity to both the furnishings and clothing industries where the power of retailers to block markets for new products is being challenged by direct retail to customers.

The food product system in Australia is one of the country's most significant areas of activity. It represents approximately 11 per cent of the Australian economy (table 1) when the retailing and food service segments are included.

The data show that food distribution services (food wholesaling and retailing and cafes and restaurants) account for a higher proportion of gross domestic product than do the food production segments.

## 1 Estimates for food system valued added, 1999-2000 <sup>a</sup>

	Value added	Share of GDP
	\$m	%
Agriculture	17 418	2.8
Food manufacturing	14 810	2.4
Wholesale trade	13 566	2.3
Retail trade	13 093	2.2
Cafes, restaurants and takeaway	8 577	1.4
Australian food economy		11.0

<sup>a</sup> The value added for cafes, restaurants and takeaway was derived from data published in the ABS tourism satellite account and updated for 2000. The wholesale and retail trade data were calculated using the percentage of food trade in retail trade. However, ABS publishes two different series of data on retail trade – the standard ANZSIC definition (used for GDP value added) that does not include cafes and restaurants and a retail trade series that does. The numbers in the table are therefore approximations.

Source: Australian Bureau of Statistics (2000, 2001); Joint Select Committee on the Retailing Sector (1999).

The second aspect that is important to note is the worldwide trend towards greater international trade in food and the increasing opening of markets, including Australia's, to a wider variety of food from overseas.

## Dynamics of innovation in the food product system

The food industry has undergone many changes in recent years. In particular, it has shifted toward being much more conscious of consumer needs. But the way in which the players control access for the products to the consumer has also changed fundamentally, shifting power from one group of players to another. This is the shift that started in the United Kingdom and the United States some decades ago and that has now spread to all OECD countries, although to a lesser extent so far in Australia. It is the shift from power lying with the food processors, the holders of technical expertise and sole product developers, supplying the market with products developed in the firm, to the major retailers and food service firms that increasingly shape the market for products and hence for innovation.

The food industry is best seen as composed of two chains of production and dis-

tribution, not one alone. The drivers of innovation in each one differ so the dynamics of innovation are also different and may demand different policy interventions to develop.

### Retailers

One chain of production and innovation is increasingly led by the major retailers, where the links in the chain that goes from retailers through processors to farmers are tightening, making the chain more rigid and perhaps less open to innovations by individual producer companies. In Australia the retail market is dominated by two major chains, both locally owned, and one new foreign owned chain now taking some market share, and a group of independent retailers, linked into a 'holding company' that is also foreign owned.

Major retailers are the gatekeepers to the consumer and hold highly sophisticated information on consumer trends and preferences. While for major processors, brands were king, and still retain vital importance, some retailers have either developed their own brands, under which the reputation and skills of the processors are hidden, or developed ways of rationing access to shelves and ensuring that suppliers enable them to hold no stocks but still be confident that delivery will occur to ensure full and rapid replenishment of stocks. The consequences of this shift, enabled by the development of new information technology systems and the introduction of a 'just in time' system known in this industry as ECR, 'efficient consumer response', are yet to be fully played out in Australia. This business process innovation may yet have either positive or negative effects on innovation throughout the supply chain.

### Food service providers

The other chain of production is led by the food service providers. That chain in turn is divided into two main areas. On the one hand there is the 'industrialised' arena of the large food service chains such as McDonalds and KFC whose relations with many of their suppliers parallel those of the major retailers with their suppliers. On the other there is an enormous, and in many cases expanding, arena composed of restaurants and smaller



food service outlets. The latter arena is one where there are many opportunities for small or new food manufacturers to try out new products and find profitable positions in niche markets. AEGIS came across many such examples in the course of this study.

### **Food processors**

This area is increasingly concentrated and the arena is highly unstable in terms of major players and who controls them.

The industry has often been thought of as 'low tech' and dominated by the suppliers of raw materials and, especially, of equipment. The reality is different (see Braadland 1999; Hauknes 2000). In Europe, the Community Innovation Survey showed that the industry's most important innovation stimulant was 'market conditions', not the inputs of others. The food industry should no longer be seen simply as a recipient of other industries' innovation but as an innovator in its own right, responding to, as well as leading, consumer requirements.

### **Logistics and packaging**

The shift in the way in which retailers and increasingly food service firms work, allied to the shift in consumer demand for fresh products, has created much greater pressure on the transport and logistics industry to meet tight targets and deliver in smaller quantities and more frequently than was the case before. This means that the major logistics firms in the arena are seeking ways to improve the technologies they use. In turn, this means that there is extra pressure to ensure that product packaging can meet the new transport and distribution needs as well as attract the consumer and maintain safety standards. Some products are especially complex to package, notably home replacement meals, as these must also withstand reheating, especially in microwave ovens.

### **Products**

There is a very considerable degree of product innovation (perhaps 15 000 new products a year worldwide). The failure rate for these products is, however, very high, even though most are incremental innovations.

The overall market for food as such is not one that is expanding fast, although there

are a number of shifts within it and overall spending by consumers on food has increased. The fact that the market is not expanding means that in many cases innovation involves competition between existing products. This competition is assisted by some demographic trends, notably the aging of the population and the associated demand for easy to prepare foods and for packing in single portions in the supermarket. It is also assisted by the trend toward more women with families remaining in the workplace. These women are often time poor. The related trend toward far greater numbers of meals being eaten in restaurants or taken away to be eaten at home also provides many opportunities for the provision of innovative products in the second food product innovation system.

In the main retailing or grocery product system there are several areas of innovation as nominated by the food processors. The first is the shift to convenience foods. At the highest value added end of the spectrum come the home replacement meals. There are several similar names for these; home meal replacements is common. At the other end come perhaps vegetables cut and packaged for specific purposes such as stir fries or salads. The second major trend is toward the creation of 'functional foods'. These are created by the addition of specific ingredients to assist with energy, and sports beverages and other fortified foods (energy — for example, caffeine; and sports — for example, vitamin enhanced) or some other need felt by the consumer.

The third is a composite trend, with three aspects. One aspect of it is the trend toward 'healthier foods' such as low fat, polyunsaturated or bran enhanced products. The second aspect is the wish by the manufacturers to make specific health claims. This, as indicated above, is a highly contentious area between regulators and manufacturers. The results of the recent trial of the addition of foliate may mean the beginning of a stream of such health producing products on the market and several firms seem to have 'novel food' products of this kind under development. The third aspect of the shift to healthier foods is the growth in the market for organic products. This market has been growing fast elsewhere in the

world and several interviewees suggested that they recognised the potential for such growth in Australia. Organic food, of course, begins with the grower but there are several processed foods made from organic ingredients appearing on the market.

### **Knowledge creation and diffusion**

As the shift in products shows again, far from being 'low tech', the food creation and distribution system coordinates information from a number of knowledge platforms. The UK Office of Science and Technology (1995, p. 2) has outlined the main research requirement for the food and drink industry. Most important among their research results for the food industry are productivity and quality improvements in their supplying (agricultural) industries. There the bio-sciences and, especially nowadays, biotechnology are critical. Equally important are analyses of information on consumer buying behavior (consumer science) and technological improvements in packaging (bio-chemical and new materials sciences) and storage techniques. These have come to join the traditionally important fields of metrology and the chemistry involved in the food technology fields. The importance of the shift to new research and knowledge production and diffusion fields became clear during the UK's Foresight project in the early 1990s and they are no less significant in Australia.

Australia has long been strong in the conduct of R&D related to agriculture and has recently begun to invest more in research related more specifically to food product development. There have been a number of innovations in the organisation of R&D related to agriculture, most notably the Rural R&D corporations, funded partly from a levy on farmers, partly by government and partly by industry contracts. In recent years these corporations began to turn their attention to R&D issues arising further downstream but more recently still seem to have returned to their more agricultural base.

There has also been innovations in the organisation of other areas of publicly funded research. The CSIRO and the Victorian government, for example, have created a 'joint venture' known as Food Science Australia and there are several

Cooperative Research Centres whose activity is related to food product development, packaging, transport and storage. There remain increasing issues of scale and the university departments that once were major sources of both trained personnel and research, both basic and applied, have suffered from low student numbers, a common problem with science, and reduced public spending on higher education. On the other hand, perhaps the R&D focus needed to shift in line with both scientific results and the increased consumer power in the industry. Thus, for example, departments of human nutrition seem to be thriving better than those with a more traditional 'food science' focus.

The shift in R&D Australia has coincided with a major restructuring of the industry as it becomes more global. This restructuring seems to have reduced R&D activity in the business sector in Australia and in recent years there have been closures of or reductions in the R&D departments maintained by firms in the industry. Moreover, even where the quantum of research dollars has not reduced, there seems to be less spent on basic research and more on the marketing side of product development or the adaptation of products developed overseas to Australian conditions.

Public sector funding for research that can be identified with specific food industries has increased. However, Commonwealth agencies reduced their expenditure on research in food sciences. The major CRC in the food industry found that its sponsors changed fast as a result of business merger and acquisition in the first years of operation and that it was increasingly hard to attract the funding needed. The other major CRC focuses on packaging, an increasingly important and in some ways most innovative element in the food product system.

New knowledge can be effectively diffused through training. It was striking that very few food processing company respondents to our survey showed much interest in training for their workforce and were seldom involved with the development of curriculum in TAFE or university courses. Few had specific training budgets. In an era of considerable change, the training area may need to attract greater attention from

firms in the field. In particular, there may need to be new courses developed for the mix of services and products that are fast becoming an important competitive strategy for manufacturing firms in many fields and more effective training for marketing and customer relations to reduce the rate of new product failure and respond rapidly to new customer demands.

### Regulators

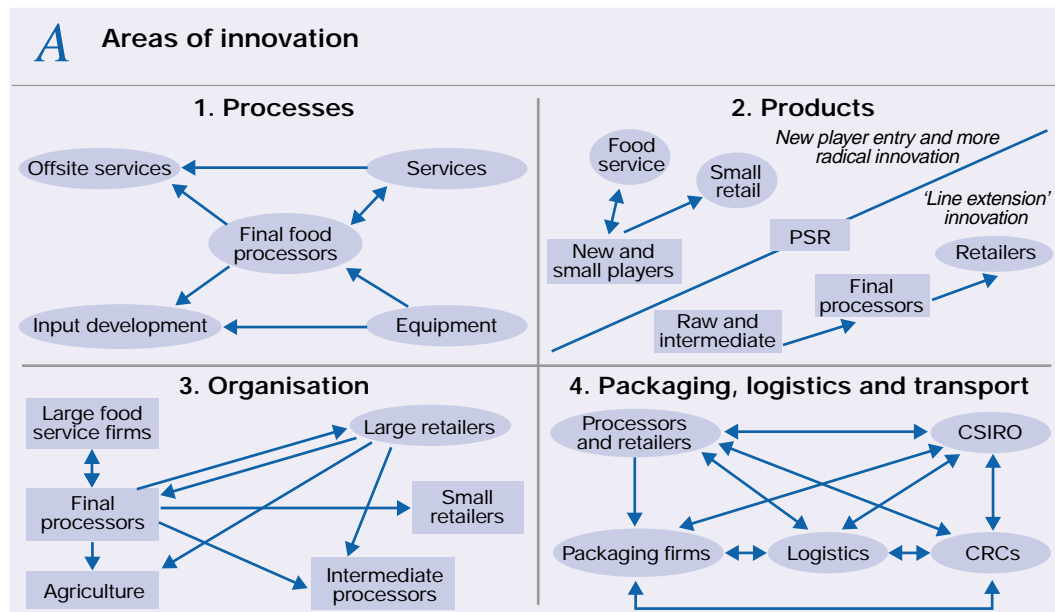
Food is of course a highly regulated system and will remain so. Present regulation is in the process of quite radical changes, some of which will move the system more toward acceptance of the processors' claims that their products are functional in terms of contributing to the better health of the products' consumers. To the relatively limited degree that the claims are allowed the changes will encourage that aspect of product innovation. But, although the regulations in force will continue to constrain product development, they may also encourage innovation in other areas, by pushing firms to work together to create new products that are acceptable both to the market and to the regulators. Indeed, to the extent that they push firms toward extra efforts to improve health and safety, they may encourage substantial process innovation and higher quality standards that may assist firms to export and support the

reputation of Australia as a 'green producer', a label that is increasingly valuable in the light of the problems now apparent in Europe, especially the United Kingdom. They may also support the efforts of firms whose competitive edge is related to guarantees of freshness and safety.

### Four fields of innovation

Food production and distribution together constitute a very complex arena. It would be wrong to imagine that there is just one model of innovation occurring within the Australian food industry. Our study suggests that there are four complex types of innovation proceeding simultaneously as shown in figure A. The diagram indicates some of the areas of key interactions that affect the dynamics of the food product system, as currently coordinated by the dominant nonprocessing players.

The four fields or 'systems' of innovation represent different aspects of the same reality and show in highly schematic form some of the directions of influence that have been pointed out above and in greater detail in the full report. Segment 1 shows the central position of the food processors in terms of influence on process innovation. They shape both the development of the raw material inputs, increasingly directly but



also of course through normal market mechanisms, and the ways in which these are semiprocessed at an earlier stage. They also exercise influence over the kinds of services offered to them. It is notable, however, that because Australia has almost no machinery and equipment industry and must therefore import almost everything, the industry lacks control of or even much input into the kinds of production tools that have been the traditional force for innovation in the food industry. This lack of influence may or may not be a constraint on innovation at present in Australia because of the shift toward product innovation per se and the greater use of R&D. Much investment seems to be currently taking place but no evidence could be found on whether that equipment would have been more effective had it had more local processor input.

Segment 2 indicates the important role that smaller actors can play in product innovation. The line running from bottom left corner to top right indicates the two systems of innovation in both the food service and the retail arenas. To the right of the line is the relatively well organised line of information flow between retailers, processors and raw materials providers. To the left of the line is a system of multiple linkages and multiple information flows. It is here that the 'fizz' of the system is most apparent. It is perhaps more frequent here for new product ideas to get their first market testing, perhaps pulled by the food service providers, including restaurants and smaller caterers as well as quite large potential customers such as airlines.

As suggested in the report, product innovation is increasingly dependent on inputs from R&D in both areas of the system, so that is shown crossing the line between the areas. Public sector research, also here includes training institutions.

Segment 3 shows the all important organisational innovation that is under way in the food product system and is another attempt at showing the system as a whole so the smaller players are included but their relative isolation is apparent. The importance of the large retailers appears clearly here.

Segment 4 indicates the interactions in what AEGIS saw as the most innovative segment of the system at present. It is notable

that the interactions between the users, including both the processors and the major retailers/food service companies as well as the more specialised logistics firms, with public sector research organisations, are frequent, go in all directions between players and are of equal strength and intensity. This seems to be currently the best functioning area of the system in terms of interactions between all relevant players.

## Conclusion

The food product system in Australia seems to be performing quite well on many of the indicators discussed in this report and has many innovation opportunities. The basic ingredients are available at most times of year and in most areas of Australia. If what is happening in Europe is any guide, consumers are increasingly going to demand higher quality, greater safety and greater variety both in the products that they consume and in the ways in which they purchase them.

Restaurant food may merge further with home cooking, as is already the case with home replacement meals, presaging and reflecting other convergence trends visible in other countries. Producers will need to add services to their products, both for intermediate companies and for final consumers. In the context of advancing internationalisation, it may be that players in the Australian food product system need to think along quite lateral and radical lines if they are to retain a place at the table.

The analysis of the dynamics of the system outlined in this report suggests some areas for policy action that have received insufficient attention. Discussion of new gene technologies was not in the scope of this study but cannot fail to be a key influence in all areas of the system in the future while ecommerce, also beyond the terms of reference of the study, will also revolutionise many relationships in the industry.

Most urgent of all in preparing for the future is common understanding by all players of how trends apparent in Australia relate to those visible elsewhere in the world so that all can appreciate fully the opportunities and constraints they will face and devise appropriate strategies for a future

which will be significantly different from the past. Achieving such common understanding may assist all players to realise the potential for growth and competitive success available through collaboration as well as rivalry, creating the extra scale and reach needed to maintain presence in international markets as well as facilitating the stream of new products and technologies for process and organisational innovation that will increasingly underpin competitive advantage. That collaboration may start with better communication of information and the development of infrastructure of relevance and to benefit to all.

### Issues for policy attention

The food industry action agenda is already under way. This process provides a critically important arena for the very different segments of the food product system to improve their communications and decide on areas of action that result in common benefits to the participants. Without wishing to prejudge what the players may decide, the AEGIS suggests that the following issues need to be addressed urgently.

■ ***The reduction in the amount of basic R&D undertaken in the industry and in the public sector related to the industry.***

This is especially important given the move internationally toward greater inputs of science into new product development.

■ ***Training in the industry.*** It was striking that very few respondents to our study seemed to be concerned about the training available to their staff or to the industry. If the industry is changing as much in each segment as is implied by the participation of Australia in the major international trends described, new training and retraining needs are expected to emerge and to need new solutions. Moreover, if innovation is increasing in importance to commercial success, specific training in different aspects of innovation may well be required. The most effective way in which to address these needs may be via collective investment in the industry to ensure high standards by all players.

■ ***Rationalisation and investment in the capacities of the smaller players in the logistics (transport, storage and packaging) arena.*** At present it seems, for example, that there is relatively little communication among the players on the directions to take in packaging to suit different forms of transport and distribution systems.

■ ***Improvement of communications between supermarkets and the more innovative producers that constitute the 'fizz' of the system.*** Many of these are smaller and more local firms and imaginative ways need to be found for them to show their wares to the public. Lessons may be learned from the restaurant and providore systems. Ecommerce needs attention in this as in other respects, both in relation to the management of the supply chain and access for innovative products and producers to final consumers.

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# Statistics

# About the data

## Australian commodity production and value

Estimates of farm crop production are based on information obtained from the Australian Bureau of Statistics' Agricultural Commodity Surveys conducted at 31 March each year from 1997-98 to 1999-2000 and from the Agricultural Census conducted at 30 June 2001. Prior to 1997-98 this information was collected annually in the Agricultural Census.

Information covering commodities such as livestock slaughterings and dairy produce is obtained from separate collections and from organisations such as the Australian Dairy Corporation.

Gross values are derived by multiplying the production quantity data by price (or unit value) data. All crop price information is obtained from non-ABS sources such as marketing boards, marketing reports, wholesalers, brokers and auctioneers. Price information for livestock slaughterings is obtained from ABS collections.

Estimates from the Agricultural Commodity Surveys are based on production from farms having an estimated value of agricultural operations (EVAO) of \$5000 or more.

- The EVAO of a farm is calculated by applying three year average weighted prices to livestock turnoff and livestock numbers on the farm, and to area and production data for crops. The aggregation of these commodity values is the EVAO.

This is the same scope as that used for the Agricultural Censuses from 1993-94 to 1996-97 and for the Agricultural Commodity survey from 1997-98 to 1999-2000. Prior to 1993-94 the scope varied. Details are available from the ABS.

## Australian trade

Data on international merchandise trade movements to and from Australia are collected by the Australian Customs Service, as part of its responsibility to administer government policy on tariffs and barrier control.

The merchandise trade statistics are compiled by the Australian Bureau of Statistics according to classifications that conform to an international standard, the International Harmonised Commodity Description and Coding System, with extra detail to meet Australian statistical needs.

- All exports are classified according to the Australian Harmonised Export Classification (AHECC).
- All imports are classified according to the Harmonised Tariff Item Statistical Code (HTISC), with extra detail to meet Australian Customs Service and statistical needs.

Restrictions are placed on the release of trade statistics where the data relating to an individual or organisation is likely to enable the identification of the trade of that individual or organisation, and that entity has requested that the data be suppressed.

- The main confidentiality restrictions that apply to food trade statistics are that no country details are provided for exports of unprocessed sugar, bulk wheat and malting barley.

The method of valuation for trade is:

- the value of exports is the free on board (fob) transactions value of the goods expressed in Australian dollars;
- the value of imports is the Australian Customs value — goods are valued at the point of containerisation (in most cases) or the port of shipment, or at the customs frontier of the exporting country, whichever comes first.



## World trade in food

The data on world trade in food — both imports and exports — were obtained from the COMTRADE database that is established and maintained by the United Nations' Statistics Division.

- More than 100 countries supply their updated trade statistics to this database, representing over 90 per cent of world trade.
- The data are recorded according to the Harmonised Commodity Description and Coding System and Standard International Trade Classification Revision 3.

## World food balances

The data on country food balances were obtained from the FAOSTAT database of the Food and Agriculture Organisation of the United Nations (FAO).

- Details of how standardised food balance sheets are derived are provided in FAO (2000).

The elements of an FAO food balance sheet are:

- production, imports and changes in stocks that together define the supply available to a country; and

- exports, livestock feed, seed use, industrial use, human consumption and losses during storage and transport that together add up to total utilisation.

FAO food balance sheets are standardised in order to reduce the amount of data for analytical purposes. Standardisation takes the form of:

- conversion of processed commodities back to their primary equivalents (so-called 'vertical standardisation'); and
- aggregation of similar products, for example chicken meat and turkey meat aggregated as poultry meat (so-called 'horizontal standardisation').

To keep the amount of data contained in *Australian Food Statistics* to manageable proportions, FAO food balance data reported are further simplified in two ways:

- only data at the major food type level of aggregation (thirteen different categories in all) are reported (FAOSTAT has 87 different food types); and
- some elements of the food balance sheets are omitted — such as feed use, industrial use and losses in transport.

# Information

## Selected Australian and world sources

### General

Agency	Publication or source	Description
<b>Australian</b>		
Australian Bureau of Agricultural and Resource Economics (ABARE)	<i>Australian Commodity Statistics</i> , December (annual)	Compendium of statistics providing a comprehensive coverage of current and historical data on price, production and export information, covering most agricultural commodities.
www.abareconomics.com.au		Also included is comprehensive information on farm sector output and employment, balance of trade figures and macroeconomic indicators.
		Up to forty years of historical data are provided.
	<i>Australian Commodities</i> (quarterly)	A journal containing: <ul style="list-style-type: none"> <li>• an overview of the performance of and prospects for the Australian primary commodities sector;</li> <li>• forecasts for the major agricultural, minerals and energy industries;</li> <li>• comprehensive statistical tables covering production, export, cost and price information;</li> <li>• macroeconomic indicators;</li> <li>• articles on topical economic issues.</li> </ul>
	<i>Australian Fisheries Statistics</i> , April (annual)	Compendium providing information on production and trade for the Australian fishing industry for a three year period. Also includes a profile of Commonwealth and state fisheries.
	<i>Australian Horticulture in the Global Environment</i> , February 2000	Research report profiling over twenty horticultural products exported by Australia, providing information on Australian production and exports, major markets and competitors, and the trade policies of key markets.
Australian Bureau of Statistics (ABS)	AusStats at: www.abs.gov.au/Ausstats/ABS@.nsf/ausstatshome?openview	An internet based information service providing ABS's full product range (both free and charged material) online. Includes: <ul style="list-style-type: none"> <li>• all ABS publications from 1998 onwards;</li> <li>• over 2000 spreadsheet tables with time series data.</li> </ul>
Agriculture, Fisheries and Forestry – Australia (AFFA)	Food Info Australia	AFFA's website providing online access to processed food and beverage industry statistics and Commonwealth government policy information.
www.affa.gov.au/foodinfo		

## INFORMATION SOURCES

Agency	Publication or source	Description
Horticulture Australia www.horticulture.com.au	<i>Australian Horticultural Statistics Handbook</i> (annual)	Handbook highlighting production in Australia and competitor countries and exports from Australia to major markets for a range of horticultural commodities. Also includes statistics on per person consumption and main horticultural imports to Australia.
Australian Pork Limited www.pork.gov.au	<i>PigStats</i> www.pork.gov.au/statistics.htm	Compilation of pig industry statistics focusing on pig industry structure, farm performance and a range of information on trade and consumption.
<b>World</b>		
International Grains Council www.igc.org.uk	<i>World Grain Statistics</i> (annual)	Report containing 45 detailed tables on production, trade, consumption, stocks and prices for wheat (including durum and wheat flour) and coarse grains. Additional tables deal with ocean freight rates. Most tables cover a ten year period.
Food and Agriculture Organisation of the United Nations www.fao.org	FAOSTAT By subscription on CD-ROM or online at apps.fao.org. There is limited free use allowed of the online version.	An online and multilingual database currently containing over 1 million time-series records for 210 countries and territories, covering international (210 countries and territories) statistics for: production, trade, food balance sheets, food aid shipments, fertiliser and pesticides, land use and irrigation, forest products, fishery products, and population.
Central Intelligence Agency of the United States of America www.cia.gov	<i>World Fact Book</i> (annual). Available in printed, CD-ROM, or online (free) at: www.cia.gov/cia/publications/factbook/index.html	Compendium containing, for virtually every country in the world, information on their geography, people, government, economy, communications, transport, military and transnational issues.

## Australian food processing industry

Agency	Publication or source	Description
Australian Bureau of Statistics www.abs.gov.au	<i>Manufacturing Industry</i> , cat. no. 8221.0, 8221.1, 8221.2, 8221.3, 8221.4, 8221.5, 8221.6 (quarterly)  Available on AusStats at: www.abs.gov.au/Ausstats/ABS@nsf/ausstatshome?openview	Information on the Australian processed food industry, including data on employment, wages and salaries, turnover and industry gross production. The data are classified by state and selected major commodities together with aggregate data for the last two years.  An internet based information service providing ABS full product range (both free and charged material) online.
Agrifood Media Pty Ltd cath.mckean@co31.aone.net.au	<i>Australian Food</i> , 2nd edition 1999	Book providing details on the structure of food processing, food safety and regulations, retailing market shares, selected food industries and industry organisations, trade directory.

## Australian retail food industry

Agency	Publication or source	Description
Australian Bureau of Statistics www.abs.gov.au	<i>Retail Trade</i> , cat. no. 8501.0 (quarterly)	Information on the Australian retail food industry including data on retail turnover by subgroup, such as, supermarkets and grocery stores, takeaway outlets, other food retailing, other retailing, hospitality services, such as cafes and restaurants, hotels and licensed clubs etc.
	Available on AusStats at: www.abs.gov.au/Ausstats/ABS@nsf/ausstatshome?openview	An internet based information service providing ABS full product range (both free and charged material) online.
Retail World Pty Ltd www.retailworld.com.au	<i>Grocery Industry Marketing Guide</i> (annual)	Information on market shares, by product group suppliers, retail developments.

## Australian retail food prices

Agency	Publication or source	Description
Australian Bureau of Statistics www.abs.gov.au	<i>Consumer Price Index</i> , cat. no. 6401.0 (quarterly)  <i>Average Retail Prices of Selected Items</i> , cat. no. 6403.0	Information on the Australian retail food prices and consumer price indexes industry including data on retail prices by subgroup, such as dairy products, grain products, meat and seafood, fruit and vegetables, processed fruit etc. for the last five years. Information on consumer price indexes, including data by subgroups, such as food, clothing, housing, transport, health and personal care etc, and by food group, such as dairy and related products, cereal products, meat and seafoods fruit, other food etc.
	Available on AusStats at: www.abs.gov.au/Ausstats/ABS@nsf/ausstatshome?openview	An internet based information service that provides ABS full product range (both free and charged material) online.

## Australian trade

Agency	Publication or source	Description
Australian Bureau of Statistics <a href="http://www.abs.gov.au">www.abs.gov.au</a>	<i>International Merchandise Trade</i> , cat. no. 5422.0 (quarterly)  Available on AusStats.	Information on the value of Australia's merchandise exports and imports with major trading partners, including data classified by state, broad economic category, industry of origin and selected major commodities, together with aggregate data on trade with major trading partners for the last fourteen years.
	AusStats at: <a href="http://www.abs.gov.au/Ausstats/ABS@nsf/ausstatshome?openview">www.abs.gov.au/Ausstats/ABS@nsf/ausstatshome?openview</a>	An internet based information service providing ABS's full product range (both free and charged material) online.
Australian Department of Foreign Affairs and Trade (DFAT) <a href="http://www.dfat.gov.au">www.dfat.gov.au</a>	<i>Composition of Trade Australia</i> (published twice yearly in calendar year and financial year format.)  Extract available free online at:  <a href="http://www.dfat.gov.au/publications/statistics.html">www.dfat.gov.au/publications/statistics.html</a>	A compendium of statistics on merchandise exports and imports, analysing the growth, direction and commodity breakdown of Australia's trade over the last five years. It also includes individual reports showing the composition of trade with over eighty of Australia's trading partners.
	<i>Direction of Trade, Time Series</i> (annual)	Contains value and percentage shares of Australia's exports to, and imports from, every one of our trading partners on a consistent basis over a twenty year period. It also includes total trade and trade balances with each of these countries.
Supermarket to Asia	Trade Statistics at: <a href="http://www.supermarkettoasia.com.au/stats/statsindex.htm">www.supermarkettoasia.com.au/stats/statsindex.htm</a>	A range of statistics and analysis on Australia's food and fibre exports to Asia. Includes food market profiles for a number of key Asian markets.

## World food trade

Agency	Publication or source	Description
International Trade Centre, an organisation operated jointly by the World Trade Organisation (WTO) and United Nations Conference on Trade and Development (UNCTAD)  www.intracen.org	Trade statistics at:  www.intracen.org/tradstat/mainproduct.htm  Also available on CD-ROM with time series data for the five years 1996–2000. (Data are obtained from the Commodity Trade Statistics Data Base (COMTRADE) of the United Nations Statistics Division.)  Infobases at:  www.intracen.org/tradstat/mainproduct.htm	International trade statistic (imports and exports) by: – section and product group, 1996–2000. – country and product group, 1996–2000.  Has coverage of over 100 reporting countries and territories representing about 90 per cent of world trade.  The data are recorded according to the Harmonised Commodity Description and Coding System (HS 96 and HS 88) and Standard International Trade classification (Rev. 3, Rev. 2 and Rev. 1).  Also includes information on product classification and trade performances, by country.  As well as trade statistics, contains market briefs, information on trade contacts and information sources.
United Nations Statistics Division  www.un.org/Depts/unsd/index.html	<i>International Trade Statistics Yearbook</i> (annual)	Volume I provides historical information on the external trade performance of individual countries in terms of current values and, if available, exchange rate, as well as quantum and unit value indexes. Information showing important commodities traded by an individual country (latest four years) and the country's trade with its major trading partners and regions (latest five years) are also shown. Summary tables for each country show imports by broad economic categories, exports by industrial origin and the percentage share of the country's top ten trading partners and selected regions in relation to its total trade. This volume contains data for 168 countries or reporting customs areas.  Volume II contains selected commodity tables showing total world trade of those commodities analysed by regions and countries, as well as various specialised tables.

## World food consumption

Agency	Publication or source	Description
Food and Agriculture Organisation of the United Nations <a href="http://www.fao.org">www.fao.org</a>	FAOSTAT  By subscription on CD-ROM or online at <a href="http://apps.fao.org">apps.fao.org</a> . There is limited free use allowed of the online version	An online and multilingual database currently containing over 1 million time series records for 210 countries and territories, covering international (210 countries and territories) statistics for: production, trade, food balance sheets, food aid shipments, fertiliser and pesticides, land use and irrigation, forest products, fishery products, and population.
Central Intelligence Agency of the United States of America <a href="http://www.cia.gov">www.cia.gov</a>	<i>World Fact Book 2001</i> (annual) Available in printed, CD-ROM, or online (free) at: <a href="http://www.cia.gov/cia/publications/factbook/index.html">www.cia.gov/cia/publications/factbook/index.html</a>	Compendium containing, for virtually every country in the world, information on their geography, people, government, economy, communications, transport, military and transnational issues.
International Monetary Fund	<i>International Financial Statistics Yearbook</i> (annual with monthly updates)	Source of international statistics on all aspects of international and domestic finance. It reports, for most countries of the world, current data needed in the analysis of problems of international payments and of inflation and deflation — that is, data on exchange rates, international liquidity, international banking, money and banking, interest rates, prices, production, international transactions, government accounts, and national accounts.



## 1.1 Agricultural food production, by commodity

	Unit	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
<b>Crops</b>							
<b>Grains a</b>							
Wheat	kt	16 504	22 924	19 224	21 464	24 758	22 190
Barley	kt	5 823	6 696	6 482	5 987	5 032	6 819
Oats	kt	1 875	1 653	1 634	1 798	1 118	1 131
Maize	kt	325	398	271	338	406	355
Rice	kt	951	1 388	1 331	1 390	1 101	1 760
Lupins	kt	1 559	1 523	1 561	1 696	1 968	800
Field peas	kt	530	454	316	298	357	401
Chickpeas	kt	287	288	199	188	230	146
Mung beans	kt	17	34	23	78	41	31
Navy beans	kt	6	4	5	3	6	6
Faba beans	kt	128	171	163	194	226	253
Lentils	kt	17	38	36	39	103	163
<b>Oilseeds</b>							
Canola	kt	557	624	856	1 690	2 426	1 905
Sunflowerseed	kt	69	143	98	209	147	70
Soybeans	kt	44	74	54	109	105	62
Cottonseed	kt	933	860	941	1 012	1 047	1 062
Other oilseeds	kt	81	66	53	72	85	78
<b>Other</b>							
Sugarcane	kt	37 436	39 938	41 064	40 128	39 699	31 228
Peanuts	kt	38	38	39	39	43	35
<b>Horticulture</b>							
<b>Fruit</b>							
Apples	kt	281	353	309	334	320	na
Pears	kt	156	168	153	157	159	na
Nashi	kt	7	6	7	5	na	na
Avocado	kt	16	20	20	24	24	33 f
Melons	kt	152	163	199	175	na	na
Pineapples	kt	128	123	123	131	139	na
Bananas	kt	220	200	223	225	257	na
Kiwifruit	kt	3	3	4	3	na	na
Mangoes	kt	27	32	37	26	38	na
Wine grapes	kt	883	798	951	1 101	1 129	1 422 f
Table and dried grapes	kt	212	363	196	269	422	429 f
Oranges	kt	439	589	566	448	517	624 f
Mandarins	kt	71	83	81	94	91	116 f
Lemons/limes/grapefruit	kt	49	55	51	45	43	47 f
<b>Nuts and berries</b>							
Almonds	kt	5	7	8	7	9	9
Chestnuts	t	686	664	505	790	1 250	1 400 f
Macadamia	kt	21	25	27	19	23	32 f
Berries b	kt	36	29	29	31	na	na

Continued

# **1.1** *Agricultural food production, by commodity (continued)*

	Unit	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
<b>Horticulture (continued)</b>							
<b>Stonefruit</b>							
Peaches	kt	60	72	65	66	86	na
Nectarines	kt	18	22	23	27	36	na
Apricots	kt	22	26	20	21	20	na
Plums	kt	21	25	26	23	24	na
Cherries	kt	5	7	7	6	6	na
<b>Vegetables</b>							
Potatoes	kt	1 308	1 286	1 372	1 327	1 200	na
Onions	kt	244	196	219	224	247	na
Carrots	kt	250	257	267	257	283	na
Asparagus	kt	7	8	8	9	16	na
Broccoli	kt	38	41	40	39	39	na
Cauliflower	kt	71	64	65	73	76	na
Tomatoes	kt	371	393	380	395	414	na
Mushrooms	kt	45	47	48	46	46	48 f
Lettuce	kt	107	111	129	131	152	na
Capsicum/chillies	kt	30	32	31	41	44	na
Cabbage	kt	69	60	58	53	69	na
Beans	kt	32	38	36	30	34	na
Other	kt	331	309	318	296	303	na
<b>Livestock slaughtering</b>							
Cattle and calves	'000	7 934	8 442	9 321	9 097	8 649	8 695
Cattle exported live c	'000	616	864	692	713	846	846
Sheep	'000	14 581	14 340	16 299	14 393	15 585	16 628
Lambs	'000	14 223	14 579	14 954	16 053	17 557	18 629
Sheep exported live c	'000	5 880	5 237	4 961	4 959	4 859	5 936
Pigs	'000	5 017	4 796	5 091	5 176	5 025	5 016
Poultry for meat	million	342	357	373	382	402	na
<b>Livestock products</b>							
Milk	ML	8 716	9 036	9 439	10 178	10 847	10 548
<b>Fisheries products</b>							
Tuna	kt	9	13	12	17	16	16
Other fish	kt	124	129	134	127	118	120
Prawns	kt	29	28	30	32	27	30
Rock lobster	kt	16	16	17	19	20	17
Abalone	kt	5	5	5	6	6	6
Scallops	kt	16	6	6	12	12	9
Oysters	kt	10	10	10	11	12	13

**a** Includes products for non food use, see section 2. **b** Includes strawberries, raspberries, blackberries, blueberries and blackcurrants. **c** Excludes animals for breeding. **f** Industry forecast. **na** Not available. Data will be updated on the AFFA website when available.

Sources: ABARE, *Australian Crop Report*, Canberra; ABARE, *Australian Fisheries Statistics*, Canberra; ABS, *Selected Agricultural Commodities, Preliminary*, cat. no. 7112.0, Canberra; ABS, *Agriculture, Australia*, cat. no. 7113.0, Canberra; ABS, *Agricultural Commodities*, Australia, cat. no. 7121.0, Canberra; ABS, *Livestock Products, Australia*, cat. no. 7215.0, Canberra; ABS, *Summary of Crops*, cat. no. 7330.0, Canberra; Horticulture Australia Limited, *Australian Horticultural Statistics Handbook, 2000-2001 and previous editions*, Sydney; Australian Citrus Growers Incorporated, *Annual Report 2000*, Adelaide; ABARE.

## 1.2 Value of agricultural food production, by commodity

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Crops</b>						
<b>Grains a</b>						
Wheat	4 305	4 878	3 802	4 011	4 831	4 688
Barley	1 319	1 308	1 032	836	865	1 364
Oats	289	227	223	157	118	143
Maize	69	80	55	61	62	59
Rice	197	270	341	296	256	335
Lupins	279	314	306	265	286	200
Field peas	132	111	86	88	106	107
Chickpeas	104	111	97	87	103	94
Mung beans	13	19	19	40	29	18
Faba beans	50	53	45	45	53	76
<b>Oilseeds</b>						
Canola	210	212	332	582	699	606
Sunflowerseed	25	47	34	54	49	23
Soybeans	18	31	22	36	39	21
Cottonseed	152	140	164	192	172	191
Other oilseeds	44	46	41	43	48	49
<b>Other</b>						
Sugarcane	1 169	1 186	1 248	1 058	943	683
<b>Total crops</b>	<b>8 375</b>	<b>9 033</b>	<b>7 847</b>	<b>7 849</b>	<b>8 660</b>	<b>8 658</b>
<b>Horticulture</b>						
<b>Fruit</b>						
Apples	305	378	273	321	274	281
Pears	91	106	108	112	72	na
Nashi	20	14	9	10	na	na
Avocado	38	42	46	52	55	na
Melons	74	84	93	127	na	na
Pineapples	36	39	37	39	44	na
Bananas	225	217	230	266	284	na
Kiwifruit	5	6	6	6	na	na
Mangoes	73	70	81	66	80	na
Wine grapes	548	532	766	974	903	1 178 f
Table and dried grapes	210	190	233	227	215	na
Oranges	219	256	254	296	276	na
Mandarins	71	86	76	82	89	na
Lemons/limes/grapefruit	37	40	33	23	23	na
Other fruit	27	39	29	48	na	na
<b>Nuts and berries</b>						
Almonds	40	39	43	46	40	na
Chestnuts	2	1	2	4	5	na
Macadamia	60	63	67	44	49	na
Berries b	71	72	91	107	na	na

Continued

## 1.2 Value of agricultural food production, by commodity (continued)

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Horticulture (continued)</b>						
<b>Stonefruit</b>						
Peaches	50	60	53	66	74	na
Nectarines	40	41	44	59	71	na
Apricots	31	39	31	28	32	na
Plums	33	39	44	42	43	na
Cherries	23	29	28	35	40	na
<b>Vegetables</b>						
Potatoes	414	449	493	438	382	486
Onions	113	92	125	119	114	na
Carrots	136	142	151	167	154	na
Asparagus	38	38	39	53	96	na
Broccoli	54	61	62	62	55	na
Cauliflower	48	48	48	56	56	na
Tomatoes	176	177	167	192	190	224
Mushrooms	128	135	157	149	na	na
Lettuce	77	76	93	88	104	na
Capsicum/chillies	44	41	49	62	60	na
Cabbage	24	24	24	22	24	na
Beans	43	41	47	43	44	na
Other	264	260	269	298	307	na
<b>Total horticulture</b>	3 889	4 064	4 399	4 827	na	na
<b>Livestock slaughtering</b>						
Cattle and calves	3 232	3 169	3 805	4 134	4 616	5 900
Cattle exported live c	344	428	333	343	433	482
Sheep	226	216	299	227	204	373
Lambs	596	637	574	645	669	788
Sheep exported live c	227	190	193	182	180	258
Pigs	825	765	710	690	792	822
Poultry meat	948	932	1 054	1 019	1 031	1 052
<b>Livestock products</b>						
Milk	2 848	2 811	2 817	2 900	2 845	3 058
<b>Total livestock</b>	9 246	9 147	9 785	10 138	10 770	12 733
<b>Fisheries products</b>						
Tuna	85	96	131	220	255	329
Other fish	352	378	396	444	470	477
Prawns	368	344	385	447	431	473
Rock lobster	370	413	373	411	551	481
Abalone	142	153	182	170	221	273
Scallops	71	37	39	40	46	44
Oysters	52	52	47	47	53	57
<b>Total fisheries d</b>	1 569	1 605	1 690	1 922	2 132	2 254

a Includes products for non food use, see section 2. b Includes strawberries, raspberries, blackberries, blueberries and blackcurrants. c Excludes animals for breeding. d Total includes pearls, other crustaceans and other molluscs. f Industry forecast. na Not available. Data will be updated on the AFFA website when available.

Sources: ABARE, *Australian Fisheries Statistics*, Canberra; ABS, *Agriculture, Australia*, cat. no. 7113.0, Canberra; ABS, *Livestock Products, Australia*, cat. no. 7215.0, Canberra; ABS, *Value of Principal Agricultural Commodities Produced*, cat. no. 7501, Canberra; ABS, *Value of Agricultural Commodities Produced*, cat. no. 7503, Canberra; Horticulture Australia Limited, *Australian Horticultural Statistics Handbook, 2000-2001 and previous editions*, Sydney; Australian Citrus Growers Incorporated, *Annual Report 2000*, Adelaide; ABARE.

### 1.3 *Number of enterprises engaged in agricultural food production* <sup>a</sup>

	1995-96	1996-97	1997-98	1998-99	1999-00
	no.	no.	no.	no.	no.
<b>Main activity</b>					
Grape growing	4 122	4 296	4 822	4 835	6 522
Apple and pear growing	1 166	1 184	1 219	1 227	1 229
Stone fruit growing	983	1 082	1 027	928	1 257
Other fruit	4 092	4 308	4 370	3 995	5 814
Vegetables	4 283	4 231	4 195	4 253	5 313
Grain growing	14 018	15 727	14 654	15 702	16 463
Grain-sheep/beef cattle farming	17 727	19 521	18 523	17 615	18 232
Sheep-beef cattle farming	9 429	8 072	7 679	6 972	9 253
Sheep farming	11 432	11 766	12 595	12 278	14 302
Beef cattle farming	19 388	16 495	15 915	15 362	35 236
Dairy cattle farming	13 683	13 683	13 762	13 241	13 820
Poultry farming (meat)	708	723	834	738	845
Poultry farming (eggs)	473	467	485	471	508
Pig farming	1 201	1 087	1 108	1 016	1 145
Deer farming	348	77	80	54	196
Sugar cane growing	4 995	4 975	5 080	5 067	5 029
Cotton growing	969	966	1 112	1 198	974
<b>Total</b>	109 017	108 660	107 460	104 952	136 138
<b>Other agriculture</b>					
Other livestock (including horses)	2 838	1 962	1 434	1 407	3 178
Other crops and plant growing nec	1 165	1 057	1 113	1 047	5 244
All other industries	2 493	2 585	2 728	1 023	1 811
<b>Total</b>	115 513	114 264	112 735	108 429	146 371

<sup>a</sup> Farm businesses with an EVAO over \$22 500 as at 31 March.  
Source: ABS, *Agriculture, Australia*, cat. no. 7113.0.

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## 1.4 *Employment in agricultural food production* <sup>a</sup>

	NSW <sup>b</sup>	Vic.	Qld.	SA	WA	Tas.	Australia <sup>c</sup>
	no.	no.	no.	no.	no.	no.	no.
<b>1997-98</b>							
Fruit	8 343	7 420	6 942	7 793	2 199	770	33 467
Vegetables	2 869	3 854	11 273	1 370	1 120	1 904	22 390
Grain growing	8 681	8 764	3 811	4 463	8 113	0	33 832
Grain-sheep/beef cattle farming	18 944	4 115	2 560	11 655	9 901	na	47 341
Sheep-beef cattle farming	6 018	3 753	1 825	1 667	1 198	478	14 939
Sheep farming	9 961	11 585	1 230	2 087	2 886	700	28 449
Beef cattle farming	8 124	6 127	14 921	952	2 059	724	34 320
Dairy cattle farming	5 009	19 968	4 449	2 734	1 090	1 770	35 020
Poultry farming (eggs)	1 067	637	460	320	484	83	3 051
Pig farming	1 560	na	1 296	458	482	77	5 451
Sugar cane growing	855	0	11 814	0	na	0	12 669
Cotton growing	3 615	0	2 278	0	na	0	5 893
Other agriculture	5 742	4 969	7 467	2 792	1 558	1 015	24 031
All agriculture	80 788	72 770 <sup>d</sup>	70 326	36 291	31 090	7 687 <sup>d</sup>	300 853
<b>1998-99</b>							
Fruit	8 687	9 734	8 461	7 286	2 072	630	36 870
Vegetables	2 544	4 604	12 771	1 090	1 358	1 643	24 010
Grain growing	10 496	6 601	4 902	9 995	6 779	0	38 773
Grain-sheep/beef cattle farming	19 922	8 353	3 225	5 406	10 801	76	47 783
Sheep-beef cattle farming	7 074	4 257	2 084	1 363	942	799	16 519
Sheep farming	9 620	10 615	1 415	4 106	2 802	1 109	29 667
Beef cattle farming	7 979	6 680	13 523	1 653	1 955	797	33 412
Dairy cattle farming	4 724	19 854	4 599	2 452	1 212	1 826	34 667
Poultry farming (eggs)	854	594	412	271	386	121	2 637
Pig farming	1 316	716	1 214	629	309	60	4 244
Sugar cane growing	900	0	11 043	0	na	0	11 943
Cotton growing	3 632	0	2 493	0	na	0	6 125
Other agriculture	6 948	6 445	5 269	1 898	2 214	1 486	24 490
All agriculture	84 696	78 453	71 411	36 149	30 830	8 547	311 140
<b>1999-2000</b>							
Fruit	8 838	11 652	6 744	8 923	2 715	975	39 847
Vegetables	3 070	3 147	9 136	na	1 990	2 063	23 468
Grain growing	9 873	6 762	4 266	9 330	7 747	139	37 978
Grain-sheep/beef cattle farming	16 349	7 233	3 736	5 499	9 578	708	42 534
Sheep-beef cattle farming	7 093	4 418	2 899	2 819	1 174	1 489	19 110
Sheep farming	10 759	8 885	1 174	4 191	2 756	822	29 253
Beef cattle farming	8 595	5 992	15 140	1 164	2 032	1 890	35 116
Dairy cattle farming	6 998	16 880	3 930	2 323	1 715	86	33 736
Poultry farming (eggs)	1 791	352	401	na	427	54	3 331
Pig farming	1 183	921	1 101	740	0	na	4 278
Sugar cane growing	1 182	0	9 860	0	na	0	11 041
Cotton growing	3 884	0	3 189	0	na	0	7 073
Other agriculture	7 867	8 489	5 282	1 384	2 326	510	26 773
All agriculture	87 481	74 730	66 857	40 709 <sup>d</sup>	32 739 <sup>d</sup>	8 735	313 538

<sup>a</sup> Includes proprietors and partners and employees working for farm businesses with an EVAO over \$22 500. Excludes non salaried directors, consultants, contractors and unpaid labor. <sup>b</sup> Includes ACT. <sup>c</sup> Includes NT for 1999-2000, data for this territory were not available for 1997-98 and 1998-99. <sup>d</sup> Totals are not the sum of components due to various data categories having a standard error greater than 50%. **na** Not available.

Source: ABS, *Agriculture, Australia*, cat. no. 7113.0; unpublished data ABS.

## 2.1 *Supply and use of Australian wheat, canola and pulses <sup>a</sup>*

	1995-96 kt	1996-97 kt	1997-98 kt	1998-99 kt	1999-00 kt	2000-01 <sup>p</sup> kt
<b>Wheat</b>						
Production	16 504	22 924	19 224	21 464	24 758	22 190
Domestic use	4 127	2 734	5 079	5 006	5 596	5 667
Human and industrial <sup>b</sup>	1 991	2 122	2 174	2 117	2 181	2 206
Feed <sup>c</sup>	1 626	904	2 385	2 341	2 830	2 900
Seed	510	486	519	548	585	564
Net exports	13 298	19 189	15 679	16 391	17 784	16 082
Change in stocks	- 921	1 001	-1 534	68	1 379	441
<b>Canola</b>						
Production	557	624	856	1 690	2 426	1 905
Domestic use	173	254	322	355	370	387
Crushers	171	251	315	345	363	381
Seed	2	3	6	10	7	6
Exports	384	330	555	1 355	2 033	1 296
<b>Canola meal</b>						
Production	94	137	178	193	203	214
Domestic use	94	137	178	193	201	213
Exports	0	0	0	0	2	1
<b>Canola oil</b>						
Production	72	106	128	142	149	156
Domestic use	66	93	92	94	110	99
Exports	7	15	38	50	41	59
<b>Pulses – major crops</b>						
Production						
Lupins	1 559	1 523	1 561	1 696	1 968	800
Field peas	530	454	316	298	357	401
Chickpeas	287	288	199	188	230	146
Apparent domestic use <sup>b</sup>						
Lupins	632	618	600	643	584	405
Field peas	257	149	132	31	68	39
Chickpeas	31	0	34	28	46	50
Exports						
Lupins	927	905	961	1 053	1 384	446
Field peas	273	304	184	267	267	362
Chickpeas	155	369	200	120	243	176

<sup>a</sup> Wheat and legume export figures are for winter crop years defined as follows: October–September for wheat;

November–October for canola (seed and products), peas and lupins. <sup>b</sup> Production may not equal the sum of apparent domestic use and exports in any one year due to reductions or increases in stock levels. Excludes wheat flour exports. <sup>c</sup>

Calculated as a residual: production less exports less other domestic uses less change in stocks. <sup>p</sup> Preliminary.

*Note:* The export data refer to market year export periods, so are not comparable with financial year export figures published elsewhere.

*Sources:* ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra; ABS, *Agriculture, Australia*, cat. no. 7113.0, Canberra; ABARE.



## 2.2 Supply and use of Australian coarse grains <sup>a</sup>

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 <sup>p</sup>
	kt	kt	kt	kt	kt	kt
<b>Barley</b>						
Production	5 823	6 696	6 482	5 987	5 032	6 819
Domestic use	2 061	2 212	2 090	2 158	1 987	2 310
As malt and other human use	109	144	148	151	154	158
Feed	1 800	1 910	1 800	1 890	1 700	2 000
Seed	151	158	143	117	133	153
Export	4 042	4 331	3 463	4 765	3 325	4 254
Feed barley	1 685	1 957	2 025	2 607	1 524	2 050
Malting barley	1 890	1 928	982	1 635	1 234	1 604
Malt (grain equivalent)	467	447	457	525	569	597
<b>Oats</b>						
Production	1 875	1 653	1 634	1 798	1 118	1 131
Domestic use	1 620	1 503	1 481	1 538	983	1 045
Human	108	110	113	116	119	122
Feed	1 460	1 348	1 324	1 394	830	891
Seed	52	45	44	28	33	33
Export	255	150	154	248	135	86
<b>Triticale <sup>b</sup></b>						
Production	469	674	633	708	764	764
Domestic use	469	674	639	713	764	601
Feed	450	656	620	695	750	587
Seed	18	18	19	18	14	14
<b>Sorghum</b>						
Production	1 591	1 425	1 081	1 891	2 116	2 107
Domestic use	993	1 194	897	1 399	1 452	1 536
Feed	990	1 192	894	1 396	1 448	1 532
Seed	3	3	3	3	4	4
Export	61	599	231	184	493	665
<b>Maize</b>						
Production	325	398	271	338	406	355
Domestic use	309	390	252	302	353	306
Human, industrial	92	94	96	94	96	99
Feed	216	295	155	207	256	205
Seed	1	1	1	1	1	1
Export	2	17	9	19	36	53
<b>Total coarse grains</b>						
Production	10 083	10 846	10 101	10 722	9 436	11 176
Domestic use	5 450	5 974	5 359	6 109	5 539	5 798
Human, industrial	309	348	357	361	369	378
Feed	4 916	5 400	4 793	5 582	4 984	5 216
Seed	226	225	210	167	186	204
Export	4 912	4 721	3 820	5 542	4 178	4 461

<sup>a</sup> Market years are November–October for barley, oats and triticale, and March–February for sorghum and maize. This means that the 1998-99 barley crop harvested in November 1998 to January 1999 is marketed from November 1998 to October 1999. The 1998-99 sorghum crop harvested in March to May 1999 is marketed from March 1999 to February 2000. The sum of domestic use and exports may differ from production as a result of changes in grain stock levels. <sup>b</sup> Excludes small quantities of triticale for export. <sup>p</sup> Preliminary.

*Note:* The export data refers to market year export periods and so are not comparable with financial year export figures published elsewhere.

*Sources:* ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra; ABS, *Agriculture, Australia*, cat. no. 7113.0, Canberra; ABARE.

## 2.3 *Supply and use of Australian dairy products*

	Unit	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
<b>Production of wholemilk</b>	ML	8 716	9 036	9 439	10 178	10 847	10 548
<b>Manufacture</b>							
Butter <b>a</b>	kt	145	147	154	176	170	160
Cheese	kt	272	290	310	320	369	361
Non-cheddar	kt	102	114	123	133	154	145
Cheddar	kt	170	176	187	186	216	216
Wholemilk powder	kt	113	134	128	145	187	205
Skim milk powder <b>b</b>	kt	215	223	215	255	247	249
Casein	kt	6	5	9	8	9	8
Buttermilk powder	kt	14	15	15	17	18	15
<b>Consumption</b>							
Butter	kt	52	50	55	50	55	55
Cheese <b>c</b>	kt	192	198	197	204	219	219
Australian	kt	158	166	166	167	182	182
Wholemilk powder	kt	20	24	16	18	15	14
Skim milk powder <b>b</b>	kt	41	43	34	35	37	37
Casein	kt	1	2	0	0	1	1
Market milk	ML	1 895	1 920	1 918	1 931	1 934	1 920
<b>Exports</b>							
Butter and butterfat <b>a</b>	kt	60	99	95	104	124	108
Cheese	kt	119	128	153	175	220	219
Wholemilk powder	kt	81	97	95	126	153	167
Skim milk powder	kt	168	192	178	220	218	203
Casein	kt	3	6	9	13	14	10
<b>Other products</b>							
Fresh milk	ML	69	80	75	82	86	83
Other fresh products	kt	6	9	9	6	5	3
Condensed milk	kt	53	45	52	62	69	63
Other powders	kt	28	34	36	38	54	49
<b>Imports</b>							
Cheese	kt	33	32	31	31	32	37

**a** Includes the butter equivalent of butter oil, butter concentrate, ghee and dry butterfat production. **b** Includes mixed skim milk powder and buttermilk powder. **c** In natural equivalent weight. **p** Preliminary.

Sources: ABS, *Apparent Consumption of Foodstuffs, Australia*, cat. no. 4306.0, Canberra; ABS, *Apparent Consumption of Selected Foodstuffs, Australia*, cat. no. 4315.0, Canberra; ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra; Australian Dairy Corporation, *Dairy Compendium*, Melbourne; Australian Dairy Corporation, *Monthly Statistics*, Melbourne; Australian Dairy Corporation; ABARE.

## 2.4 *Supply and use of Australian meats*

	Unit	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
<b>Beef and veal</b>							
Slaughterings a	'000	7 934	8 442	9 321	9 097	8 649	8 695
Production b	kt	1 745	1 810	1 955	2 011	1 988	2 071
Exports c	kt	738	730	821	883	852	959
Consumption bd	kt	726	753	695	705	724	638
Closing stocks b	kt	29	34	28	29	na	30
<b>Mutton</b>							
Slaughterings	'000	14 581	14 340	16 299	14 393	15 585	16 628
Production b	kt	310	296	333	302	328	348
Exports bc	kt	141	138	163	155	171	180
Consumption bd	kt	104	112	112	99	102	110
Closing stocks b	kt	9	6	6	12	12	12
<b>Lamb</b>							
Slaughterings a	'000	14 223	14 579	14 954	16 053	17 557	18 629
Production b	kt	265	270	283	312	347	367
Exports c	kt	52	63	71	85	99	115
Consumption bd	kt	205	198	203	216	236	236
Closing stocks b	kt						
<b>Pig meat</b>							
Slaughterings	'000	5 017	4 796	5 091	5 176	5 025	5 016
Production b	kt	347	336	358	370	363	365
Imports be	kt	4	10	10	16	37	26
Exports be	kt	6	7	12	16	39	44
Consumption bd	kt	343	348	354	373	379	352
Closing stocks – pork b	kt	2	4	3	3	3	3
<b>Poultry meat f</b>							
Slaughterings	million	na	na	na	375	394	399
Production b	kt	516	533	588	604	638	657
Exports b	kt	10	12	14	19	17	21
Consumption d	kt	507	540	579	587	631	631

a Includes calves. b Carcass weight. c Includes canned and miscellaneous product. d Apparent consumption. e Includes preserved pig meat. f Includes chicken, turkey and duck. p Preliminary. na Not available.

Sources: ABS, *Apparent Consumption of Foodstuffs, Australia*, cat. no. 4306.0, Canberra; ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra; ABS, *Principal Agricultural Commodities, Australia*, Preliminary, cat. no. 7111.0, Canberra; ABS, *Agriculture, Australia*, cat. no. 7113.0, Canberra; ABS, *Agricultural Commodities, Australia*, cat. no. 7121.0, Canberra; Agriculture, Fisheries and Forestry – Australia, *Export Statistics*, Sydney; ABARE.

## 2.5 *Supply and use of selected Australian horticultural products*

	Unit	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
<b>Grapes and grape products</b>							
<b>Grape production</b>							
Total	kt	1 095	1 161	1 147	1 370	1 551	1 851
<b>Grape use</b>							
Wine making	kt	883	798	951	1 101	1 129	1 422
Red grapes	kt	282	260	350	436	538	795
White grapes	kt	601	538	601	666	591	627
Drying and table	kt	212	363	196	269	422	429
<b>Wine production</b>							
Fortified wine	ML	29	29	29	21	27	19
Unfortified wine	ML	577	538	651	772	779	1 016
Total wine	ML	606	567	680	793	806	1 035
<b>Domestic sales</b>							
Table wine	ML	247	268	277	287	307	325
Red wine	ML	69	84	87	99	114	126
White wine	ML	179	185	190	188	193	199
Sparkling wine	ML	30	32	31	33	33	31
Fortified wine	ML	26	26	25	24	23	22
Other wine	ML	4	7	6	4	7	7
Total wine a	ML	308	333	339	348	369	384
<b>Exports</b>							
Table wine	ML	122	146	184	206	276	331
Red wine	ML	55	69	86	100	144	180
White wine	ML	67	77	99	106	132	151
Sparkling wine	ML	5	6	6	7	8	7
Fortified wine	ML	2	2	3	3	2	2
Other wine	ML	2	1	1	1	1	0
Total wine	ML	131	155	194	216	288	340
<b>Imports</b>							
Table wine	ML	17	10	21	20	14	8
Sparkling wine	ML	3	2	3	3	4	3
Fortified wine	ML	0	0	0	0	1	0
Other wine	ML	1	1	1	1	1	2
Total wine	ML	20	14	26	24	20	13
<b>Dried vine fruit</b>							
Production (dried weight)	kt	38	69	29	44	63	64
Exports	kt	15	25	12	14	5	6
Imports	kt	9	10	12	16	17	17
<b>Table grapes</b>							
Production	kt	56	63	65	70	67	65
Exports	kt	21	27	27	29	33	31

*Continued*

## 2.5 *Supply and use of selected Australian horticultural products* (continued)

	Unit	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
<b>Oranges and orange juice</b>							
<b>Navel oranges</b>							
Production	kt	136	201	210	149	180	246
Fresh domestic consumption	kt	60	82	84	60	75	69
Processed	kt	30	50	52	28	36	78
Exports	kt	46	69	74	61	69	99
<b>Valencia and other oranges</b>							
Production	kt	303	388	356	299	337	378
Fresh consumption	kt	81	90	85	79	83	114
Processed	kt	180	250	227	168	211	213
Exports	kt	42	48	44	52	43	51
<b>Total oranges</b>							
Production	kt	439	589	566	448	517	624
Fresh consumption	kt	140	173	170	140	159	183
Processed	kt	210	300	279	196	247	291
Exports	kt	89	116	117	112	111	150
Imports	kt	10	13	13	6	14	12
<b>Orange juice (equivalent tonnes of fresh oranges) b</b>							
Production	kt	200	286	266	186	234	277
Exports of processed juice	kt	25	23	21	21	32	34
Imports of FCOJ	kt	220	185	222	367	293	309
Stocks of Australian FCOJ	kt	36	79	55	29	50	90
Apparent consumption	kt	360	368	412	503	445	462
<b>Apples</b>							
Production	kt	281	353	309	334	320	na
Fresh domestic consumption	kt	148	175	163	173	166	na
Processed	kt	104	153	110	136	131	na
Exports	kt	29	25	35	25	33	39
<b>Tomatoes and tomato products</b>							
Tomato production	kt	371	393	380	395	414	na
<b>Tomato use</b>							
Fresh domestic consumption	kt	78	89	39	81	96	na
Processed (raw material)	kt	288	299	334	309	368	na
Fresh exports	kt	5	5	7	5	5	4
Processed production	kt	99	104	125	117	138	na
Processed exports	kt	2	3	7	12	9	7
Processed imports	kt	38	36	37	34	24	22
Apparent processed consumption	kt	134	136	154	140	157	na

a Includes carbonated wine and vermouth. b 1 tonne fresh weight = 500 litres (single strength) orange juice. 1 tonne FCOJ = 13 Australian fresh fruit tonnes (approximately). p Preliminary. na Not available.

Note: FCOJ – Frozen concentrated orange juice.

Sources: ABS, *Australian Wine and Grape Industry*, cat. no. 1329.0, Canberra; ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra; ABS, *Agriculture, Australia*, cat. no. 7113.0, Canberra; Shepherd, A, *Wine Grapes*, ABARE Research Report 99.15, Canberra; Australian Horticultural Corporation, *Australian Horticulture Statistics Handbook, 1999-2000*, Sydney; Australian Processing Tomato Industry Council, *Annual Industry Survey 1999*, Blackburn South, Victoria; ABARE.

### 3.1 Summary statistics for the Australian processed food industry

	Establishments at 30 June a		Employment at 30 June b		Wages and salaries c		Turnover		Industry value added	
	1998-99	1999-00	1998-99	1999-00	1998-99	1999-00	1998-99	1999-00	1998-99	1999-00
	no.	no.	'000	'000	\$m	\$m	\$m	\$m	\$m	\$m
<b>Meat</b>										
Meat processing	279	292	30	28	1 013	948	6 868	7 038	1 554	1 523
Poultry processing	136	155	13	13	415	439	2 405	2 543	681	750
Bacon, ham and smallgoods	136	160	8	7	226	227	1 404	1 377	419	353
Total	551	607	51	47	1 654	1 614	10 678	10 958	2 654	2 626
<b>Dairy</b>										
Milk and cream processing	39	57	6	6	275	270	2 798	3 027	596	640
Ice cream	72	32	3	3	111	98	690	728	204	172
Other dairy products	100	118	8	9	368	403	4 362	4 593	857	1 060
Total	211	207	17	17	754	771	7 849	8 348	1 657	1 872
<b>Fruit and vegetables</b>	264	300	11	11	446	457	3 532	3 632	924	975
<b>Oil and fat</b>	52	60	2	1	85	84	1 048	934	225	226
<b>Flour mill and cereal food</b>										
Flour mill products	42	45	2	2	103	106	1 273	1 373	278	328
Cereal food and baking mixes	183	168	6	6	206	192	2 089	2 188	669	724
Total	225	213	8	8	309	298	3 361	3 561	946	1 052
<b>Bakery products</b>										
Bread	58	251	9	10	371	376	1 309	1 371	475	537
Cakes and pastry products	606	465	9	10	256	263	1 071	1 078	388	401
Biscuits	11	14	5	5	154	128	1 031	991	515	370
Total	675	730	23	25	781	767	3 411	3 440	1 379	1 308
<b>Other food</b>										
Sugar	22	27	7	6	260	247	2 479	1 996	594	424
Confectionery	123	201	6	6	264	271	1 469	1 542	616	608
Seafood	126	111	4	4	100	103	1 111	1 269	195	270
Prepared animal and bird feed	169	202	4	5	186	229	2 549	2 506	520	487
Food nec	501	318	15	14	555	526	3 145	3 164	1 011	954
Total	941	859	36	35	1 364	1 376	10 753	10 477	2 935	2 743
<b>Beverage and malt</b>										
Soft drink, cordial and syrup	101	110	6	6	263	255	2 589	2 702	807	722
Beer and malt	40	33	3	3	165	170	2 518	2 461	892	819
Wine	312	286	9	9	268	310	3 323	3 575	1 326	1 502
Spirits	18	11	0	0	10	8	193	234	50	71
Total	471	440	18	18	707	743	8 624	8 972	3 074	3 114
<b>Total food and beverages</b>	3 390	3 416	166	163	6 099	6 110	49 256	50 321	13 794	13 916
<b>Total manufacturing</b>	na	na	923	933	34 869	35 482	220 102	231 145	68 805	70 018

a Statistical data collection units that do not necessarily represent a separate physical unit. b Includes working proprietors. c Excludes drawings of working proprietors.

Sources: ABS, *Manufacturing Industry*, cat. no. 8221.0, Canberra; ABS unpublished data, Canberra.

## 3.2 *New South Wales processed food industry, summary statistics*

	Employment at 30 June a		Wages and salaries b		Turnover		Industry value added	
	1998-99 no.	1999-00 no.	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m
<b>Meat</b>								
Meat processing	8 197	7 194	305	257	1 782	1 707	434	374
Poultry processing	6 691	6 740	218	225	1 112	1 263	373	408
Bacon, ham and smallgoods	1 760	1 505	53	55	428	386	129	98
Total	16 648	15 439	577	536	3 322	3 356	936	880
<b>Dairy</b>								
Milk and cream processing	993	1 170	59	54	505	560	836	132
Ice cream	807	844	48	35	262	250	107	75
Other dairy products	1 571	1 361	81	67	744	536	130	123
Total	3 371	3 376	189	157	1 511	1 346	321	330
<b>Fruit and vegetables</b>	2 618	2 485	97	109	733	879	133	225
<b>Oil and fat</b>	840	532	47	38	561	423	121	100
<b>Flour mill and cereal food</b>								
Flour mill products	1 191	1 316	59	58	726	843	152	208
Cereal food and baking mix	2 201	2 374	82	81	1 165	1 265	369	448
Total	3 392	3 690	141	138	1 891	2 107	521	656
<b>Bakery products</b>								
Bread	2 858	3 545	120	136	404	450	148	176
Cake and pastry	2 285	2 586	76	78	318	367	96	125
Biscuit	961	891	42	34	281	270	148	123
Total	6 105	7 022	238	248	1 003	1 087	392	425
<b>Other food</b>								
Sugar	532	533	na	na	na	na	na	na
Confectionery	1 272	1 513	na	na	na	na	na	na
Seafood	703	402	26	17	149	86	27	16
Prepared animal and bird feed	1 723	2 035	83	109	1 036	981	263	232
Food nec	5 263	5 047	207	204	1 092	1 079	364	385
Total	9 494	9 530	391	407	2 861	2 711	824	822
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	2 042	2 050	83	85	880	997	260	310
Beer and malt	870	883	na	na	na	na	na	na
Wine	1 710	2 002	53	63	695	702	188	205
Spirits	na	126	na	na	na	na	na	na
Total	na	5 061	na	210	na	2 658	na	826
<b>Total food and beverage</b>	47 741	47 135	1 913	1 842	14 827	14 567	4 202	4 264
<b>Total manufacture</b>	297 015	291 930	11 973	11 660	71 876	73 259	22 903	23 103

a Includes working proprietors. b Excludes drawings of working proprietors. na Not available.  
Source: ABS, *Manufacturing Industry, NSW and ACT*, cat. no. 8221.1, Canberra.



### 3.3 Victorian processed food industry, summary statistics

	Employment at 30 June a		Wages and salaries b		Turnover		Industry value added	
	1998-99 no.	1999-00 no.	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m
<b>Meat</b>								
Meat processing	5 892	4 576	200	164	1 222	1 042	289	234
Poultry processing	3 076	2 765	89	91	597	528	131	132
Bacon, ham and smallgoods	2 112	2 103	71	78	380	384	107	109
<b>Total</b>	<b>11 079</b>	<b>9 444</b>	<b>361</b>	<b>333</b>	<b>2 199</b>	<b>1 955</b>	<b>527</b>	<b>475</b>
<b>Dairy</b>								
Milk and cream processing	1 919	1 974	94	85	978	1 131	258	245
Ice cream	1 078	1 069	38	37	260	278	50	53
Other dairy products	4 953	5 724	231	270	3 023	3 414	611	773
<b>Total</b>	<b>7 950</b>	<b>8 767</b>	<b>363</b>	<b>392</b>	<b>4 261</b>	<b>4 823</b>	<b>920</b>	<b>1 071</b>
<b>Fruit and vegetables</b>	<b>4 206</b>	<b>4 285</b>	<b>195</b>	<b>197</b>	<b>1 633</b>	<b>1 621</b>	<b>485</b>	<b>417</b>
<b>Oil and fat</b>	<b>na</b>	<b>407</b>	<b>na</b>	<b>24</b>	<b>na</b>	<b>311</b>	<b>na</b>	<b>84</b>
<b>Flour mill and cereal food</b>								
Flour mill products	340	340	17	18	180	175	44	38
Cereal food and baking mix	2 332	1 995	87	82	623	636	215	197
<b>Total</b>	<b>2 672</b>	<b>2 335</b>	<b>104</b>	<b>99</b>	<b>803</b>	<b>811</b>	<b>259</b>	<b>235</b>
<b>Bakery products</b>								
Bread	2 184	2 256	98	85	300	282	128	113
Cake and pastry	3 014	3 322	76	na	369	na	150	na
Biscuit	1 631	1 728	54	na	289	na	135	na
<b>Total</b>	<b>6 828</b>	<b>7 306</b>	<b>228</b>	<b>228</b>	<b>957</b>	<b>1 013</b>	<b>413</b>	<b>333</b>
<b>Other food</b>								
Sugar	na	na	na	na	na	na	na	na
Confectionery	3 361	3 433	172	181	761	819	254	238
Seafood	na	na	na	na	na	na	na	na
Prepared animal and bird feed	1 131	1 204	54	69	757	750	145	145
Food nec	4 165	4 377	169	168	1 020	1 083	330	290
<b>Total</b>	<b>9 256</b>	<b>9 624</b>	<b>414</b>	<b>442</b>	<b>2 814</b>	<b>2 938</b>	<b>790</b>	<b>724</b>
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	na	na	na	na	na	na	na	na
Beer and malt	606	597	na	na	na	na	na	na
Wine	2 168	2 136	59	57	778	790	376	377
Spirits	na	na	na	na	na	na	na	na
<b>Total</b>	<b>4 112</b>	<b>4 089</b>	<b>161</b>	<b>155</b>	<b>2 087</b>	<b>2 088</b>	<b>834</b>	<b>761</b>
<b>Total food and beverage</b>	<b>46 990</b>	<b>46 257</b>	<b>1 878</b>	<b>1 871</b>	<b>15 559</b>	<b>15 558</b>	<b>4 529</b>	<b>4 099</b>
<b>Total manufacture</b>	<b>298 711</b>	<b>292 050</b>	<b>11 588</b>	<b>11 679</b>	<b>71 984</b>	<b>74 312</b>	<b>22 847</b>	<b>22 159</b>

a Includes working proprietors. b Excludes drawings of working proprietors. na Not available.  
Source: ABS, *Manufacturing Industry, Vic*, cat. no. 8221.2, Canberra.

## 3.4 *Queensland processed food industry, summary statistics*

	Employment at 30 June a		Wages and salaries b		Turnover		Industry value added	
	1998-99	1999-00	1998-99	1999-00	1998-99	1999-00	1998-99	1999-00
	no.	no.	\$m	\$m	\$m	\$m	\$m	\$m
<b>Meat</b>								
Meat processing	11 008	10 476	350	348	2 946	3 203	598	657
Poultry processing	1 775	1 959	53	57	313	320	84	92
Bacon, ham and smallgoods	1 790	1 698	53	54	317	336	96	91
Total	14 573	14 134	456	458	3 576	3 859	778	840
<b>Dairy</b>								
Milk and cream processing	1 436	1 635	50	68	577	639	77	81
Ice cream	353	186	9	na	55	na	19	na
Other dairy products	528	407	18	na	197	na	30	na
Total	2 318	2 227	78	92	829	899	126	129
<b>Fruit and vegetables</b>	1 801	1 969	58	60	394	390	91	132
<b>Oil and fat</b>	na	269	na	15	na	138	na	29
<b>Flour mill and cereal food</b>								
Flour mill products	299	255	13	12	180	151	37	26
Cereal food and baking mix	736	338	19	8	139	101	41	29
Total	1 035	593	32	20	319	252	78	55
<b>Bakery products</b>								
Bread	1 682	1 990	59	67	261	295	71	109
Cake and pastry	na	1 611	na	40	na	139	na	47
Biscuit	na	1 343	na	27	na	216	na	115
Total	4 573	4 944	135	134	711	650	298	270
<b>Other food</b>								
Sugar	5 900	4 911	226	203	1 995	1 544	487	333
Confectionery	142	106	3	2	8	7	3	3
Seafood	230	485	3	9	40	172	4	26
Prepared animal and bird feed	864	746	24	22	353	335	49	47
Food nec	3 436	2 686	105	87	604	566	166	147
Total	10 571	8 935	360	323	2 999	2 624	710	555
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	1 248	na	na	na	na	na	na	na
Beer and malt	na	614	na	na	na	na	na	na
Wine	56	50	1	na	5	na	1	na
Spirits	na	na	na	na	na	na	na	na
Total	1 983	2 029	95	94	1 280	1 122	494	329
<b>Total food and beverage</b>	37 195	35 100	1 228	1 196	10 227	9 933	2 592	2 340
<b>Total manufacture</b>	144 622	142 095	4 843	4 987	32 245	34 109	9 528	9 597

a Includes working proprietors. b Excludes drawings of working proprietors. na Not available.  
Source: ABS, *Manufacturing Industry, Qld*, cat. no. 8221.3, Canberra.

### 3.5 *Western Australian processed food industry, summary statistics*

	Employment at 30 June a		Wages and salaries b		Turnover		Industry value added	
	1998-99 no.	1999-00 no.	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m
<b>Meat</b>								
Meat processing	1 896	2 742	65	89	391	521	98	131
Poultry processing	922	878	na	32	na	216	na	67
Bacon, ham and smallgoods	840	557	na	16	na	117	na	28
Total	3 658	4 177	118	138	735	854	195	226
<b>Dairy</b>								
Milk and cream processing	na	na	na	na	na	na	na	na
Ice cream	386	368	na	na	na	na	na	na
Other dairy products	na	297	na	12	na	84	na	25
Total	1 271	na	57	na	435	na	109	na
<b>Fruit and vegetables</b>	687	558	19	na	149	na	33	na
<b>Oil and fat</b>	202	150	6	5	80	53	21	12
<b>Flour mill and cereal food</b>								
Flour mill products	na	230	na	10	na	83	na	18
Cereal food and baking mix	na	na	na	na	na	na	na	na
Total	371	na	13	na	131	na	29	na
<b>Bakery products</b>								
Bread	na	na	na	na	na	na	na	na
Cake and pastry	1 245	1 035	34	27	132	108	53	45
Biscuit	na	na	na	na	na	na	na	na
Total	2 201	1 912	64	53	269	235	100	95
<b>Other food</b>								
Sugar	na	na	na	na	na	na	na	na
Confectionery	na	82	na	1	na	8	na	4
Seafood	850	1 183	23	29	347	528	54	127
Prepared animal and bird feed	496	489	15	19	219	236	35	41
Food nec	1 402	na	40	na	201	na	66	na
Total	2 869	3 228	82	92	825	1 045	180	245
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	539	515	na	na	na	na	na	na
Beer and malt	342	267	15	16	223	216	63	65
Wine	na	1 058	na	na	na	na	na	na
Spirits	na	na	na	na	na	na	na	na
Total	1 661	1 840	65	71	593	611	170	175
<b>Total food and beverage</b>	12 919	13 558	423	447	3 216	3 509	838	922
<b>Total manufacture</b>	72 710	73 249	2 600	2 655	17 771	18 652	4 972	5 058

a Includes working proprietors. b Excludes drawings of working proprietors. na Not available.  
Source: ABS, *Manufacturing Industry*, WA, cat. no. 8221.5, Canberra.

### 3.6 *South Australian processed food industry, summary statistics*

	Employment at 30 June a		Wages and salaries b		Turnover		Industry value added	
	1998-99 no.	1999-00 no.	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m
<b>Meat</b>								
Meat processing	2 154	1 729	64	na	379	na	93	na
Poultry processing	621	719	na	na	na	na	na	na
Bacon, ham and smallgoods	736	731	na	19	na	118	na	20
Total	3 510	3 178	104	106	623	659	149	130
<b>Dairy</b>								
Milk and cream processing	na	449	na	na	na	na	na	na
Ice cream	na	36	na	na	na	na	na	na
Other dairy products	316	323	11	na	142	na	20	na
Total	877	808	34	35	402	397	88	138
<b>Fruit and vegetables</b>	693	1 024	31	32	276	283	95	92
<b>Oil and fat</b>	na	45	na	1	na	8	na	1
<b>Flour mill and cereal food</b>								
Flour mill products	121	na	5	na	73	na	22	na
Cereal food and baking mix	na	na	na	na	na	na	na	na
Total	na	685	na	23	na	261	na	78
<b>Bakery products</b>								
Bread	1 138	1 038	41	37	122	118	50	51
Cake and pastry	1 097	na	29	na	89	na	38	na
Biscuit	621	na	18	na	155	na	53	na
Total	2 855	2 627	88	75	367	339	141	143
<b>Other food</b>								
Sugar	na	na	na	na	na	na	na	na
Confectionery	380	393	7	8	29	29	11	10
Seafood	661	658	18	17	247	185	49	43
Prepared animal and bird feed	217	308	7	8	128	144	16	15
Food nec	867	878	30	25	219	204	83	66
Total	2 125	2 237	63	59	623	562	160	134
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	634	na	na	na	na	na	na	na
Beer and malt	223	235	14	15	170	187	54	54
Wine	3 969	3 875	135	159	1 702	1 923	707	863
Spirits	70	na	na	na	na	na	na	na
Total	4 897	4 724	180	201	2 132	2 373	862	983
<b>Total food and beverage</b>	15 588	15 328	518	533	4 631	4 881	1 556	1 698
<b>Total manufacture</b>	83 356	83 995	3 031	3 085	20 181	21 442	6 414	6 179

a Includes working proprietors. b Excludes drawings of working proprietors. na Not available.  
Source: ABS, *Manufacturing Industry, SA*, cat. no. 8221.4, Canberra.

### 3.7 *Tasmanian processed food industry, summary statistics*

	Employment at 30 June a		Wages and salaries b		Turnover		Industry value added	
	1998-99 no.	1999-00 no.	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m	1998-99 \$m	1999-00 \$m
<b>Meat</b>								
Meat processing	762	950	na	28	na	181	na	45
Poultry processing	na	na	na	na	na	na	na	na
Bacon, ham and smallgoods	253	163	5	5	33	35	9	7
Total	na	na	na	na	na	na	na	na
<b>Dairy</b>								
Milk and cream processing	221	201	9	8	108	94	20	15
Ice cream	na	2	na	na	na	0	na	na
Other dairy products	na	503	na	23	na	223	na	61
Total	868	706	27	31	319	317	73	76
<b>Fruit and vegetables</b>	1 189	934	46	na	346	na	86	na
<b>Oil and fat</b>	na	5	na	0	na	1	na	na
<b>Flour mill and cereal food</b>								
Flour mill products	4	na	na	na	na	na	na	na
Cereal food and baking mix	na	na	na	na	na	na	na	na
Total	na	na	na	na	na	na	na	na
<b>Bakery products</b>								
Bread	na	na	na	na	na	na	na	na
Cake and pastry	na	na	na	na	na	na	na	na
Biscuit	na	na	na	na	na	na	na	na
Total	523	426	16	13	51	49	18	21
<b>Other food</b>								
Sugar	na	699	na	na	na	na	na	na
Confectionery	na	1 100	na	na	na	na	na	na
Seafood	1 131	na	na	na	na	na	na	na
Prepared animal and bird feed	na	61	na	3	na	60	na	6
Food nec	57	32	1	1	4	3	0	1
Total	1 946	1 892	52	53	622	593	268	262
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	na	48	na	1	na	13	na	3
Beer and malt	215	169	7	7	65	69	21	23
Wine	50	52	na	1	2	4	1	2
Spirits	na	11	na	na	na	na	na	na
Total	285	280	8	na	68	na	22	na
<b>Total food and beverage</b>	6 010	5 505	183	191	1 611	1 676	525	535
<b>Total manufacture</b>	20 220	20 181	737	745	5 278	5 490	1 720	1 769

a Includes working proprietors. b Excludes drawings of working proprietors. na Not available.

Source: ABS, *Manufacturing Industry, Tas*, cat. no. 8221.6, Canberra.

## 4.1 Retail food turnover, by state and category

	1997-98	1998-99	1999-00	2000-01
	\$m	\$m	\$m	\$m
<b>New South Wales</b>				
Supermarkets and grocery stores	11 743	12 451	13 073	14 045
Takeaway food outlets	2 373	1 943	1 875	2 370
Liquor retailing	1 279	1 236	1 357	1 520
Cafes and restaurants	2 371	2 960	2 908	3 569
Other food retailing	2 762	2 795	2 614	2 011
<b>Victoria</b>				
Supermarkets and grocery stores	9 386	10 217	10 801	11 456
Takeaway food outlets	1 464	1 419	1 419	1 499
Liquor retailing	560	670	737	813
Cafes and restaurants	1 260	1 617	2 210	2 153
Other food retailing	1 524	1 627	1 692	1 729
<b>Queensland</b>				
Supermarkets and grocery stores	6 892	7 492	7 930	8 533
Takeaway food outlets	1 539	1 424	1 388	1 345
Liquor retailing	na	na	na	na
Cafes and restaurants	1 091	1 111	1 428	1 577
Other food retailing	na	na	na	na
<b>Western Australia</b>				
Supermarkets and grocery stores	4 010	4 422	4 573	4 671
Takeaway food outlets	641	751	761	826
Liquor retailing	478	522	583	588
Cafes and restaurants	722	779	783	743
Other food retailing	649	684	703	496
<b>South Australia</b>				
Supermarkets and grocery stores	2 895	3 050	3 134	3 282
Takeaway food outlets	511	505	476	549
Liquor retailing	120	144	159	188
Cafes and restaurants	399	384	445	592
Other food retailing	709	833	833	731
<b>Tasmania</b>				
Supermarkets and grocery stores	973	965	981	1 065
Takeaway food outlets	167	168	184	195
Liquor retailing	na	na	na	na
Cafes and restaurants	101	79	78	90
Other food retailing	na	na	na	na

*Continued*

## 4.1 Retail food turnover, by state and category (continued)

	1997-98	1998-99	1999-00	2000-01
	\$m	\$m	\$m	\$m
<b>Australian Capital Territory</b>				
Supermarkets and grocery stores	696	708	774	863
Takeaway food outlets	129	121	97	117
Liquor retailing	40	41	45	49
Cafes and restaurants	149	165	168	224
Other food retailing	70	76	99	139
<b>Northern Territory</b>				
Supermarkets and grocery stores	512	536	601	619
Takeaway food outlets	75	89	94	93
Liquor retailing	26	29	34	33
Cafes and restaurants	105	119	93	93
Other food retailing	30	35	48	40
<b>Australia</b>				
Supermarkets and grocery stores	37 107	39 841	41 868	44 534
Takeaway food outlets	6 898	6 420	6 294	6 994
Liquor retailing	2 639	2 962	3 279	3 594
Cafes and restaurants	6 196	7 214	8 112	9 039
Other food retailing	7 127	7 504	7 513	6 883
Total food and liquor retailing	59 966	63 941	67 066	71 044
Total retailing	131 153	138 930	147 581	155 222

na Not available.

Sources: ABS, *Retail Trade*, cat. no. 8501.0, Canberra; ABS, unpublished data, Canberra.



## 4.2 Consumer price index for food groups <sup>a</sup>

	1996-97	1997-98	1998-99	1999-00	2000-01
<b>Food</b>	120	122	127	129	136
<b>Dairy and related products</b>	130	133	136	140	142
Milk and cream	142	147	151	156	155
Cheese	113	111	114	116	116
Other dairy products	123	126	130	135	144
<b>Cereal products</b>	133	136	140	143	149
Bread	145	150	159	165	173
Cakes and biscuits	124	126	127	130	138
Breakfast cereals	129	129	125	122	121
Other cereal products	122	124	124	125	125
<b>Meat and seafoods</b>	109	110	111	114	119
Beef and veal	104	104	105	109	118
Lamb and mutton	123	123	124	127	133
Pork	114	113	111	119	126
Poultry	96	96	95	96	94
Bacon and ham	114	114	112	114	120
Processed meat	113	115	116	120	128
Fish and other seafood	102	105	111	114	118
<b>Fresh fruit and vegetables</b>	105	101	119	116	122
Fresh fruit	124	112	132	135	132
Fresh vegetables	92	95	111	102	116
<b>Processed fruit and vegetables</b>	116	117	120	122	na
Processed fruit	118	122	128	133	na
Processed vegetables	107	107	108	111	na
<b>Fruit and vegetable juices</b>	121	122	127	126	na
<b>Soft drinks, ice cream and confectionery</b>	130	136	141	142	139
Soft drinks and cordials	126	131	134	133	127
Ice cream and ice confectionery	145	149	152	157	na
Sweet and savoury snacks	131	138	146	148	154
<b>Other food</b>	121	126	128	130	132
Eggs	141	144	146	152	151
Jams, honey and sandwich spreads	135	140	140	143	145
Tea, coffee and food drinks	122	137	139	138	138
Food additives and condiments	113	117	123	124	125
Fats and oils	114	113	118	119	119
Food nec	119	122	123	127	131
<b>Meals out and take away foods</b>	119	121	124	127	144
Restaurant meals	120	123	126	129	145
Take away and fast foods	120	121	124	127	139

<sup>a</sup> Weighted average, capital cities, base year 1989-90 = 100. **na** Not available.

Source: ABS, *Consumer Price Index*, electronic data service, cat. no. 6401.0, Canberra

### 4.3 *Average retail prices of selected foods*

	Unit	1996-97 cents	1997-98 cents	1998-99 cents	1999-00 cents	2000-01 cents
<b>Dairy products</b>						
Milk, fresh	L	120	124	128	137	139
Wholemilk powder	kg	583	640	639	na	na
Cheese	500gm	357	362	359	365	348
Butter	500gm	190	190	193	201	203
<b>Grain products</b>						
Bread	650gm	185	191	262	226	238
Breakfast foods	550gm	338	299	323	305	307
Flour	kg	146	146	145	149	152
Rice	kg	137	151	159	164	169
<b>Meat and seafood</b>						
Beef	kg	977	983	990	1 041	1 112
Lamb	kg	704	703	710	725	763
Pig meat	kg	792	789	775	842	885
Chicken	kg	302	330	349	359	363
Seafood	210gm	220	238	258	258	263
<b>Fruit and vegetables</b>						
Oranges	kg	170	186	224	215	205
Banana	kg	254	199	218	230	228
Potatoes	kg	103	116	125	127	136
Tomatoes	kg	282	269	345	303	339
Carrots	kg	135	143	172	158	177
Onions	kg	108	123	138	132	152
<b>Processed fruit</b>						
Jam, strawberry	500gm	243	246	241	245	247
<b>Other food</b>						
Sugar	2kg	210	215	229	229	229
Tea	250gm	190	222	265	342	345
Coffee	150gm	563	634	614	603	585
Eggs	dozen	268	271	282	297	293
Margarine	500gm	155	155	172	175	174
Chocolate milk	250gm	276	291	304	312	317
<b>Alcohol and beverages</b>						
Beer, bottled,						
low alcohol	24x375mL	1 994	1 998	2 013	2 126	2 244
Scotch	30mL	302	330	349	335	371

na Not available.

Source: ABS, *Average Retail Prices of Selected Items*, cat. no. 6403.0, Canberra; ABARE.

## 4.4 *Apparent consumption of selected foods Australia*

		Average for 3 years ended					
		1948-49	1958-59	1968-69	1978-79	1988-89	1998-99
<b>Meat and meat products</b>							
Beef and veal	kg	49.5	56.2	40.0	64.8	40.0	36.4
Lamb	kg	11.4	13.3	20.5	14.4	14.9	11.8
Mutton	kg	20.5	23.1	18.8	3.6	7.3	4.5
Pigmeat	kg	3.2	4.6	6.7	13.3	17.5	19.0
Total	kg	84.6	97.2	85.9	96.1	79.8	71.6
Canned meat (canned weight)	kg	1.2	1.9	2.2	1.6	na	na
Bacon and ham (cured carcass weight)	kg	5.3	3.2	3.6	6.0	6.9	8.7
Total meat and meat products	kg	91.1	102.3	91.7	103.7	na	na
<b>Poultry</b>							
Poultry (dressed weight)	kg	na	na	8.3	17.1	24.1	30.8
<b>Seafood a</b>							
Fish (edible weight)							
Australian	kg	1.5	1.8	1.8	2.1	3.1	3.6
Imported	kg	2.1	2.1	2.7	3.0	3.6	4.5
Crustaceans and molluscs	kg	0.5	0.6	1.1	1.3	1.6	2.9
Total	kg	4.1	4.5	5.6	6.4	8.3	11.0
<b>Dairy products</b>							
Condensed, concentrated and evaporated milk							
Full cream							
Sweetened	kg	1.6	1.2	1.1	0.8	na	na
Unsweetened b	kg	1.8	2.9	3.5	2.5	na	na
Total	kg	3.4	4.1	4.6	3.3	2.2	0.4
Skim milk	kg	na	0.6	0.7	1.6	1.2	1.0
Powdered milk							
Full cream	kg	1.5	1.1	0.8	1.3	0.9	0.9
Skim	kg	0.3	1.1	4.3	2.7	2.8	1.8
Infants' and invalids' food	kg	0.6	1.0	1.3	1.2	1.2	na
Cheese c	kg	2.5	2.6	3.5	5.3	8.8	10.7
Market milk (fluid) d	L	138.7	128.7	128.2	100.5	101.7	102.4
Total e	kg	22.3	22.1	25.4	22.1	23.8	23.3
<b>Fruit and fruit products</b>							
Fresh fruit (incl. fruit for fruit juice)							
Citrus	kg	16.9	16.1	22.5	34.5	39.1	56.4
Other	kg	39.5	35.6	40.8	34.6	49.9	55.4
Jams, preserves etc. (product weight)	kg	5.6	3.9	3.3	2.0	2.1	1.9
Dried fruit (product weight)	kg	3.9	2.8	2.5	2.0	2.4	3.0
Processed fruit (product weight)	kg	3.4	6.0	9.9	10.5	8.4	6.8
Total (fresh fruit equivalent)	kg	80.9	72.2	86.5	91.0	111.6	135.0
<b>Vegetables</b>							
Potatoes	kg	56.3	51.7	53.7	50.1	61.5	68.0
Other root and bulb vegetables f	kg	19.1	15.9	17.1	16.7	19.3	24.4
Tomatoes	kg	11.5	13.0	14.2	13.6	19.3	24.9
Leafy and green vegetables	kg	20.5	17.9	21.3	24.3	23.8	19.5
Other vegetables	kg	22.3	18.6	18.1	17.9	24.2	25.1
Total (fresh equivalent weight)	kg	129.7	117.1	124.3	122.5	148.1	162.0
<b>Eggs and egg products</b>							
Total g	doz.	12.7	10.2	12.6	12.4	na	na
Equivalent number of eggs g	no.	255.0	206.0	222.0	220.0	146.0	137.0

*Continued*

## 4.4 Apparent consumption of selected foods Australia (continued)

		Average for 3 years ended					
		1948-49	1958-59	1968-69	1978-79	1988-89	1998-99
<b>Grain products</b>							
Wheaten flour <b>h</b>	kg	91.6	82.3	77.4	69.6	72.6	69.7
Breakfast foods	kg	6.1	6.2	6.8	7.8	9.7	7.9
Table rice	kg	0.4	na	1.9	2.4	na	7.1
Bread	kg	64.0	69.1	59.5	47.7	44.4	53.4
Total grain products	kg	162.1	157.6	145.6	127.5	126.7	138.1
<b>Nuts (in shell)</b>							
Peanuts	kg	4.2	3.1	2.8	2.1	2.3	2.3
Tree nuts	kg	1.8	3.4	5.8	2.9	3.8	4.8
Total nuts	kg	6.0	6.5	8.6	5.0	6.1	7.1
<b>Oils and fats</b>							
Butter <b>i</b>	kg	11.2	12.3	9.8	5.1	3.2	2.9
Margarine							
Table	kg	0.4	na	1.5	5.4	6.8	4.5
Other	kg	2.4	2.2	3.4	3.1	2.2	1.9
Total (fat content) <b>j</b>	kg	14.0	na	14.3	21.6	20.4	18.5
<b>Sugars</b>							
<b>Cane sugar</b>							
As refined sugar	kg	31.2	27.0	21.0	14.9	8.8	na
In manufactured foods	kg	23.1	23.6	27.7	34.6	33.9	na
Total	kg	54.3	50.6	48.7	49.5	42.7	na
Total sugars <b>k</b>	kg	56.8	53.0	51.9	54.5	48.3	43.4
<b>Beverages</b>							
Tea	kg	2.9	2.7	2.3	1.7	1.2	0.9
Coffee <b>l</b>	kg	0.5	0.6	1.2	1.6	2.0	2.4
Aerated / carbonated waters <b>m</b>	L	na	na	47.3	67.4	87.4	113.0
Beer	L	76.8	99.7	113.5	133.2	113.1	93.2
Wine	L	5.9	5.0	8.2	14.7	20.2	19.8
<b>Alcohol content <b>n</b></b>							
Beer	L al	3.6	4.8	5.5	6.4	5.1	4.0
Wine	L al	0.8	0.9	1.2	2.0	2.4	2.3
Spirits	L al	0.8	0.7	0.9	1.2	1.2	1.2
Total	L al	5.2	6.4	7.5	9.6	8.7	7.5

**a** Comprises fresh, frozen and otherwise prepared seafood. **b** Included in 'Ice-cream mix' prior to 1972-73. **c** Combined product and natural weight equivalent weights prior to 1971-72. **d** Prior to 1978-79 known as fluid whole milk. **e** Includes an allowance for estimated cream consumption. Excludes infants and invalids food after 1993-94. **f** Sweet potatoes included with 'Other root and bulb vegetables' since 1968-69; formerly included with 'Other vegetables'. **g** Data from 1988-89 onwards includes an estimate for home production of eggs. **h** Includes flour for breadmaking. From 1994-95 data excludes flour used in production of starch and gluten. **i** Includes butter equivalent of butter oil, butter concentrate and ghee. **j** Includes an estimate for vegetable oils and other fats. Prior to 1975-76 this was estimated at 2 kg, from 1975-76 onwards estimated at 10 kg. **k** Includes sugar content of syrups, honey and glucose. **l** Coffee and coffee products in terms of roasted coffee. **m** Includes bulk pre-mix and post-mix concentrates in terms of drink equivalent. **n** From 1984-85, data for beer have been compiled on the basis of excise data. Prior to this the alcohol content of beer was calculated using 2.4 per cent by volume for low alcohol beer and 4.8 per cent for other beer. **na** Not available.

Source: ABS 2000, *Apparent Consumption of Foodstuffs, 1997-98 and 1998-99*, cat. no. 4306.0, Canberra.

## 5.1 Australian food exports, by level of transformation

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	268	387	574	621	532	528	625	753
Fish or shellfish	317	384	435	445	446	453	524	651
<b>Horticulture</b>								
Vegetables	169	188	187	177	209	218	191	201
Fruit and nuts	236	260	287	348	359	372	396	476
Total	404	449	474	525	568	590	587	677
<b>Grains</b>	2 617	1 961	4 236	5 231	4 267	4 193	4 208	5 239
<b>Oilseeds</b>	116	104	201	198	364	683	798	721
<b>Food nec</b>	33	30	39	34	37	88	54	61
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	4 036	3 650	3 281	2 943	3 714	3 986	4 440	5 770
Poultry processing	12	13	14	14	18	23	21	26
Bacon, ham and smallgoods	73	80	71	69	64	61	86	65
Total	4 121	3 744	3 366	3 027	3 795	4 070	4 548	5 862
<b>Seafood</b>	786	751	671	636	731	769	1 006	1 045
<b>Dairy</b>								
Milk and cream processing	631	721	872	899	897	1 056	1 126	1 550
Ice cream	32	37	41	44	47	41	36	34
Other dairy products	659	692	794	852	1 008	1 193	1 305	1 486
Total	1 322	1 450	1 707	1 795	1 952	2 291	2 467	3 070
<b>Fruit and vegetables</b>	437	396	469	491	436	480	522	566
<b>Oil and fat</b>	66	82	95	104	167	170	131	129
<b>Flour mill and cereal food</b>								
Flour mill products	119	113	143	158	174	204	209	207
Cereal food and baking mix	425	403	446	438	528	513	529	544
Total	543	516	589	596	702	717	738	751
<b>Bakery products</b>								
Bread, cake and pastry	13	14	16	15	9	8	17	12
Biscuit	34	45	58	72	83	79	69	73
Total	47	60	74	87	92	86	86	85
<b>Other food</b>								
Sugar	1 246	1 657	1 595	1 595	1 742 a	1 377 a	1 111 a	1 236 a
Confectionery	149	149	194	170	162	176	230	261
Food nec	562	511	603	767	788	734	900	1 087
Total	1 958	2 318	2 392	2 532	2 692	2 288	2 241	2 585
<b>Beverages and malt</b>								
Soft drink, cordial and syrup	24	31	59	34	28	23	26	45
Beer and malt	170	166	204	215	216	207	213	266
Wine	367	386	474	604	874	1 068	1 374	1 753
Spirit	22	27	27	29	31	38	55	73
Total	583	610	764	883	1 150	1 336	1 667	2 136
<b>Total food and beverage</b>								
Minimally transformed	3 755	3 315	5 959	7 053	6 214	6 536	6 796	8 102
Substantially transformed	9 671	9 723	9 880	9 914	11 485	11 960	13 132	15 924
Elaborately transformed	193	202	246	238	232	247	273	302
Total	13 618	13 239	16 085	17 205	17 931	18 744	20 201	24 328

a Includes ABARE estimates where ABS confidentiality restrictions apply. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.2 Australian grain exports, by level of transformation

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 P
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
<b>Cereals</b>								
Barley, feed	na	110	317	372	264	427	326	409
Barley, malting	247	187	394	443	280	271	320	467
Maize	6	3	2	8	3	6	11	15
Oats	33	18	50	26	30	38	27	22
Rice, husked (paddy)	0	0	0	0	1	29	17	8
Sorghum	32	19	97	70	50	14	4	4
Wheat	2 290	1 618	3 363	4 301	3 630	3 398	3 413	4 135
Other	8	7	12	10	8	10	11	11
Total	2 616	1 961	4 236	5 231	4 267	4 193	4 130	5 071
<b>Oilseeds</b>								
Canola	48	38	138	124	256	558	638	544
Cottonseed	35	34	42	45	68	91	122	137
Sunflowerseed	4	9	7	8	7	10	19	11
Other	30	23	14	21	33	25	16	28
Total	116	104	201	198	364	683	796	720
<b>Other</b>	0	0	0	0	0	0	78	168
<b>Substantially transformed</b>								
<b>Milled</b>								
Barley, maize, oats	7	8	12	13	13	14	13	15
Rice	319	286	326	313	394	380	363	357
Wheat a	11	9	13	9	16	12	13	15
Other	0	0	1	1	2	1	1	1
Total	337	303	351	335	425	406	389	388
<b>Flour</b>								
Rice	3	4	7	5	7	8	7	5
Wheat	14	15	26	45	57	69	68	62
Other	0	0	0	0	1	1	1	1
Total	18	19	33	50	65	77	76	69
<b>Oil</b>								
Canola	3	0	5	6	24	52	25	18
Cottonseed	0	0	0	1	18	2	0	1
Sunflowerseed	0	0	0	0	4	7	6	10
Other	40	54	62	74	92	85	79	72
Total	43	55	67	81	139	145	110	101
<b>Cereal starches</b>								
Wheat	83	76	83	83	77	99	104	105
Rice	0	1	2	1	1	1	1	1
Other	0	0	0	1	1	0	0	0
Total	83	77	85	85	78	100	105	107
<b>Malt</b>	117	107	156	174	173	170	166	216
<b>Preparations of cereals</b>								
Biscuits	34	45	58	72	83	79	69	73
Breads and cakes	14	16	17	16	11	11	19	15
Pasta	13	16	17	17	25	23	31	34
Other	93	101	103	108	108	110	136	154
Total	154	178	195	213	228	223	255	275
<b>Total grains</b>								
Minimally transformed	2 732	2 065	4 437	5 428	4 630	4 877	5 004	5 959
Substantially transformed	711	687	825	867	1 033	1 050	1 027	1 080
Elaborately transformed	40	51	61	73	74	72	75	75
Total	3 483	2 803	5 323	6 368	5 738	5 999	6 107	7 114

a Includes ABARE estimates where ABS confidentiality restrictions apply. na Not available.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.3 Australian meat and livestock exports, by level of transformation

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Live animals a</b>								
Cattle	115	201	344	428	333	343	433	482
Sheep	149	184	227	190	193	182	180	258
Other	4	2	3	4	6	4	12	14
Total live animal exports	268	387	574	621	532	528	625	753
<b>Meat and meat products</b>								
<b>Beef and veal b</b>								
Fresh, chilled or frozen								
Carcasses	63	66	61	57	55	49	9	14
Hindquarters and forequarters								
Bone-in	101	84	52	37	44	56	58	47
Boneless	292	297	215	222	336	401	417	461
Cuts								
Bone-in	24	25	27	26	28	51	54	80
Boneless	2 745	2 381	2 103	1 771	2 236	2 379	2 651	3 525
Other products c	144	139	141	122	144	161	205	272
Beef and veal products, otherwise prepared or preserved d	24	32	41	32	39	41	44	55
Total beef and veal	3 394	3 023	2 638	2 267	2 883	3 137	3 437	4 453
<b>Sheep meat</b>								
Fresh, chilled or frozen								
Carcasses	96	90	62	67	78	80	74	97
Cuts								
Bone-in	224	227	232	296	355	378	437	593
Boneless	190	180	213	178	219	178	195	261
Other products c	34	38	36	37	40	44	39	51
Sheep meat products, otherwise prepared or preserved d	3	2	3	3	2	3	3	3
Total sheep meat	548	538	546	580	695	683	747	1 006
<b>Pig meat</b>								
Fresh, chilled or frozen								
Carcasses	8	4	2	3	3	11	91	93
Hams, shoulders and cuts	5	4	4	3	5	3	2	5
Other pig meat nec	13	16	25	27	44	57	66	88
Other products c	1	2	1	2	3	2	2	5
Pig meat products, otherwise prepared or preserved d	1	1	1	1	1	1	1	2
Total pig meat	27	26	32	36	55	74	162	192
<b>Poultry meat e</b>	12	13	14	14	18	23	21	26
<b>Bacon, ham and smallgoods</b>	73	80	71	69	64	61	86	65
<b>Other meat f</b>								
Fresh, chilled or frozen								
Goat meat	22	22	20	18	24	22	27	39
Horse, ass, mule and hinny meat	26	23	23	16	21	26	20	17
Kangaroo meat	1	3	4	5	8	11	10	17
Other meat and meat products c	5	7	9	10	17	19	27	33
<b>Other meat products</b>								
Otherwise prepared or preserved d	13	9	10	11	11	13	11	12
Total other meat	67	63	65	60	81	92	95	118
<b>Total meat and meat product exports</b>	<b>4 121</b>	<b>3 744</b>	<b>3 366</b>	<b>3 027</b>	<b>3 795</b>	<b>4 070</b>	<b>4 548</b>	<b>5 862</b>

a Excludes animals for breeding. b Includes buffalo meat. c Includes edible offal, tongues, livers or tripe. d Includes meat and animal products either salted, in brine, dried, smoked, canned or bottled. e Includes meat and other food products from fowls, turkeys, ducks, geese, guinea fowls and other poultry. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.



## 5.4 *Australian dairy exports, by level of transformation*

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Butter and butterfat a</b>	183	159	181	220	238	294	291	291
<b>Cheese</b>								
Unprocessed cheddar	120	128	152	164	225	239	286	328
Processed cheddar	124	127	147	130	177	206	227	227
Unprocessed other	92	94	123	133	134	175	180	236
Processed other	19	20	22	24	23	31	33	56
Fresh, unripened or uncured b	11	26	12	17	39	38	71	87
Grated or powdered cheese	4	5	8	7	8	7	9	17
Total cheese	370	401	463	476	607	695	807	950
<b>Wholemilk powder</b>	149	183	255	268	275	364	403	580
<b>Skim milk powder</b>	367	399	479	473	444	496	478	694
<b>Casein</b>	35	35	30	33	43	67	81	89
<b>Other products</b>								
Fresh milk	40	52	57	68	67	76	81	82
Icecream	32	37	41	44	47	41	36	34
Other fresh products	6	11	13	18	22	18	20	13
Condensed milk	26	44	61	49	58	82	88	111
Other powders	87	95	81	97	116	117	159	193
Lactose	1	1	3	3	2	2	3	9
Yoghurt	5	8	8	8	6	6	7	8
Other dairy products	23	27	36	38	26	33	14	15
Total other products	220	273	300	325	345	375	408	465
<b>Total</b>	<b>1 323</b>	<b>1 451</b>	<b>1 708</b>	<b>1 796</b>	<b>1 952</b>	<b>2 291</b>	<b>2 467</b>	<b>3 070</b>

a Includes the butter equivalent of butter oil, butter concentrate, ghee and dry butterfat production. b Includes blue veined cheese. p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.5 Australian seafood exports, by level of transformation

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
<b>Fish</b>								
<b>Live</b>	6	9	16	15	16	13	24	42
<b>Fresh or chilled</b>								
Tuna a	14	20	38	42	70	72	101	148
Salmon	23	22	23	19	12	8	6	12
Other fish	4	4	9	11	9	7	10	13
<b>Whole frozen</b>								
Tuna a	0	1	1	2	10	31	105	117
Salmon	1	1	1	3	2	2	3	4
Whiting	4	4	4	3	4	3	3	3
Other fish	14	15	16	19	27	51	19	11
<b>Substantially transformed</b>								
<b>Fillets</b>								
Fresh or chilled	2	5	3	5	5	5	5	7
Frozen	34	21	13	14	27	44	37	18
<b>Other frozen</b>	22	30	27	30	32	25	62	81
<b>Elaborately transformed</b>								
<b>Dried, salted or smoked</b>								
Salmon	2	1	1	1	1	1	1	2
Other fish	4	5	6	8	9	6	13	14
<b>Roes, caviar and substitutes</b>	8	10	11	7	7	5	6	6
<b>Canned</b>	1	1	2	2	2	3	5	4
<b>Other processed</b>	1	4	5	7	7	4	0	1
<b>Total fish</b>	141	152	178	189	241	280	399	485

Continued

## 5.5 Australian seafood exports, by level of transformation *(continued)*

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
<b>Shellfish</b>								
<b>Live fresh or chilled</b>								
<b>Whole</b>								
Rock lobster	218	247	241	267	254	269	296	318
Prawns	5	19	20	23	15	21	10	11
Crabs	15	20	29	20	23	16	19	28
Other crustaceans	1	1	0	0	0	0	0	3
Abalone	19	29	38	39	37	42	51	61
Other molluscs	3	6	7	5	5	2	2	1
Other	8	6	14	4	4	1	4	14
<b>Substantially transformed</b>								
<b>Rock lobster</b>								
Frozen green	0	24	19	20	17	17	35	42
Cooked	196	135	102	112	88	87	142	101
Tails	47	60	50	50	64	76	95	60
<b>Prawns</b>								
Headless	50	50	47	33	41	25	21	25
Whole frozen	146	179	171	147	189	196	209	258
Other	1	1	3	3	2	1	9	3
Crabs	7	8	8	8	4	3	4	4
<b>Other crustaceans</b>	6	4	8	9	11	9	6	16
Abalone	44	28	22	30	34	37	43	43
Scallops	80	68	64	32	33	31	39	48
Other molluscs	1	2	2	2	2	3	3	6
<b>Elaborately transformed</b>								
<b>Dried salted</b>								
Molluscs	3	7	9	5	5	6	7	11
<b>Canned</b>								
Abalone	124	106	85	94	110	98	121	116
Other shellfish	0	3	15	8	8	11	12	26
Other preserved	1	1	2	2	2	2	1	1
Seafood extracts	0	0	2	3	3	2	0	1
Seafood meals and flours	4	5	7	4	5	5	7	8
<b>Total shellfish</b>	978	1 009	965	919	955	962	1 137	1 206
Minimally transformed	334	403	457	472	488	539	653	785
Substantially transformed	636	615	541	494	549	558	710	716
Elaborately transformed	148	144	145	142	159	144	173	189
<b>Total seafood</b>	1 118	1 161	1 143	1 108	1 196	1 242	1 536	1 690

a Exports of tuna landed in Australia. Tuna shipped at sea or captured under joint venture or bilateral agreements are not included. p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.6 *Selected Australian fruit and nut exports, by level of transformation*

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
<b>Fruit</b>								
Oranges	69	80	82	109	110	119	123	150
Grapes	29	32	47	67	53	67	74	72
Apples	37	35	33	28	38	30	36	46
Pears	27	27	26	30	24	19	20	24
Mandarins	10	12	17	19	21	22	26	37
Plums and sloes	9	8	10	12	13	18	16	25
Melons	11	15	14	12	14	12	16	18
Mangoes	0	5	9	10	13	10	11	11
Nectarines	0	1	1	2	5	13	16	16
Other fruit	35	37	37	43	39	38	39	49
Total fruit	227	253	276	331	329	349	376	447
<b>Nuts, in shell</b>								
Macadamias	4	4	7	9	6	8	12	20
Almonds	0	0	0	6	7	10	3	3
Other nuts	4	3	4	3	16	5	5	5
Total nuts	8	8	11	18	30	23	20	28
<b>Substantially transformed</b>								
<b>Canned or bottled</b>								
Pears	37	30	29	37	35	30	31	30
Fruit salads and mixtures	25	21	21	21	23	28	28	23
Peaches	16	14	14	12	14	23	19	20
Pineapples	4	5	4	4	4	4	4	3
Apricots	2	2	3	3	3	3	2	2
Apples	0	1	1	1	0	0	0	0
Other canned or bottled fruit	2	2	2	4	4	7	7	8
Total canned or bottled fruit	86	74	73	81	83	96	91	86
<b>Dried</b>								
Grapes	73	30	34	52	30	36	13	17
Other dried fruit	7	7	10	10	6	3	2	3
Total dried fruit	81	37	44	62	36	39	15	19
<b>Juice</b>								
Orange, frozen or otherwise	10	15	19	16	15	13	17	22
Grape	11	11	8	9	11	11	10	12
Apple	4	5	8	6	5	4	8	13
Pineapple	1	1	1	1	1	1	1	1
Other fruit juice	19	29	29	28	23	18	25	23
Total fruit juice	45	61	65	61	56	47	62	72
<b>Shelled nuts</b>								
Macadamias	24	40	46	48	44	47	66	57
Other shelled nuts	9	12	29	10	7	15	16	11
Total shelled nuts	32	52	74	59	51	61	82	68
<b>Jams, spreads, pastes etc</b>	8	11	12	13	14	11	11	10
<b>Otherwise processed fruits</b>								
Fruits preserved by sugar	5	5	4	4	4	4	4	4
Frozen fruits	1	1	1	1	1	1	1	1
Other processed fruits	2	2	2	1	2	2	1	2
Total otherwise processed fruit	7	7	8	7	7	6	6	7
<b>Total fruit and nut products</b>								
Minimally transformed	236	260	287	348	359	372	396	476
Substantially transformed	259	242	276	283	247	261	266	262
Total	495	503	563	631	606	633	662	738

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.7 *Selected Australian vegetable exports, by level of transformation*

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
<b>Minimally transformed</b>									
<b>Vegetables</b>									
Asparagus	28	23	31	30	32	46	46	43	
Carrots	21	28	29	31	35	43	36	40	
Cauliflowers	18	21	24	25	22	23	23	30	
Onions	31	36	23	11	29	28	15	19	
Headed broccoli	14	19	18	16	18	16	15	14	
Potatoes (excluding seed)	5	6	6	7	8	9	9	6	
Tomatoes	8	9	9	9	9	8	7	7	
Lettuce	5	6	6	7	8	7	7	8	
Chinese cabbage	6	7	7	5	6	6	4	6	
Other vegetables	31	33	35	35	42	32	27	29	
Total vegetables	169	188	187	177	209	218	191	201	
<b>Substantially transformed</b>									
<b>Canned or bottled</b>									
Tomatoes and tomato products	3	3	3	5	12	16	14	14	
Ginger in syrup	4	3	3	4	6	6	5	5	
Other canned or bottled vegetables	2	2	2	2	2	3	4	5	
Total canned or bottled vegetables	8	8	8	11	20	24	23	24	
<b>Dried</b>									
Peas	91	40	62	96	66	62	81	92	
Beans	22	20	38	34	33	47	76	91	
Other dried vegetables	6	3	5	10	4	11	5	9	
Total dried vegetables	118	63	105	141	103	120	162	192	
<b>Juice</b>									
Vegetable juice mixtures	6	27	16	3	8	12	9	1	
Single vegetable juices	2	4	6	2	1	4	9	22	
Tomato juice	0	0	0	0	0	1	1	1	
Total juice	8	31	23	5	10	17	19	25	
<b>Frozen</b>									
Potatoes	4	8	14	11	10	7	11	8	
Mixed vegetables	3	5	4	5	3	8	5	5	
Corn	0	0	1	2	5	4	2	1	
Peas	0	0	0	0	0	0	1	1	
Other frozen vegetables	6	8	5	9	8	5	5	7	
Total frozen vegetables	13	22	24	26	26	24	23	21	
<b>Saps and extracts</b>									
Hop extracts	2	3	2	2	4	2	2	4	
Miscellaneous vegetable extracts	2	1	2	3	5	6	4	7	
Total vegetable extracts	4	4	4	6	9	8	6	11	
<b>Otherwise processed vegetables</b>									
Hops	9	12	11	6	6	8	6	8	
Ginger	5	5	5	4	4	5	5	6	
Mixed vegetables	5	4	5	4	3	3	2	2	
Potatoes	1	1	5	2	3	3	2	5	
Other	6	4	3	4	5	7	7	10	
Total otherwise processed vegetables	25	26	29	20	22	27	22	31	
<b>Total vegetable products</b>									
Minimally transformed	169	188	187	177	209	218	191	201	
Substantially transformed	177	153	193	208	189	220	255	304	
Total	346	341	380	385	398	438	446	505	

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.8 Australian food exports, by level of transformation and state, 2000-01 <sup>p</sup>

	NSW \$m	Vic \$m	Qld \$m	WA \$m	SA \$m	Tas \$m	NT \$m
<b>Minimally transformed</b>							
Live animals except fish	12	69	96	394	39	2	140
Fish or shellfish	30	37	110	204	182	86	2
<b>Horticulture</b>							
Vegetables	27	44	30	77	3	21	0
Fruit and nuts	73	180	60	52	70	21	1
Total	100	223	89	129	73	42	1
<b>Grains</b>	1 021	735	273	1 385	772	0	0
<b>Oilseeds</b>	146	259	103	140	63	9	0
<b>Food nec</b>	11	5	22	19	3	0	3
<b>Substantially transformed</b>							
<b>Meat</b>							
Meat processing	1 379	1 024	2 752	264	261	89	1
Poultry processing	7	13	4	1	1	0	0
Bacon, ham and smallgoods	10	45	4	1	6	0	0
Total	1 396	1 082	2 760	266	268	89	1
<b>Seafood</b>	16	100	292	274	270	90	3
<b>Dairy</b>							
Milk and cream processing	31	1 395	45	31	4	43	0
Ice cream	19	7	1	8	0	0	0
Other dairy products	57	1 257	54	18	40	59	0
Total	107	2 659	100	56	44	102	0
<b>Fruit and vegetables</b>	88	249	71	15	128	9	0
<b>Oil and fat</b>	47	26	55	0	0	0	0
<b>Flour mill and cereal food</b>							
Flour mill products	62	9	11	11	9	0	0
Cereal food and baking mix	439	77	10	5	13	0	0
Total	501	86	21	16	22	0	0
<b>Bakery products</b>							
Bread, cake and pastry	10	0	0	1	0	0	0
Biscuit	17	17	18	0	19	0	0
Total	28	18	18	1	20	0	0
<b>Other food</b>							
Sugar a	2	1	1 234	0	0	0	0
Confectionery	21	189	35	3	0	13	0
Food nec	418	252	209	52	19	30	1
Total	441	442	1 478	55	19	43	1
<b>Beverages and malt</b>							
Soft drink, cordial and syrup	25	4	7	0	6	0	1
Beer and malt	2	126	0	47	41	0	0
Wine	437	204	1	28	1 082	1	0
Spirit	15	14	20	0	23	0	0
Total	479	348	28	76	1 152	1	1
<b>Total food and beverage</b>							
Minimally transformed	1 320	1 329	694	2 271	1 131	140	146
Substantially transformed	3 045	4 849	4 777	755	1 905	322	6
Elaborately transformed	57	161	47	5	20	13	0
Total b	4 422	6 338	5 517	3 030	3 056	475	152

a Includes ABARE estimates where ABS confidentiality restrictions apply. b Due to state level ABS confidentiality restrictions, these totals do not correspond with table 5.1. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.9 Australian air freight exports of food, by level of transformation <sup>a</sup>

	1996-97	1997-98	1998-99	1999-00	2000-01 <sup>p</sup>
	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>					
Live animals except fish	76	86	80	109	111
<b>Fish or shellfish</b>					
Fish	132	151	144	200	244
Shellfish	426	423	415	473	549
Total	558	574	559	673	793
<b>Horticulture</b>					
Vegetables	99	103	105	97	97
Fruit and nuts	85	71	73	76	92
Total	183	173	178	174	190
<b>Grains</b>	0	0	0	0	0
<b>Oilseeds</b>	1	3	2	3	2
<b>Substantially transformed</b>					
<b>Meat</b>					
Beef	66	66	64	58	72
Other meat and offal	127	127	163	236	268
Total	193	193	227	294	340
<b>Seafood</b>	16	22	31	38	38
<b>Dairy</b>					
Milk, cream and milk products <sup>b</sup>	12	10	10	10	12
Butter and other milk fat	1	0	0	1	1
Cheese and curd	5	5	8	6	7
Total	18	15	19	17	20
<b>Fruit and vegetables</b>	7	10	8	5	7
<b>Oil and fat</b>	1	1	2	2	1
<b>Flour mill and cereal food</b>	4	5	4	4	5
<b>Other food</b>					
Chocolate and chocolate confectionery	8	8	10	11	10
Sugar confectionery	2	1	1	3	3
Food nec	26	23	29	35	32
Total	36	32	39	49	45
<b>Beverages and malt</b>					
Nonalcoholic	0	0	0	0	0
Alcoholic	6	9	10	11	15
Total	6	9	10	11	15
<b>Total food and beverage</b>					
Minimally transformed	818	836	819	959	1 096
Substantially transformed	280	287	340	420	471
Total	1 098	1 123	1 158	1 378	1 567

<sup>a</sup> Based on state of departure. <sup>b</sup> Excluding butter and cheese. <sup>p</sup> Preliminary.

Source: ABS, Air freight cargo statistics, unpublished.

## 5.10 Australian air freight exports of food, by level of transformation and state, 2000-01 <sup>ap</sup>

	NSW \$m	Vic \$m	Qld \$m	WA \$m	SA \$m	Tas <sup>b</sup> \$m	NT \$m
<b>Minimally transformed</b>							
Live animals except fish	62	41	3	5	0	0	0
<b>Fish or shellfish</b>							
Fish	114	27	69	23	10	0	0
Shellfish	105	144	67	196	35	0	2
Total	219	171	136	219	46	0	2
<b>Horticulture</b>							
Vegetables	47	20	20	10	1	0	0
Fruit and nuts	31	19	22	17	2	0	1
Total	78	39	43	27	3	0	1
<b>Grains</b>	0	0	0	0	0	0	0
<b>Oilseeds</b>	1	0	0	0	0	0	0
<b>Substantially transformed</b>							
<b>Meat</b>							
Beef	33	8	24	6	0	0	0
Other meat and offal	97	97	33	31	10	0	0
Total	130	105	57	37	10	0	1
<b>Seafood</b>	5	20	10	2	2	0	0
<b>Dairy</b>							
Milk, cream and milk products <sup>c</sup>	6	4	1	1	0	0	0
Butter and other milk fat	0	0	0	0	0	0	0
Cheese and curd	3	4	1	0	0	0	0
Total	9	9	2	1	0	0	0
<b>Fruit and vegetables</b>	4	1	2	0	0	0	0
<b>Oil and fat</b>	1	0	0	0	0	0	0
<b>Flour mill and cereal food</b>	2	1	1	0	0	0	0
<b>Other food</b>							
Chocolate and chocolate confectionery	4	6	0	0	0	0	0
Sugar confectionery	1	1	0	0	0	0	0
Food nec	17	6	8	1	0	0	1
Total	21	13	8	1	0	0	1
<b>Beverages and malt</b>							
Nonalcoholic	0	0	0	0	0	0	0
Alcoholic	9	3	0	1	2	0	0
Total	9	3	0	1	2	0	0
<b>Total food and beverage</b>							
Minimally transformed	360	251	182	251	48	0	3
Substantially transformed	181	152	80	42	15	0	2
Total	541	403	262	293	64	0	4

<sup>a</sup> Based on state of departure. <sup>b</sup> Virtually all air freight exports of Tasmanian origin are recorded as exports from mainland Australian airports. <sup>c</sup> Excluding butter and cheese. <sup>p</sup> Preliminary.  
Source: ABS, Air freight cargo statistics, unpublished.



## 5.11 Australian food exports to APEC member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	115	202	312	394	221	201	284	305
Fish or shellfish	314	382	432	441	443	444	516	645
<b>Horticulture</b>								
Vegetables	140	155	166	161	174	188	171	177
Fruit and nuts	210	210	246	317	311	319	343	393
Total	350	365	413	478	485	507	514	570
<b>Grains ab</b>	1 416	1 033	1 957	1 386	1 662	1 801	1 536	2 420
<b>Oilseeds</b>	96	84	140	150	254	445	705	423
<b>Food nec</b>	20	23	25	20	21	59	39	38
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	3 596	3 184	2 760	2 468	3 000	3 335	3 903	5 042
Poultry processing	5	5	7	6	8	10	7	8
Bacon, ham and smallgoods	49	55	50	53	47	36	67	52
Total	3 651	3 244	2 816	2 528	3 055	3 382	3 977	5 101
<b>Seafood</b>	753	613	629	617	703	724	963	993
<b>Dairy</b>								
Milk and cream processing	578	640	749	734	695	796	840	1 128
Ice cream	31	36	40	42	46	39	35	33
Other dairy products	430	471	577	575	641	758	793	905
Total	1 039	1 147	1 366	1 351	1 382	1 594	1 668	2 065
<b>Fruit and vegetables</b>	218	248	270	282	253	280	278	300
<b>Oil and fat</b>	54	58	76	90	139	112	101	106
<b>Flour mill and cereal food</b>								
Flour mill products	103	101	119	120	124	164	171	174
Cereal food and baking mix	93	103	100	105	113	110	135	147
Total	196	204	219	225	237	274	306	321
<b>Bakery products</b>								
Bread, cake and pastry	11	13	14	14	8	6	16	10
Biscuit	23	34	47	60	68	66	55	56
Total	35	47	61	74	76	72	71	66
<b>Other food</b>								
Sugar	17	82	400	1 449	1 534 a	1 206 a	1 002 a	1 125 a
Confectionery	123	128	176	154	148	161	207	239
Food nec	392	428	495	580	584	596	650	730
Total	533	637	1 070	2 183	2 266	1 963	1 858	2 095
<b>Beverages and malt</b>								
Soft drink, cordial and syrup	18	24	52	28	23	19	20	37
Beer and malt	137	132	153	158	154	146	155	180
Wine	140	141	176	246	358	418	547	764
Spirit	15	18	18	27	27	30	45	64
Total	310	315	398	459	561	613	767	1 046
<b>Total food and beverage</b>								
Minimally transformed	2 310	2 089	3 279	2 869	3 086	3 458	3 594	4 400
Substantially transformed	6 635	6 346	6 692	7 601	8 472	8 799	9 754	11 837
Elaborately transformed	154	167	214	207	201	215	234	255
Total	9 099	8 602	10 185	10 677	11 758	12 472	13 582	16 492

a Includes ABARE estimates where ABS confidentiality restrictions apply. b Data not available for rice. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.12 Australian food exports to ASEAN member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m	
<b>Minimally transformed</b>									
Live animals except fish	104	193	305	378	204	190	270	284	
Fish or shellfish	5	7	8	10	9	4	6	8	
<b>Horticulture</b>									
Vegetables	58	71	78	81	86	87	78	87	
Fruit and nuts	131	118	142	170	142	113	119	160	
Total	188	189	220	251	228	200	197	247	
<b>Grains ab</b>	445	433	799	865	897	751	758	1 022	
Oilseeds	1	2	2	2	2	4	21	11	
Food nec	4	4	5	5	3	4	7	4	
<b>Substantially transformed</b>									
<b>Meat</b>									
Meat processing	121	142	185	221	203	184	305	348	
Poultry processing	0	0	0	0	1	1	2	1	
Bacon, ham and smallgoods	1	1	2	1	1	1	1	2	
Total	122	143	187	223	204	186	308	351	
<b>Seafood</b>	46	56	59	46	47	51	64	72	
<b>Dairy</b>									
Milk and cream processing	330	410	523	521	471	563	546	761	
Ice cream	3	5	4	7	8	7	3	2	
Other dairy products	146	159	202	175	169	180	196	201	
Total	479	575	729	703	647	750	746	965	
<b>Fruit and vegetables</b>	33	33	38	45	40	37	39	46	
<b>Oil and fat</b>	10	10	11	14	23	15	15	13	
<b>Flour mill and cereal food</b>									
Flour mill products	15	15	21	21	24	43	49	55	
Cereal food and baking mix	17	18	20	25	27	16	25	24	
Total	32	34	42	47	51	59	74	79	
<b>Bakery products</b>									
Bread, cake and pastry	2	2	3	3	1	1	2	2	
Biscuit	4	6	7	7	4	3	2	3	
Total	6	8	10	9	5	4	4	5	
<b>Other food</b>									
Sugar	1	14	92	339	367 a	297 a	263 a	315 a	
Confectionery	25	32	34	38	26	29	30	40	
Food nec	52	52	66	90	78	83	113	144	
Total	79	97	193	467	471	409	406	498	
<b>Beverages and malt</b>									
Soft drink, cordial and syrup	2	4	16	8	4	3	4	4	
Beer and malt	49	41	63	63	63	64	65	79	
Wine	7	7	14	19	17	24	31	39	
Spirit	1	1	4	5	5	3	6	12	
Total	59	53	97	95	88	93	107	134	
<b>Total food and beverage</b>									
Minimally transformed	747	828	1 338	1 512	1 343	1 154	1 258	1 576	
Substantially transformed	837	972	1 324	1 605	1 548	1 576	1 729	2 120	
Elaborately transformed	30	37	41	43	28	29	33	42	
Total	1 615	1 836	2 704	3 159	2 919	2 760	3 020	3 738	

a Includes ABARE estimates where ABS confidentiality restrictions apply. b Data not available for rice. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.13 Australian food exports to NAFTA member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	0	0	0	3	1	1	2	5
Fish or shellfish	4	4	3	5	7	11	15	25
<b>Horticulture</b>								
Vegetables	2	0	0	0	0	0	0	0
Fruit and nuts	11	20	16	23	43	42	51	46
Total	13	20	16	23	43	42	51	46
<b>Grains ab</b>	0	0	0	0	6	0	1	1
<b>Oilseeds</b>	9	5	4	4	34	86	86	76
<b>Food nec</b>	0	0	0	0	0	6	5	8
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	1 290	843	579	666	903	1 118	1 379	2 094
Poultry processing	0	0	0	0	0	0	0	0
Bacon, ham and smallgoods	2	2	1	1	0	0	1	1
Total	1 292	845	580	666	903	1 118	1 380	2 095
<b>Seafood</b>	98	57	40	53	92	120	128	106
<b>Dairy</b>								
Milk and cream processing	73	34	21	8	18	18	12	57
Ice cream	0	0	0	0	0	0	0	0
Other dairy products	53	49	44	73	96	152	138	173
Total	127	83	65	81	114	170	150	230
<b>Fruit and vegetables</b>	58	51	43	70	68	82	74	69
<b>Oil and fat</b>	1	2	2	3	3	2	2	3
<b>Flour mill and cereal food</b>								
Flour mill products	51	38	42	39	36	59	64	61
Cereal food and baking mix	3	2	3	3	3	3	2	2
Total	54	41	45	42	39	61	66	62
<b>Bakery products</b>								
Bread, cake and pastry	0	0	0	0	0	0	0	0
Biscuit	0	1	2	4	3	2	3	2
Total	0	1	2	4	3	2	3	2
<b>Other food</b>								
Sugar	11	24	136	374	370 a	245 a	159 a	233 a
Confectionery	2	2	2	2	2	3	12	12
Food nec	19	17	27	23	29	34	46	60
Total	32	44	165	399	401	282	217	306
<b>Beverages and malt</b>								
Soft drink, cordial and syrup	1	1	1	1	1	0	1	2
Beer and malt	3	3	2	1	1	1	1	1
Wine	80	83	106	150	238	289	403	594
Spirit	1	1	0	0	0	0	1	1
Total	84	87	109	152	241	290	406	598
<b>Total food and beverage</b>								
Minimally transformed	26	29	23	35	90	146	159	161
Substantially transformed	1 743	1 208	1 048	1 465	1 860	2 124	2 410	3 458
Elaborately transformed	2	3	4	6	5	5	15	15
Total	1 772	1 240	1 076	1 505	1 955	2 275	2 585	3 633

a Includes ABARE estimates where ABS confidentiality restrictions apply. b Data not available for rice. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.14 Australian food exports to EU member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	0	0	0	0	0	0	0	1
Fish or shellfish	2	1	2	2	3	7	7	5
<b>Horticulture</b>								
Vegetables	21	24	13	8	22	18	9	13
Fruit and nuts	9	7	8	9	20	18	20	28
Total	30	31	20	17	42	36	29	42
<b>Grains ab</b>	18	17	47	80	104	48	120	159
<b>Oilseeds</b>	13	8	7	9	56	147	21	140
<b>Food nec</b>	4	3	7	5	6	9	6	6
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	174	184	213	197	222	229	203	240
Poultry processing	0	0	0	0	0	1	1	1
Bacon, ham and smallgoods	15	17	11	10	9	18	14	5
Total	189	201	223	207	231	247	218	247
<b>Seafood</b>	29	29	33	15	20	37	36	43
<b>Dairy</b>								
Milk and cream processing	2	1	0	2	4	3	7	5
Ice cream	0	0	0	0	0	0	0	0
Other dairy products	22	37	36	58	67	95	119	174
Total	25	38	36	59	72	98	126	179
<b>Fruit and vegetables</b>	121	77	95	85	77	77	68	72
<b>Oil and fat</b>	1	1	1	1	2	2	3	3
<b>Flour mill and cereal food</b>								
Flour mill products	0	0	0	0	0	1	1	1
Cereal food and baking mix	2	2	2	3	5	4	4	7
Total	3	2	2	3	5	4	5	8
<b>Bakery products</b>								
Bread, cake and pastry	0	0	0	0	1	0	0	1
Biscuit	0	0	0	0	2	1	1	2
Total	0	0	0	1	3	1	1	2
<b>Other food</b>								
Sugar	1	0	13	8	10 a	1 a	0 a	2 a
Confectionery	0	0	1	0	2	1	3	1
Food nec	33	25	24	32	36	31	30	51
Total	34	25	37	41	48	33	34	53
<b>Beverages and malt</b>								
Soft drink, cordial and syrup	0	0	1	1	1	1	1	1
Beer and malt	4	2	1	1	1	2	3	2
Wine	213	227	275	330	477	612	781	935
Spirit	2	2	4	1	0	2	4	4
Total	219	232	281	333	479	616	788	942
<b>Total food and beverage</b>								
Minimally transformed	68	61	83	113	211	248	184	352
Substantially transformed	620	605	708	743	931	1 115	1 276	1 546
Elaborately transformed	0	1	1	1	5	2	3	4
Total	688	667	792	857	1 147	1 365	1 463	1 902

a Includes ABARE estimates where ABS confidentiality restrictions apply. b Data not available for rice. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.15 *Australian total food exports, by selected destination*

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
Canada	227	404	446	447	400	550
China	737	293	486	657	672	689
Chinese Taipei	574	588	609	676	724	741
Egypt	274	512	265	544	456	545
Germany	103	104	125	181	142	239
Hong Kong, China	583	572	588	615	704	886
Indonesia	890	1 106	833	595	700	1 005
Japan	3 580	3 333	3 853	3 831	4 174	4 806
Korea, Rep. Of	444	664	730	830	852	1 012
Malaysia	596	783	830	764	780	967
New Zealand	516	562	609	654	700	826
Philippines	500	552	500	610	635	696
Saudi Arabia	162	169	267	411	275	547
Singapore	392	436	414	411	517	583
Thailand	277	234	260	272	277	337
United Arab Emirates	213	243	260	284	262	325
United States	805	1 051	1 366	1 672	2 054	2 890
United Kingdom	390	467	600	724	796	971

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 5.16 *Australian food exports to selected countries*

	Japan		United States		United Kingdom	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	9	10	1	1	0	0
Fish or shellfish	194	248	15	24	1	0
<b>Horticulture</b>						
Vegetables	48	49	0	0	3	4
Fruit and nuts	35	27	49	42	12	20
Total	83	76	49	42	15	24
<b>Grains ab</b>	348	512	1	1	2	6
<b>Oilseeds</b>	169	181	48	75	3	2
<b>Food nec</b>	2	3	4	7	2	1
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	1 679	1 969	1 178	1 777	99	100
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	29	20	0	1	0	0
Total	1 709	1 990	1 178	1 778	99	100
<b>Seafood</b>	460	481	126	104	1	1
<b>Dairy</b>						
Milk and cream processing	91	84	8	6	0	0
Ice cream	17	14	0	0	0	0
Other dairy products	331	376	108	126	25	40
Total	439	473	116	132	25	40
<b>Fruit and vegetables</b>	77	91	49	48	23	23
<b>Oil and fat</b>	16	18	1	3	1	2
<b>Flour mill and cereal food</b>						
Flour mill products	27	29	62	55	0	0
Cereal food and baking mix	32	35	1	1	3	7
Total	59	65	63	56	3	7
<b>Bakery products</b>						
Bread, cake and pastry	2	1	0	0	0	1
Biscuit	9	6	3	1	0	2
Total	11	7	3	1	1	2
<b>Other food</b>						
Sugar a	181	180	21	57	0	2
Confectionery	71	90	9	11	2	0
Food nec	246	267	35	48	13	19
Total	498	536	66	117	15	21
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	1	2	1	0	0	0
Beer and malt	52	53	1	1	3	2
Wine	30	30	332	499	604	738
Spirit	20	30	0	0	0	0
Total	102	115	334	501	607	741
<b>Total food and beverage</b>						
Minimally transformed	804	1 030	118	150	22	34
Substantially transformed	3 326	3 720	1 925	2 726	772	933
Elaborately transformed	43	56	12	13	2	3
Total	4 174	4 806	2 054	2 890	796	971

*Continued*

## 5.16 Australian food exports to selected countries (continued)

	Hong Kong, China		New Zealand		Chinese Taipei	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	1	1	0	1	0	0
Fish or shellfish	225	285	0	0	70	72
<b>Horticulture</b>						
Vegetables	17	16	13	13	13	10
Fruit and nuts	94	117	16	17	21	18
Total	111	133	30	30	34	28
<b>Grains ab</b>	2	7	37	73	34	59
<b>Oilseeds</b>	0	19	2	3	2	2
<b>Food nec</b>	3	3	13	9	8	8
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	45	55	32	51	161	198
Poultry processing	5	5	0	0	0	0
Bacon, ham and smallgoods	1	1	4	4	0	0
Total	51	61	35	56	161	198
<b>Seafood</b>	130	180	6	7	139	108
<b>Dairy</b>						
Milk and cream processing	39	39	14	12	100	105
Ice cream	2	1	11	10	0	0
Other dairy products	27	32	11	11	23	23
Total	68	72	36	33	123	128
<b>Fruit and vegetables</b>	12	10	63	68	5	6
<b>Oil and fat</b>	26	32	26	27	1	1
<b>Flour mill and cereal food</b>						
Flour mill products	10	7	8	10	9	7
Cereal food and baking mix	8	9	54	60	9	9
Total	18	16	63	70	18	17
<b>Bakery products</b>						
Bread, cake and pastry	7	3	4	3	0	0
Biscuit	0	2	40	42	0	0
Total	7	5	44	45	0	0
<b>Other food</b>						
Sugar a	0	1	54	70	78	65
Confectionery	15	16	48	50	14	15
Food nec	17	24	140	152	33	26
Total	32	41	242	272	125	106
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	2	3	9	25	2	1
Beer and malt	2	1	13	11	0	5
Wine	13	16	63	77	2	2
Spirit	1	1	16	19	0	0
Total	18	21	101	133	4	8
<b>Total food and beverage</b>						
Minimally transformed	342	448	83	116	147	169
Substantially transformed	340	418	528	620	562	557
Elaborately transformed	22	20	89	90	15	15
Total	704	886	700	826	724	741

Continued

## 5.16 Australian food exports to selected countries (continued)

	Philippines		China		Malaysia	
	1999-00 \$m	2000-01 p \$m	1999-00 \$m	2000-01 p \$m	1999-00 \$m	2000-01 p \$m
<b>Minimally transformed</b>						
Live animals except fish	122	87	1	1	27	35
Fish or shellfish	0	0	6	6	1	2
<b>Horticulture</b>						
Vegetables	2	2	0	1	37	43
Fruit and nuts	0	0	6	4	44	65
Total	2	3	6	5	81	109
Grains ab	76	44	84	339	159	198
Oilseeds	1	2	406	108	6	6
Food nec	0	0	0	1	2	1
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	45	63	32	50	50	65
Poultry processing	1	0	0	1	0	0
Bacon, ham and smallgoods	0	0	30	23	0	0
Total	46	63	63	75	50	65
<b>Seafood</b>	0	0	33	36	7	7
<b>Dairy</b>						
Milk and cream processing	209	316	20	48	137	163
Ice cream	0	0	0	0	0	0
Other dairy products	55	56	11	16	34	32
Total	264	372	31	64	171	195
<b>Fruit and vegetables</b>	6	5	2	4	12	13
<b>Oil and fat</b>	2	3	5	2	5	2
<b>Flour mill and cereal food</b>						
Flour mill products	9	12	0	1	5	6
Cereal food and baking mix	1	7	1	1	11	5
Total	11	20	2	3	16	11
<b>Bakery products</b>						
Bread, cake and pastry	0	0	0	0	0	0
Biscuit	0	0	0	0	0	0
Total	0	1	0	0	0	0
<b>Other food</b>						
Sugar a	36	27	17	24	197	267
Confectionery	8	12	4	5	5	7
Food nec	31	32	10	12	28	32
Total	75	70	32	41	230	306
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	0	0	0	0	0	0
Beer and malt	25	24	0	0	4	5
Wine	1	2	1	2	9	11
Spirit	2	1	0	0	1	1
Total	29	27	2	2	14	17
<b>Total food and beverage</b>						
Minimally transformed	202	135	503	461	276	351
Substantially transformed	426	548	164	223	499	609
Elaborately transformed	8	12	4	5	5	8
Total	635	696	672	689	780	967

Continued



## 5.16 Australian food exports to selected countries (continued)

	Singapore		Republic of Korea		Saudi Arabia	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	3	3	1	3	9	69
Fish or shellfish	5	6	0	1	0	0
<b>Horticulture</b>						
Vegetables	34	35	2	1	0	0
Fruit and nuts	54	63	0	2	1	2
Total	88	98	2	3	1	2
<b>Grains ab</b>	17	25	248	375	0	130
Oilseeds	11	0	19	22	1	4
Food nec	3	2	0	1	0	0
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	146	159	234	246	57	79
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	0	0	0	0
Total	146	159	234	246	57	79
<b>Seafood</b>	48	46	1	2	0	0
<b>Dairy</b>						
Milk and cream processing	71	109	10	12	21	45
Ice cream	3	2	1	5	0	0
Other dairy products	40	39	54	72	106	138
Total	114	149	65	90	127	182
<b>Fruit and vegetables</b>	12	13	3	2	13	10
<b>Oil and fat</b>	5	5	6	5	0	0
<b>Flour mill and cereal food</b>						
Flour mill products	3	4	2	3	0	0
Cereal food and baking mix	5	4	0	1	1	1
Total	8	8	2	4	1	1
<b>Bakery products</b>						
Bread, cake and pastry	2	1	0	0	0	0
Biscuit	1	1	0	0	0	0
Total	3	3	0	0	0	0
<b>Other food</b>						
Sugar a	1	0	212	189	53	56
Confectionery	11	12	11	11	5	5
Food nec	22	25	24	25	7	7
Total	34	37	247	225	66	69
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	1	1	0	0	0	0
Beer and malt	4	6	21	27	0	0
Wine	16	21	2	2	0	0
Spirit	1	1	0	1	0	0
Total	22	29	24	30	0	0
<b>Total food and beverage</b>						
Minimally transformed	126	134	270	406	11	205
Substantially transformed	378	435	572	597	259	336
Elaborately transformed	14	14	10	9	5	6
Total	517	583	852	1 012	275	547

Continued

## 5.16 Australian food exports to selected countries (continued)

	Canada		Thailand		Egypt	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	0	1	0	0	138	155
Fish or shellfish	0	0	0	0	0	0
<b>Horticulture</b>						
Vegetables	0	0	2	3	0	0
Fruit and nuts	2	4	4	6	0	0
Total	2	4	6	9	0	0
<b>Grains ab</b>	0	0	65	82	197	248
<b>Oilseeds</b>	4	1	3	3	0	0
<b>Food nec</b>	0	0	0	0	0	0
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	140	210	5	6	8	8
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	0	0	0	0
Total	140	210	5	6	8	8
<b>Seafood</b>	2	3	7	16	0	2
<b>Dairy</b>						
Milk and cream processing	3	25	97	104	7	20
Ice cream	0	0	0	0	0	0
Other dairy products	5	5	33	30	48	42
Total	8	30	131	134	55	61
<b>Fruit and vegetables</b>	21	18	3	7	47	65
<b>Oil and fat</b>	0	0	1	1	0	0
<b>Flour mill and cereal food</b>						
Flour mill products	0	0	8	11	7	2
Cereal food and baking mix	1	1	6	6	1	1
Total	1	1	13	17	7	3
<b>Bakery products</b>						
Bread, cake and pastry	0	0	0	0	0	0
Biscuit	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>Other food</b>						
Sugar a	138	176	0	0	0	0
Confectionery	3	1	3	4	2	2
Food nec	9	7	10	14	1	0
Total	149	184	13	18	3	2
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	0	2	0	0	0	0
Beer and malt	0	0	24	33	0	0
Wine	71	95	2	3	0	0
Spirit	0	0	1	8	0	0
Total	72	97	28	44	0	0
<b>Total food and beverage</b>						
Minimally transformed	7	6	75	94	335	404
Substantially transformed	390	542	199	240	118	139
Elaborately transformed	3	2	3	4	2	2
Total	400	550	277	337	456	545

Continued

## 5.16 Australian food exports to selected countries (continued)

	Indonesia		Germany		United Arab Emirates	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	108	146	0	0	29	34
Fish or shellfish	0	0	0	0	0	0
<b>Horticulture</b>						
Vegetables	1	1	4	4	3	4
Fruit and nuts	14	25	3	5	5	8
Total	16	26	7	10	8	12
<b>Grains ab</b>	353	544	0	0	120	136
<b>Oilseeds</b>	0	0	1	91	0	0
<b>Food nec</b>	1	1	4	3	0	0
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	56	55	22	42	38	54
Poultry processing	1	1	0	0	0	0
Bacon, ham and smallgoods	0	1	8	3	0	0
Total	57	56	30	45	38	54
<b>Seafood</b>	2	2	2	2	0	0
<b>Dairy</b>						
Milk and cream processing	31	69	2	1	6	14
Ice cream	0	0	0	0	0	0
Other dairy products	33	43	9	9	26	35
Total	65	113	11	10	32	49
<b>Fruit and vegetables</b>	6	7	19	20	10	11
<b>Oil and fat</b>	2	2	1	1	1	1
<b>Flour mill and cereal food</b>						
Flour mill products	24	22	1	0	0	0
Cereal food and baking mix	1	1	0	0	0	1
Total	25	23	1	0	1	1
<b>Bakery products</b>						
Bread, cake and pastry	0	0	0	0	1	0
Biscuit	1	1	0	0	0	0
Total	1	1	0	0	1	0
<b>Other food</b>						
Sugar a	29	21	0	0	0	0
Confectionery	2	4	0	0	4	5
Food nec	21	41	6	3	9	9
Total	52	66	6	3	13	14
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	2	2	0	0	1	0
Beer and malt	9	11	0	0	7	9
Wine	2	3	59	52	2	3
Spirit	1	1	1	1	0	0
Total	14	17	60	53	10	12
<b>Total food and beverage</b>						
Minimally transformed	477	717	13	105	157	182
Substantially transformed	221	284	129	134	100	137
Elaborately transformed	2	4	0	0	4	6
Total	700	1 005	142	239	262	325

a Includes ABARE estimate where ABS confidentiality restrictions apply. b Data not available for rice. p Preliminary.  
Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 6.1 Australian food imports by level of transformation

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	7	24	19	12	13	1	1	0
Fish or shellfish	17	21	25	25	30	31	35	37
<b>Horticulture</b>								
Vegetables	14	13	17	16	19	24	27	26
Fruit and nuts	65	70	79	77	90	94	99	110
Total	79	83	96	93	109	118	126	136
<b>Grains</b>	1	57	14	1	3	1	1	0
<b>Oilseeds</b>	39	51	52	38	40	29	23	24
<b>Food nec</b>	89	186	167	141	186	172	155	115
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	33	33	30	50	42	51	133	105
Poultry processing	0	0	0	0	0	0	0	0
Bacon, ham and smallgoods	24	24	26	29	33	28	29	31
Total	57	57	56	79	75	79	161	136
<b>Seafood</b>	526	589	579	584	666	720	751	843
<b>Dairy</b>								
Milk and cream processing	14	17	23	19	25	33	29	37
Ice cream	6	8	5	13	15	33	17	21
Other dairy products	148	155	176	172	188	207	230	261
Total	169	180	204	204	228	273	276	319
<b>Fruit and vegetables</b>	518	535	585	593	622	717	721	755
<b>Oil and fat</b>	203	233	267	258	253	288	271	275
<b>Flour mill and cereal food</b>								
Flour mill products	49	109	63	71	55	48	79	77
Cereal food and baking mix	76	78	96	111	141	149	139	196
Total	124	187	159	182	196	197	219	273
<b>Bakery products</b>								
Bread, cake and pastry	47	39	41	49	63	76	81	92
Biscuit	45	46	51	55	58	62	80	82
Total	92	86	92	103	120	138	161	174
<b>Other food</b>								
Sugar	6	11	7	7	7	9	11	12
Confectionery	117	141	155	183	215	208	213	224
Food nec	430	462	487	385	487	554	568	640
Total	553	614	649	575	710	771	791	876
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	229	215	246	252	286	276	330	405
Beer and malt	17	19	21	26	32	44	42	52
Wine	48	61	61	67	94	103	114	92
Spirit	198	186	189	191	216	232	252	330
Total	492	481	517	536	627	654	737	880
<b>Total food and beverage</b>								
Minimally transformed	232	423	371	310	380	352	342	313
Substantially transformed	2 614	2 839	2 972	3 022	3 379	3 719	3 953	4 387
Elaborately transformed	120	122	136	91	117	117	136	143
Total	2 966	3 385	3 479	3 423	3 876	4 188	4 430	4 843

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 6.2 Australian food imports from APEC member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	6	13	18	4	0	0	1	0
Fish or shellfish	16	19	22	24	29	30	34	36
<b>Horticulture</b>								
Vegetables	12	11	15	13	15	19	23	23
Fruit and nuts	52	55	65	62	74	73	78	81
Total	64	66	80	75	89	93	102	104
<b>Grains</b>	1	52	14	1	3	1	1	0
<b>Oilseeds</b>	33	46	39	36	34	22	22	19
<b>Food nec</b>	51	96	85	78	96	88	70	52
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	33	33	30	50	41	49	72	64
Poultry processing	0	0	0	0	0	0	0	0
Bacon, ham and smallgoods	16	16	18	23	26	22	22	25
Total	49	49	48	73	68	71	94	88
<b>Seafood</b>	384	443	433	428	502	524	542	592
<b>Dairy</b>								
Milk and cream processing	13	17	21	19	25	32	27	36
Ice cream	6	6	4	6	11	18	12	16
Other dairy products	85	84	106	102	116	134	155	183
Total	103	106	132	127	151	184	195	235
<b>Fruit and vegetables</b>	318	300	315	335	333	357	361	396
<b>Oil and fat</b>	100	122	126	118	138	153	135	116
<b>Flour mill and cereal food</b>								
Flour mill products	47	97	58	67	50	43	66	70
Cereal food and baking mix	55	55	66	80	103	105	95	118
Total	102	152	123	147	153	148	161	188
<b>Bakery products</b>								
Bread, cake and pastry	35	26	25	27	40	54	51	63
Biscuit	23	24	28	29	29	34	49	50
Total	58	50	53	56	69	89	100	113
<b>Other food</b>								
Sugar	5	9	5	6	6	6	8	8
Confectionery	34	40	46	61	88	87	92	108
Food nec	240	252	273	210	267	311	318	379
Total	280	301	324	277	361	404	418	496
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	31	36	35	20	23	28	54	75
Beer and malt	6	6	6	8	9	10	11	14
Wine	4	6	8	10	17	18	25	22
Spirit	53	58	63	64	79	92	105	144
Total	94	105	112	102	127	148	195	256
<b>Total food and beverage</b>								
Minimally transformed	171	292	258	218	251	234	229	212
Substantially transformed	1 448	1 588	1 619	1 612	1 838	2 010	2 114	2 393
Elaborately transformed	40	40	47	50	64	67	85	87
Total	1 659	1 921	1 924	1 880	2 153	2 311	2 428	2 692

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 6.3 Australian food imports from ASEAN member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	0	0	0	0	0	0	0	0
Fish or shellfish	0	0	0	0	1	1	1	1
<b>Horticulture</b>								
Vegetables	1	1	1	2	2	3	2	3
Fruit and nuts	2	2	1	2	2	2	2	2
Total	2	3	3	4	4	5	4	5
<b>Grains</b>	0	0	0	0	0	0	0	0
<b>Oilseeds</b>	0	0	0	0	0	0	1	1
<b>Food nec</b>	15	33	27	22	23	29	13	14
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	0	0	0	0	0	0	0	0
Poultry processing	0	0	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
<b>Seafood</b>	192	229	223	228	276	285	293	317
<b>Dairy</b>								
Milk and cream processing	0	0	0	0	0	0	0	0
Ice cream	0	0	0	0	0	0	2	4
Other dairy products	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	3	4
<b>Fruit and vegetables</b>	62	64	69	79	77	85	84	82
<b>Oil and fat</b>	90	111	113	103	121	134	115	100
<b>Flour mill and cereal food</b>								
Flour mill products	1	1	1	2	1	2	2	2
Cereal food and baking mix	27	28	34	45	54	52	48	61
Total	28	29	35	47	55	54	50	63
<b>Bakery products</b>								
Bread, cake and pastry	5	5	6	6	5	6	7	9
Biscuit	3	4	4	5	8	14	25	25
Total	8	8	10	10	13	20	32	33
<b>Other food</b>								
Sugar	2	4	1	2	2	2	3	2
Confectionery	4	4	4	4	11	13	15	14
Food nec	100	109	119	110	149	174	157	147
Total	106	116	125	116	162	188	174	163
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	2	3	3	3	3	3	3	4
Beer and malt	0	0	0	0	0	1	1	1
Wine	0	0	0	0	0	0	0	0
Spirit	0	0	0	0	0	0	0	0
Total	3	3	4	4	3	3	4	5
<b>Total food and beverage</b>								
Minimally transformed	18	37	30	26	28	35	18	20
Substantially transformed	484	557	575	583	699	755	729	742
Elaborately transformed	5	4	4	5	8	14	26	25
Total	507	597	609	614	736	803	773	787

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 6.4 Australian food imports from NAFTA member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	6	12	17	4	0	0	1	0
Fish or shellfish	0	0	0	0	0	0	0	0
<b>Horticulture</b>								
Vegetables	3	3	6	4	5	6	8	4
Fruit and nuts	19	18	25	26	29	26	25	31
Total	22	21	31	30	34	31	33	35
<b>Grains</b>	0	52	13	0	2	0	0	0
<b>Oilseeds</b>	22	39	29	26	28	13	10	5
<b>Food nec</b>	1	5	2	2	2	1	2	2
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	9	14	13	37	31	41	61	57
Poultry processing	0	0	0	0	0	0	0	0
Bacon, ham and smallgoods	4	3	4	7	11	12	12	12
Total	12	17	17	44	43	53	73	69
<b>Seafood</b>	57	65	62	57	63	66	62	69
<b>Dairy</b>								
Milk and cream processing	0	0	1	0	0	0	0	0
Ice cream	1	1	1	1	0	1	1	1
Other dairy products	12	5	6	4	5	4	3	6
Total	13	6	7	5	5	5	4	7
<b>Fruit and vegetables</b>	133	103	107	108	115	126	127	130
<b>Oil and fat</b>	4	4	5	6	5	6	7	4
<b>Flour mill and cereal food</b>								
Flour mill products	44	89	50	60	42	34	58	59
Cereal food and baking mix	7	8	5	9	13	12	10	13
Total	52	97	56	69	55	46	68	72
<b>Bakery products</b>								
Bread, cake and pastry	14	6	8	7	15	26	23	26
Biscuit	2	2	2	3	3	4	4	6
Total	16	8	9	10	18	30	26	32
<b>Other food</b>								
Sugar	2	2	2	2	2	2	2	3
Confectionery	11	13	19	34	51	47	47	42
Food nec	48	45	54	29	33	39	40	45
Total	61	60	74	65	86	88	88	89
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	190	180	213	219	77	13	13	13
Beer and malt	4	4	5	6	7	8	8	10
Wine	1	2	2	1	1	1	1	1
Spirit	51	54	55	62	69	68	71	95
Total	247	240	275	287	154	89	93	118
<b>Total food and beverage</b>								
Minimally transformed	52	129	92	61	66	46	47	42
Substantially transformed	589	594	606	629	510	479	523	569
Elaborately transformed	6	5	7	22	34	28	26	23
Total	646	729	704	712	610	554	595	633

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 6.5 Australian food imports from EU member countries

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>								
Live animals except fish	1	1	0	0	0	0	0	0
Fish or shellfish	0	0	0	0	0	0	0	0
<b>Horticulture</b>								
Vegetables	1	0	1	0	1	1	1	1
Fruit and nuts	5	7	5	6	7	9	13	9
Total	5	7	5	6	7	10	14	10
<b>Grains</b>	0	5	0	0	0	0	0	0
<b>Oilseeds</b>	0	0	0	0	0	1	0	0
<b>Food nec</b>	2	7	2	4	2	2	2	3
<b>Substantially transformed</b>								
<b>Meat</b>								
Meat processing	0	0	0	0	0	2	60	41
Poultry processing	0	0	0	0	0	0	0	0
Bacon, ham and smallgoods	7	7	7	5	6	5	6	5
Total	7	7	7	5	6	7	66	46
<b>Seafood</b>	27	30	31	32	32	35	34	36
<b>Dairy</b>								
Milk and cream processing	2	1	1	0	1	1	1	2
Ice cream	0	2	1	7	4	15	4	5
Other dairy products	52	58	58	58	60	58	61	63
Total	54	61	59	65	64	74	66	70
<b>Fruit and vegetables</b>	93	105	97	104	121	149	145	145
<b>Oil and fat</b>	54	70	95	93	79	95	110	132
<b>Flour mill and cereal food</b>								
Flour mill products	1	12	5	3	4	4	12	6
Cereal food and baking mix	17	18	24	25	29	31	29	62
Total	18	30	29	28	33	35	41	68
<b>Bakery products</b>								
Bread, cake and pastry	11	13	15	21	20	19	26	26
Biscuit	19	19	19	22	24	23	25	25
Total	30	31	34	42	44	42	51	51
<b>Other food</b>								
Sugar	1	1	1	1	1	2	2	2
Confectionery	66	81	91	105	107	96	93	88
Food nec	97	121	122	93	109	114	152	165
Total	165	204	215	198	217	212	247	254
<b>Beverage and malt</b>								
Soft drink, cordial and syrup	26	21	19	21	197	246	157	48
Beer and malt	10	13	14	18	22	33	30	37
Wine	41	52	47	53	73	80	86	67
Spirit	126	111	109	112	119	131	129	170
Total	204	197	188	205	411	490	402	322
<b>Total food and beverage</b>								
Minimally transformed	8	21	8	11	9	13	16	13
Substantially transformed	585	666	678	740	965	1 101	1 126	1 086
Elaborately transformed	66	68	77	32	42	37	38	38
Total	659	755	763	783	1 017	1 151	1 180	1 137

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.



## 6.6 *Australian total food imports, by selected destination*

	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
Brazil	85	59	53	82	194	345
Canada	90	75	79	95	112	109
China	89	94	104	114	132	162
France	62	74	95	104	117	103
India	68	57	66	77	64	80
Indonesia	64	64	91	110	89	110
Ireland	24	28	211	254	147	54
Italy	168	168	182	222	215	231
Malaysia	170	151	173	183	160	159
Netherlands	88	82	87	70	101	98
New Zealand	540	501	553	618	704	870
Papua New Guinea	63	61	78	64	56	39
Singapore	86	82	108	123	127	105
Spain	84	88	89	99	108	107
Thailand	264	285	330	358	368	386
United Kingdom	171	176	180	216	225	268
United States	394	393	432	432	455	488
Viet Nam	61	51	78	92	109	108

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 6.7 *Australian food imports from selected countries*

	New Zealand		United States		Thailand	
	1999-00 \$m	2000-01 p \$m	1999-00 \$m	2000-01 p \$m	1999-00 \$m	2000-01 p \$m
<b>Minimally transformed</b>						
Live animals except fish	0	0	1	0	0	0
Fish or shellfish	31	34	0	0	0	0
<b>Horticulture</b>						
Vegetables	4	7	6	4	2	2
Fruit and nuts	37	41	25	31	2	2
Total	42	48	31	35	3	4
<b>Grains</b>	0	0	0	0	0	0
<b>Oilseeds</b>	1	1	6	0	1	0
<b>Food nec</b>	4	3	1	1	0	0
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	10	6	0	0	0	0
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	9	12	12	12	0	0
Total	19	18	12	12	0	0
<b>Seafood</b>	116	121	38	43	238	244
<b>Dairy</b>						
Milk and cream processing	27	35	0	0	0	0
Ice cream	9	11	1	1	2	3
Other dairy products	149	174	3	6	0	0
Total	185	220	4	7	2	3
<b>Fruit and vegetables</b>	83	109	108	110	44	44
<b>Oil and fat</b>	2	2	6	3	1	0
<b>Flour mill and cereal food</b>						
Flour mill products	4	5	58	59	1	2
Cereal food and baking mix	10	16	9	12	37	44
Total	14	20	67	71	38	45
<b>Bakery products</b>						
Bread, cake and pastry	12	16	22	25	1	1
Biscuit	12	10	3	6	12	15
Total	24	26	25	31	13	16
<b>Other food</b>						
Sugar	1	1	2	2	1	1
Confectionery	25	37	42	37	0	0
Food nec	65	102	31	38	26	27
Total	90	140	75	77	27	28
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	35	54	11	11	0	0
Beer and malt	1	2	3	3	0	0
Wine	24	21	1	1	0	0
Spirit	32	52	65	82	0	0
Total	92	129	79	97	0	0
<b>Total food and beverage</b>						
Minimally transformed	77	85	40	36	4	5
Substantially transformed	602	754	390	432	352	366
Elaborately transformed	24	30	25	20	12	15
Total	704	870	455	488	368	386

*Continued*

## 6.7 Australian food imports from selected countries (continued)

	Ireland		Italy		United Kingdom	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	0	0	0	0	0	0
Fish or shellfish	0	0	0	0	0	0
<b>Horticulture</b>						
Vegetables	0	0	0	0	0	0
Fruit and nuts	0	0	4	3	0	0
Total	0	0	5	3	0	0
<b>Grains</b>	0	0	0	0	0	0
<b>Oilseeds</b>	0	0	0	0	0	0
<b>Food nec</b>	0	0	1	1	1	1
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	0	0	0	0	0	0
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>Seafood</b>	0	0	6	6	8	8
<b>Dairy</b>						
Milk and cream processing	0	0	0	0	0	0
Ice cream	0	0	2	1	1	2
Other dairy products	0	0	18	17	2	1
Total	0	0	21	18	2	4
<b>Fruit and vegetables</b>	0	0	50	50	10	7
<b>Oil and fat</b>	0	0	33	45	2	1
<b>Flour mill and cereal food</b>						
Flour mill products	0	0	0	0	0	0
Cereal food and baking mix	1	28	23	25	2	4
Total	1	28	23	25	2	4
<b>Bakery products</b>						
Bread, cake and pastry	0	0	4	3	5	5
Biscuit	0	0	2	2	9	10
Total	0	0	5	5	14	16
<b>Other food</b>						
Sugar	0	0	0	0	0	0
Confectionery	0	0	13	13	20	22
Food nec	0	0	26	31	52	52
Total	0	0	39	44	73	74
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	140	21	5	5	1	2
Beer and malt	1	0	1	1	13	14
Wine	0	0	22	24	0	0
Spirit	5	4	3	3	99	136
Total	145	25	31	34	113	153
<b>Total food and beverage</b>						
Minimally transformed	0	0	6	4	1	1
Substantially transformed	147	54	207	224	210	251
Elaborately transformed	0	0	3	3	14	16
Total	147	54	215	231	225	268

*Continued*

## 6.7 Australian food imports from selected countries (continued)

	Malaysia		Singapore		China	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	0	0	0	0	0	0
Fish or shellfish	0	0	0	0	0	0
<b>Horticulture</b>						
Vegetables	0	0	0	0	7	8
Fruit and nuts	0	0	0	0	9	5
Total	0	0	0	0	17	13
<b>Grains</b>	0	0	0	0	0	0
<b>Oilseeds</b>	0	0	0	0	10	13
<b>Food nec</b>	1	1	2	1	2	3
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	0	0	0	0	0	0
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>Seafood</b>	28	34	9	9	14	22
<b>Dairy</b>						
Milk and cream processing	0	0	0	0	0	0
Ice cream	0	0	0	0	0	0
Other dairy products	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>Fruit and vegetables</b>	3	3	8	8	52	58
<b>Oil and fat</b>	87	79	22	19	3	5
<b>Flour mill and cereal food</b>						
Flour mill products	0	0	0	0	1	2
Cereal food and baking mix	4	3	3	4	8	10
Total	4	3	3	4	9	11
<b>Bakery products</b>						
Bread, cake and pastry	2	3	3	3	5	8
Biscuit	2	2	2	1	4	5
Total	5	5	5	4	9	13
<b>Other food</b>						
Sugar	0	0	0	0	1	1
Confectionery	1	1	9	8	3	11
Food nec	30	32	66	50	10	11
Total	32	33	75	58	15	23
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	0	1	2	2	1	1
Beer and malt	0	0	0	0	0	0
Wine	0	0	0	0	0	0
Spirit	0	0	0	0	0	0
Total	0	1	2	2	1	1
<b>Total food and beverage</b>						
Minimally transformed	1	1	3	2	29	29
Substantially transformed	156	156	122	102	99	128
Elaborately transformed	2	2	2	1	4	5
Total	160	159	127	105	132	162

Continued

## 6.7 Australian food imports from selected countries (continued)

	Indonesia		France		Spain	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	0	0	0	0	0	0
Fish or shellfish	0	0	0	0	0	0
<b>Horticulture</b>						
Vegetables	0	0	0	0	0	0
Fruit and nuts	0	0	1	0	5	3
Total	0	0	1	1	5	3
<b>Grains</b>	0	0	0	0	0	0
<b>Oilseeds</b>	0	0	0	0	0	0
<b>Food nec</b>	8	9	0	0	0	0
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	0	0	0	0	0	0
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	1	1	0	0
Total	0	0	1	1	0	0
<b>Seafood</b>	17	29	0	0	2	3
<b>Dairy</b>						
Milk and cream processing	0	0	0	1	0	0
Ice cream	0	0	1	2	1	0
Other dairy products	0	0	6	7	0	0
Total	0	0	8	10	1	0
<b>Fruit and vegetables</b>	13	11	13	12	18	19
<b>Oil and fat</b>	5	3	0	1	55	63
<b>Flour mill and cereal food</b>						
Flour mill products	0	0	1	1	0	0
Cereal food and baking mix	4	10	1	1	0	0
Total	4	10	2	3	0	0
<b>Bakery products</b>						
Bread, cake and pastry	0	0	0	0	0	0
Biscuit	8	7	1	1	0	0
Total	9	8	1	1	0	0
<b>Other food</b>						
Sugar	1	1	0	0	0	0
Confectionery	4	5	4	4	15	13
Food nec	28	33	11	11	6	4
Total	33	38	16	16	20	17
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	0	1	7	5	0	0
Beer and malt	0	0	0	0	0	0
Wine	0	0	51	37	7	2
Spirit	0	0	16	17	0	0
Total	1	1	74	59	7	2
<b>Total food and beverage</b>						
Minimally transformed	8	10	2	1	5	3
Substantially transformed	72	93	114	99	102	103
Elaborately transformed	8	7	2	2	1	1
Total	89	110	117	103	108	107

Continued

## 6.7 Australian food imports from selected countries (continued)

	Canada		Viet Nam		Brazil	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	0	0	0	0	0	0
Fish or shellfish	0	0	1	0	0	0
<b>Horticulture</b>						
Vegetables	1	0	0	0	0	0
Fruit and nuts	0	0	0	0	0	0
Total	2	0	0	0	0	0
<b>Grains</b>	0	0	0	0	0	0
<b>Oilseeds</b>	1	1	0	0	0	0
<b>Food nec</b>	0	0	39	20	15	13
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	61	57	0	0	0	0
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	0	0	0	0	0	0
Total	62	57	0	0	0	0
<b>Seafood</b>	24	26	31	43	0	0
<b>Dairy</b>						
Milk and cream processing	0	0	0	0	0	0
Ice cream	0	0	0	0	0	0
Other dairy products	0	0	0	0	0	0
Total	0	0	0	0	0	0
<b>Fruit and vegetables</b>	8	9	34	41	46	38
<b>Oil and fat</b>	0	1	0	0	0	0
<b>Flour mill and cereal food</b>						
Flour mill products	0	0	0	0	0	0
Cereal food and baking mix	1	1	1	1	1	1
Total	1	1	1	1	1	1
<b>Bakery products</b>						
Bread, cake and pastry	1	1	1	1	0	0
Biscuit	0	0	0	0	0	0
Total	1	1	1	1	0	0
<b>Other food</b>						
Sugar	0	0	0	0	0	0
Confectionery	3	4	0	0	3	2
Food nec	7	6	1	1	11	11
Total	11	10	1	1	14	14
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	2	2	0	0	117	278
Beer and malt	0	0	0	0	0	0
Wine	0	0	0	0	0	0
Spirit	1	1	0	0	0	0
Total	4	3	0	0	117	278
<b>Total food and beverage</b>						
Minimally transformed	2	1	40	20	15	14
Substantially transformed	109	106	68	87	179	331
Elaborately transformed	1	2	0	0	0	0
Total	112	109	109	108	194	345

*Continued*

## 6.7 Australian food imports from selected countries (continued)

	Netherlands		India		Papua New Guinea	
	1999-00	2000-01 p	1999-00	2000-01 p	1999-00	2000-01 p
	\$m	\$m	\$m	\$m	\$m	\$m
<b>Minimally transformed</b>						
Live animals except fish	0	0	0	0	0	0
Fish or shellfish	0	0	0	0	0	0
<b>Horticulture</b>						
Vegetables	0	0	0	0	0	0
Fruit and nuts	0	0	1	1	0	0
Total	0	0	1	1	0	0
<b>Grains</b>	0	0	0	0	0	0
<b>Oilseeds</b>	0	0	1	1	0	0
<b>Food nec</b>	0	0	8	6	46	28
<b>Substantially transformed</b>						
<b>Meat</b>						
Meat processing	0	0	0	0	0	0
Poultry processing	0	0	0	0	0	0
Bacon, ham and smallgoods	3	4	0	0	0	0
Total	3	4	0	0	0	0
<b>Seafood</b>	1	1	14	36	4	5
<b>Dairy</b>						
Milk and cream processing	1	1	0	0	0	0
Ice cream	0	0	0	0	0	0
Other dairy products	8	6	0	0	0	0
Total	8	7	0	0	0	0
<b>Fruit and vegetables</b>	11	13	25	20	0	0
<b>Oil and fat</b>	2	1	2	2	1	0
<b>Flour mill and cereal food</b>						
Flour mill products	2	1	0	0	0	0
Cereal food and baking mix	0	0	4	5	0	0
Total	2	1	4	6	0	0
<b>Bakery products</b>						
Bread, cake and pastry	3	2	1	1	0	0
Biscuit	1	2	0	0	0	0
Total	4	4	1	2	0	0
<b>Other food</b>						
Sugar	0	0	0	0	0	0
Confectionery	13	7	0	0	0	0
Food nec	42	43	8	7	5	5
Total	55	50	8	7	5	5
<b>Beverage and malt</b>						
Soft drink, cordial and syrup	0	0	0	0	0	0
Beer and malt	10	14	0	0	0	0
Wine	0	0	0	0	0	0
Spirit	2	3	0	0	0	0
Total	13	16	0	0	0	0
<b>Total food and beverage</b>						
Minimally transformed	1	1	10	8	47	28
Substantially transformed	98	95	54	72	9	10
Elaborately transformed	2	2	0	0	0	0
Total	101	98	64	80	56	39

p Preliminary.

Source: ABS, *International Trade*, electronic data service, cat. no. 5464.0, Canberra.

## 7.1 *Value of world trade in processed food, major exporting countries <sup>a</sup>*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share <sup>b</sup> %
<b>Meat</b>						
Australia	2 263	2 554	2 457	2 685	2 913	5.9
Denmark	3 995	4 018	3 575	3 345	3 335	8.4
France	4 317	4 218	3 871	3 664	3 421	8.9
Netherlands	5 303	4 645	4 290	4 519	4 294	10.6
United States	6 958	6 894	6 411	6 340	7 305	15.5
Other	22 665	23 042	21 798	21 740	21 514	50.7
Total	45 502	45 371	42 402	42 294	42 782	100.0
<b>Dairy</b>						
Australia	1 373	1 356	1 339	1 420	1 573	5.1
France	4 402	4 176	4 089	4 011	3 803	14.7
Germany	5 199	4 816	4 879	4 519	4 093	16.9
Netherlands	4 355	3 488	3 742	3 411	3 118	13.0
New Zealand	2 326	2 406	2 134	2 009	2 125	7.9
Other	11 985	11 765	12 123	11 609	11 534	42.4
Total	29 639	28 007	28 307	26 978	26 246	100.0
<b>Seafood</b>						
Australia	78	99	71	80	94	1.0
China	1 131	1 054	923	1 022	1 391	12.4
Denmark	483	439	463	436	397	5.0
Korea, Rep. of	417	375	287	311	312	3.8
Thailand	1 611	1 882	1 876	2 016	2 058	21.3
Other	4 993	5 230	5 146	4 929	4 762	56.5
Total	8 714	9 078	8 766	8 794	9 014	100.0
<b>Horticulture</b>						
Australia	156	150	139	148	138	0.7
China	1 391	1 397	1 390	1 501	1 685	6.7
Italy	1 812	1 626	1 745	1 775	1 515	7.7
Netherlands	2 257	1 882	1 913	2 193	1 885	9.2
United States	2 246	2 368	2 393	2 448	2 378	10.8
Other	14 606	13 778	14 487	14 772	13 455	64.9
Total	22 469	21 200	22 067	22 838	21 057	100.0
<b>Beverages <sup>c</sup></b>						
Australia	508	593	658	848	991	2.2
France	8 087	8 277	8 834	9 014	8 104	25.5
Germany	1 971	1 721	1 704	1 829	1 512	5.3
Italy	2 893	2 744	3 022	3 249	2 987	9.0
United Kingdom	4 913	5 388	4 786	4 712	4 619	14.7
Other	13 861	14 248	13 874	14 802	15 003	43.3
Total	32 234	32 972	32 878	34 453	33 216	100.0
<b>Sugar and confectionery</b>						
Australia	1 397	1 377	977	963	874	4.9
Belgium-Luxembourg	1 794	1 708	1 747	1 665	1 737	7.6
Brazil	1 735	1 919	2 082	2 062	1 359	8.1
France	3 144	2 526	2 455	2 225	2 066	10.9
Germany	2 826	2 472	2 463	2 176	1 874	10.4
Other	15 387	14 751	13 014	11 316	11 575	58.1
Total	26 284	24 753	22 738	20 407	19 485	100.0

*Continued*



## 7.1 Value of world trade in processed food, by major exporting countries <sup>a</sup>

(continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Argentina	1 902	2 236	2 751	2 347	1 691	8.7
Australia	238	263	293	254	220	1.0
Malaysia	4 776	4 775	5 574	4 911	3 515	18.7
Netherlands	1 764	1 738	1 915	1 719	1 224	6.6
United States	1 880	2 225	2 815	2 012	1 503	8.3
Other	14 487	16 254	15 423	13 643	11 460	56.6
Total	25 047	27 491	28 769	24 886	19 613	100.0
<b>Animal feed <sup>d</sup></b>						
Argentina	2 367	2 404	2 006	2 049	2 433	10.6
Australia	390	413	331	403	565	2.0
Brazil	2 930	2 842	1 800	1 587	1 716	10.2
Netherlands	2 229	2 080	1 803	1 670	1 670	8.9
United States	4 338	4 782	4 206	3 526	3 975	19.6
Other	11 574	11 691	10 186	9 409	9 081	48.8
Total	23 828	24 212	20 332	18 643	19 440	100.0
<b>Cereal products</b>						
Australia	304	318	279	280	275	1.8
Belgium-Luxembourg	1 370	1 402	1 396	1 447	1 308	8.4
France	2 066	1 913	1 817	1 672	1 540	10.9
Germany	1 660	1 630	1 630	1 570	1 503	9.7
Italy	2 109	1 980	1 987	1 852	1 704	11.7
Other	9 935	9 989	9 289	9 134	9 032	57.5
Total	17 445	17 231	16 397	15 955	15 360	100.0
<b>Other processed food</b>						
Australia	178	193	164	202	232	0.6
Brazil	2 291	3 321	2 854	2 778	2 258	7.9
France	2 575	2 608	2 192	1 544	1 419	6.0
Netherlands	1 735	1 703	1 577	1 618	1 638	4.8
United States	2 563	2 858	2 798	3 044	3 204	8.4
Other	24 162	26 376	26 613	24 805	22 396	72.3
Total	33 503	37 058	36 198	33 991	31 146	100.0
<b>All processed food</b>						
Australia	6 884	7 316	6 708	7 281	7 874	2.8
France	27 901	26 961	26 567	25 242	23 269	10.2
Germany	21 109	19 945	20 908	19 612	17 390	7.7
Netherlands	21 989	19 390	18 551	18 858	17 365	7.5
United States	22 201	23 670	23 175	22 028	23 184	8.9
Other	164 581	170 091	163 751	156 974	148 920	62.9
Total	264 665	267 373	259 660	249 995	238 002	100.0

<sup>a</sup> Based on over 100 reporting countries representing more than 90 per cent of world trade. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Alcoholic and nonalcoholic. <sup>d</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre UNCTAD/WTO; ABARE.

## 7.2 Value of food exports, European Union

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	5 263	4 382	4 407	4 572	4 381	2.6
<b>Fish or shellfish</b>						
Fish, live or fresh	4 892	4 999	5 125	5 336	5 011	2.9
Fish, dried, salted or smoked	674	646	719	695	677	0.4
Shellfish	2 102	2 107	2 109	2 261	2 207	1.2
<b>Horticulture</b>						
Vegetables	10 197	9 324	9 926	10 011	8 932	5.4
Fruit and nuts	10 436	11 312	11 369	10 869	9 694	6.0
<b>Cocoa</b>	1 531	1 602	1 675	1 531	1 273	0.9
<b>Eggs, albumin</b>	1 155	1 008	963	937	934	0.6
<b>Grains and oilseeds</b>						
Barley	1 966	1 499	1 172	1 469	1 835	0.9
Maize	1 936	1 666	1 677	1 626	1 453	0.9
Oilseeds, not soft oil	138	180	180	162	159	0.1
Oilseeds, soft oil	1 323	1 613	1 784	1 416	1 126	0.8
Rice	1 072	951	904	898	726	0.5
Wheat or meslin	5 260	4 504	4 125	3 966	3 662	2.4
Other cereal grains, nec	643	346	330	358	339	0.2
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	5 967	5 884	5 869	6 129	4 959	3.2
Meat, fresh, chilled or frozen	13 826	13 107	11 866	11 526	11 624	7.0
Meat or offal, preserved	1 721	1 614	1 389	1 410	1 416	0.8
Meat or offal, preserved, nec	3 598	3 500	3 361	3 011	2 870	1.8
<b>Dairy</b>						
Milk products, excluding butter and cheese	10 309	9 804	9 998	9 723	9 361	5.5
Butter and cheese	2 506	2 418	2 421	2 049	1 761	1.3
Cheese and curd	9 696	8 537	8 752	8 291	7 738	4.8
<b>Fish or shellfish</b>	2 192	2 110	2 325	2 246	2 091	1.2
<b>Cereal products</b>						
Flour or meal from wheat or meslin	1 662	1 473	1 155	963	854	0.7
Cereal flour or meal, nec	181	165	137	125	118	0.1
Cereal etc, flour or starch	9 520	9 258	9 394	9 258	8 557	5.2
<b>Horticulture</b>						
Vegetables, prepared or preserved	5 459	5 072	5 371	5 627	4 872	3.0
Fruit, prepared or preserved	2 668	2 416	2 569	2 330	2 106	1.4
Fruit or vegetable juices	2 369	2 191	2 645	2 753	2 584	1.4
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	4 435	4 254	4 237	3 422	3 323	2.2
Sugar confectionery	2 360	2 238	2 172	2 088	1 969	1.2
Chocolate and cocoa preparations	6 425	5 519	5 278	5 016	4 635	3.0

Continued

## 7.2 *Value of food exports, European Union (continued)*

	1996	1997	1998	1999	2000 p	Share a
	US\$m	US\$m	US\$m	US\$m	US\$m	%
<b>Animal and vegetable oil</b>						
Margarine and shortening	1 024	1 151	1 070	788	628	0.5
Animal oil or fat	681	706	679	539	509	0.4
Vegetable oil or fat, fixed, soft	5 565	5 473	5 436	4 781	3 895	2.8
Vegetable oils, fixed, not soft	732	794	856	850	617	0.4
Animal or vegetable oils, processed	1 413	1 357	1 511	1 370	1 228	0.8
<b>Other food</b>						
Coffee and coffee substitutes	2 605	2 867	2 792	2 402	2 282	1.5
Tea and mate	493	489	574	482	423	0.3
Spices	325	373	416	417	399	0.2
Edible products, nec	10 363	9 557	9 423	9 018	8 666	5.3
<b>Beverage</b>						
Beverages, nonalcoholic, nec	2 640	2 602	2 588	3 202	3 164	1.6
Alcoholic beverages	22 024	22 176	22 091	22 806	20 928	12.4
<b>Animal feed b</b>	7 986	8 024	7 800	7 137	6 673	4.2
<b>Total</b>	<b>189 334</b>	<b>181 269</b>	<b>180 641</b>	<b>175 863</b>	<b>162 661</b>	<b>100.0</b>

a Average, 1996–2000. b Excludes unmilled cereal. p Preliminary.  
Source: International Trade Centre, UNCTAD/WTO; ABARE.

## 7.3 Value of food exports, NAFTA

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	2 063	2 273	2 235	2 004	2 452	3.0
<b>Fish or shellfish</b>						
Fish, live or fresh	2 743	2 604	2 274	2 659	2 713	3.5
Fish, dried, salted or smoked	410	274	260	278	287	0.4
Shellfish	2 189	2 201	1 968	2 335	2 578	3.1
<b>Horticulture</b>						
Vegetables	3 819	3 999	4 537	4 575	4 933	6.0
Fruit and nuts	4 329	4 255	4 132	3 957	4 266	5.7
<b>Cocoa</b>	76	98	106	127	97	0.1
<b>Eggs, albumin</b>	246	247	243	199	201	0.3
<b>Grains and oilseeds</b>						
Barley	787	683	276	258	364	0.6
Maize	8 743	5 488	4 696	5 224	4 746	7.9
Oilseeds, not soft oil	258	311	333	239	199	0.4
Oilseeds, soft oil	8 808	9 103	6 814	6 108	6 764	10.3
Rice	1 032	935	1 212	948	836	1.4
Wheat or meslin	9 739	8 130	6 528	5 906	5 936	9.9
Other cereal grains, nec	1 081	945	776	767	842	1.2
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	2 881	3 115	3 049	3 628	4 210	4.6
Meat, fresh, chilled or frozen	4 938	4 908	4 442	4 251	5 042	6.4
Meat or offal, preserved	157	157	155	153	206	0.2
Meat or offal, preserved, nec	628	715	672	610	701	0.9
<b>Dairy</b>						
Milk products, excluding butter and cheese	512	630	610	614	649	0.8
Butter and cheese	70	47	41	26	19	0.1
Cheese and curd	166	215	221	220	209	0.3
<b>Fish or shellfish</b>	650	632	620	732	760	0.9
<b>Cereal products</b>						
Flour or meal from wheat or meslin	212	194	189	222	196	0.3
Cereal flour or meal, nec	135	143	137	145	137	0.2
Cereal etc, flour or starch	1 727	1 907	2 004	2 116	2 272	2.7
<b>Horticulture</b>						
Vegetables, prepared or preserved	1 445	1 660	1 796	1 941	1 915	2.4
Fruit, prepared or preserved	705	711	712	713	744	1.0
Fruit or vegetable juices	797	841	857	906	877	1.2
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	857	798	891	694	634	1.1
Sugar confectionery	503	631	660	653	757	0.9
Chocolate and cocoa preparations	642	719	692	727	901	1.0

Continued

## 7.3 *Value of food exports, NAFTA (continued)*

	1996	1997	1998	1999	2000 p	Share a
	US\$m	US\$m	US\$m	US\$m	US\$m	%
<b>Animal and vegetable oil</b>						
Margarine and shortening	80	84	95	104	97	0.1
Animal oil or fat	722	693	801	617	472	0.9
Vegetable oil or fat, fixed, soft	1 451	1 857	2 323	1 510	1 020	2.2
Vegetable oils, fixed, not soft	73	89	93	118	113	0.1
Animal or vegetable oils, processed	262	282	326	322	302	0.4
<b>Other food</b>						
Coffee and coffee substitutes	1 101	1 313	1 181	1 098	1 144	1.6
Tea and mate	55	64	64	86	111	0.1
Spices	72	79	92	104	115	0.1
Edible products, nec	2 734	3 094	3 119	3 442	3 606	4.4
<b>Beverage</b>						
Beverages, nonalcoholic, nec	508	646	672	737	696	0.9
Alcoholic beverages	2 253	2 420	2 619	2 846	3 244	3.7
<b>Animal feed b</b>	5 104	5 601	4 925	4 147	4 622	6.7
<b>Total</b>	<b>77 758</b>	<b>75 789</b>	<b>70 445</b>	<b>69 065</b>	<b>72 986</b>	<b>100.0</b>

a Average, 1996–2000. b Excludes unmilled cereal. p Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 7.4 Value of food exports, APEC <sup>a</sup>

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share b %
<b>Minimally transformed</b>						
<b>Live animals except fish</b>	3 486	3 670	3 377	3 149	3 578	2.4
<b>Fish or shellfish</b>						
Fish, live or fresh	7 430	7 666	7 216	8 096	8 418	5.4
Fish, dried, salted or smoked	762	620	541	557	655	0.4
Shellfish	8 240	8 063	7 347	7 538	8 440	5.5
<b>Horticulture</b>						
Vegetables	6 765	6 704	7 032	7 257	7 504	4.9
Fruit and nuts	7 913	7 660	7 208	7 389	7 804	5.3
<b>Cocoa</b>	929	991	1 053	891	714	0.6
<b>Eggs, albumin</b>	361	360	343	298	306	0.2
<b>Grains and oilseeds</b>						
Barley	1 493	1 368	700	689	798	0.7
Maize	8 851	6 442	5 413	5 777	5 895	4.5
Oilseeds, not soft oil	305	360	410	304	267	0.2
Oilseeds, soft oil	9 923	9 844	7 640	7 076	7 797	5.9
Rice	3 406	3 599	4 615	3 886	3 275	2.6
Wheat or meslin	12 930	11 489	8 866	8 093	8 184	6.9
Other cereal grains, nec	1 314	1 067	879	844	911	0.7
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	5 250	5 724	5 540	6 246	7 006	4.2
Meat, fresh, chilled or frozen	8 416	8 392	7 626	7 432	8 178	5.6
Meat or offal, preserved	186	186	181	175	230	0.1
Meat or offal, preserved, nec	1 232	1 335	1 298	1 357	1 667	1.0
<b>Dairy</b>						
Milk products, excluding butter and cheese	2 927	3 004	2 697	2 682	3 105	2.0
Butter and cheese	886	878	805	741	714	0.6
Cheese and curd	1 056	1 178	1 180	1 204	1 247	0.8
<b>Fish or shellfish</b>	4 960	5 254	4 678	5 016	5 515	3.6
<b>Cereal products</b>						
Flour or meal from wheat or meslin	581	514	449	469	449	0.3
Cereal flour or meal, nec	242	239	208	217	214	0.2
Cereal etc, flour or starch	2 992	3 184	2 972	3 184	3 411	2.2
<b>Horticulture</b>						
Vegetables, prepared or preserved	3 238	3 285	3 332	3 567	3 566	2.4
Fruit, prepared or preserved	2 168	2 022	1 894	2 229	2 163	1.5
Fruit or vegetable juices	1 342	1 293	1 227	1 412	1 393	0.9
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	4 411	3 771	3 087	2 595	2 555	2.3
Sugar confectionery	1 096	1 200	1 090	1 151	1 331	0.8
Chocolate and cocoa preparations	1 034	1 083	1 001	1 113	1 314	0.8

*Continued*

## 7.4 *Value of food exports, APEC* <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	276	419	397	439	410	0.3
Animal oil or fat	1 093	1 051	1 083	920	763	0.7
Vegetable oil or fat, fixed, soft	1 941	2 647	2 853	1 888	1 376	1.5
Vegetable oils, fixed, not soft	5 901	6 972	7 013	6 157	5 119	4.4
Animal or vegetable oils, processed	1 761	1 510	1 822	1 617	1 395	1.1
<b>Other food</b>						
Coffee and coffee substitutes	2 289	2 642	2 739	2 086	2 127	1.7
Tea and mate	533	568	628	589	641	0.4
Spices	766	996	980	1 014	1 052	0.7
Edible products, nec	5 167	5 472	5 349	5 862	6 347	3.9
<b>Beverage</b>						
Beverages, nonalcoholic, nec	1 161	1 284	1 213	1 343	1 325	0.9
Alcoholic beverages	4 202	4 533	4 714	5 184	5 854	3.4
<b>Animal feed <sup>c</sup></b>	8 317	8 784	6 996	6 355	7 428	5.3
<b>Total</b>	<b>149 531</b>	<b>149 322</b>	<b>137 693</b>	<b>136 087</b>	<b>142 435</b>	<b>100.0</b>

<sup>a</sup> No data available for Viet Nam. Not including Chinese Taipei. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.

Source: International Trade Centre, UNCTAD/WTO; ABARE.

## 7.5 Value of food exports, ASEAN <sup>a</sup>

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share b %
<b>Minimally transformed</b>						
Live animals except fish	293	266	225	196	172	0.9
<b>Fish or shellfish</b>						
Fish, live or fresh	1 235	1 242	1 162	1 205	1 159	4.5
Fish, dried, salted or smoked	174	135	109	109	125	0.5
Shellfish	3 678	3 466	3 268	3 060	3 483	12.7
<b>Horticulture</b>						
Vegetables	880	699	539	615	458	2.4
Fruit and nuts	974	957	747	910	977	3.4
<b>Cocoa</b>	777	812	860	710	568	2.8
<b>Eggs, albumin</b>	53	51	46	58	58	0.2
<b>Grains and oilseeds</b>						
Barley	0	0	0	0	0	0.0
Maize	30	36	92	29	18	0.2
Oilseeds, not soft oil	11	20	32	30	28	0.1
Oilseeds, soft oil	46	42	36	43	25	0.1
Rice	2 004	2 100	2 106	1 950	1 630	7.3
Wheat or meslin	1	1	1	1	1	0.0
Other cereal grains, nec	17	14	7	5	7	0.0
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	8	5	4	3	4	0.0
Meat, fresh, chilled or frozen	431	421	471	471	456	1.7
Meat or offal, preserved	6	4	2	3	3	0.0
Meat or offal, preserved, nec	161	187	234	288	363	0.9
<b>Dairy</b>						
Milk products, excluding butter and cheese	215	221	164	177	259	0.8
Butter and cheese	16	11	11	12	12	0.0
Cheese and curd	6	4	4	5	4	0.0
<b>Fish or shellfish</b>	2 002	2 244	2 240	2 304	2 347	8.3
<b>Cereal products</b>						
Flour or meal from wheat or meslin	42	48	38	38	39	0.2
Cereal flour or meal, nec	67	63	51	50	56	0.2
Cereal etc, flour or starch	410	372	299	401	421	1.4
<b>Horticulture</b>						
Vegetables, prepared or preserved	381	326	259	273	274	1.1
Fruit, prepared or preserved	812	646	532	773	621	2.5
Fruit or vegetable juices	247	186	162	223	209	0.8
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	1 579	1 268	874	737	840	4.0
Sugar confectionery	217	188	137	183	192	0.7
Chocolate and cocoa preparations	102	97	86	127	135	0.4

Continued



## 7.5 *Value of food exports, ASEAN* <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	114	214	209	257	233	0.8
Animal oil or fat	13	6	8	8	12	0.0
Vegetable oil or fat, fixed, soft	197	211	217	212	163	0.8
Vegetable oils, fixed, not soft	5 678	6 731	6 466	5 976	4 811	22.2
Animal or vegetable oils, processed	1 353	1 078	1 366	1 163	963	4.4
<b>Other food</b>						
Coffee and coffee substitutes	868	774	830	643	527	2.7
Tea and mate	145	118	143	122	139	0.5
Spices	442	674	706	731	735	2.5
Edible products, nec	928	832	679	757	852	3.0
<b>Beverage</b>						
Beverages, nonalcoholic, nec	221	197	128	159	166	0.7
Alcoholic beverages	598	544	418	461	475	1.9
<b>Animal feed <sup>c</sup></b>	772	640	551	523	560	2.3
<b>Total</b>	28 206	28 154	26 519	25 999	24 577	100.0

<sup>a</sup> No data available for Laos, Myanmar and Viet Nam. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO; ABARE.

## 7.6 *Value of food exports, United States <sup>a</sup>*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share b %
<b>Minimally transformed</b>						
Live animals except fish	533	684	678	652	859	1.4
<b>Fish or shellfish</b>						
Fish, live or fresh	1 858	1 650	1 314	1 659	1 727	3.3
Fish, dried, salted or smoked	120	65	60	77	76	0.2
Shellfish	668	661	534	693	722	1.3
<b>Horticulture</b>						
Vegetables	1 448	1 545	1 644	1 579	1 691	3.2
Fruit and nuts	3 619	3 570	3 283	3 116	3 428	6.9
<b>Cocoa</b>	49	62	67	93	72	0.1
<b>Eggs, albumin</b>	207	207	207	155	159	0.4
<b>Grains and oilseeds</b>						
Barley	211	211	77	85	122	0.3
Maize	8 623	5 417	4 617	5 121	4 704	11.6
Oilseeds, not soft oil	41	59	110	99	92	0.2
Oilseeds, soft oil	7 797	7 891	5 315	4 929	5 671	12.8
Rice	1 029	932	1 208	944	835	2.0
Wheat or meslin	6 302	4 178	3 712	3 574	3 379	8.6
Other cereal grains, nec	799	648	594	599	644	1.3
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	2 375	2 433	2 251	2 597	3 036	5.2
Meat, fresh, chilled or frozen	4 019	3 800	3 530	3 217	3 674	7.4
Meat or offal, preserved	91	90	101	83	105	0.2
Meat or offal, preserved, nec	473	571	529	443	490	1.0
<b>Dairy</b>						
Milk products, excluding butter and cheese	333	448	441	432	490	0.9
Butter and cheese	42	26	14	5	7	0.0
Cheese and curd	105	123	117	130	138	0.2
<b>Fish or shellfish</b>	284	254	262	313	286	0.6
<b>Cereal products</b>						
Flour or meal from wheat or meslin	149	140	129	166	136	0.3
Cereal flour or meal, nec	108	118	114	118	115	0.2
Cereal etc, flour or starch	912	986	1 029	1 026	1 058	2.0
<b>Horticulture</b>						
Vegetables, prepared or preserved	1 089	1 210	1 260	1 279	1 211	2.5
Fruit, prepared or preserved	521	490	479	438	469	1.0
Fruit or vegetable juices	636	668	654	731	698	1.4
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	380	359	380	356	348	0.7
Sugar confectionery	240	300	271	267	319	0.6
Chocolate and cocoa preparations	351	373	323	344	463	0.8

*Continued*

## 7.6 *Value of food exports, United States* <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	74	73	86	91	82	0.2
Animal oil or fat	611	570	685	515	383	1.1
Vegetable oil or fat, fixed, soft	964	1 323	1 747	1 080	721	2.4
Vegetable oils, fixed, not soft	59	73	78	93	92	0.2
Animal or vegetable oils, processed	171	186	219	233	224	0.4
<b>Other food</b>						
Coffee and coffee substitutes	203	221	234	246	253	0.5
Tea and mate	34	33	29	38	45	0.1
Spices	43	46	55	55	61	0.1
Edible products, nec	2 283	2 557	2 480	2 705	2 845	5.2
<b>Beverage</b>						
Beverages, nonalcoholic, nec	244	299	302	328	312	0.6
Alcoholic beverages	1 068	1 119	1 171	1 173	1 147	2.3
<b>Animal feed <sup>c</sup></b>	4 338	4 782	4 206	3 526	3 975	8.5
<b>Total</b>	55 504	51 449	46 596	45 403	47 364	100.0

<sup>a</sup> Includes Puerto Rico and the US Virgin Islands. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 7.7 *Value of food exports, France*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	1 723	1 671	1 741	1 622	1 453	4.5
<b>Fish or shellfish</b>						
Fish, live or fresh	556	604	608	543	512	1.5
Fish, dried, salted or smoked	51	36	41	44	53	0.1
Shellfish	203	244	254	254	247	0.7
<b>Horticulture</b>						
Vegetables	1 225	1 104	1 287	1 302	1 073	3.3
Fruit and nuts	1 487	1 461	1 391	1 274	1 211	3.7
<b>Cocoa</b>	183	181	288	283	245	0.6
<b>Eggs, albumin</b>	151	130	141	153	149	0.4
<b>Grains and oilseeds</b>						
Barley	631	565	585	698	587	1.7
Maize	1 617	1 393	1 408	1 395	1 225	3.8
Oilseeds, not soft oil	17	15	18	14	13	0.0
Oilseeds, soft oil	726	907	947	642	558	2.1
Rice	70	59	47	57	44	0.2
Wheat or meslin	2 883	2 365	1 975	2 256	2 102	6.3
Other cereal grains, nec	77	63	65	57	46	0.2
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	1 117	1 082	1 040	1 042	772	2.8
Meat, fresh, chilled or frozen	2 548	2 493	2 217	1 988	2 053	6.2
Meat or offal, preserved	116	115	101	98	95	0.3
Meat or offal, preserved, nec	537	529	514	536	501	1.4
<b>Dairy</b>						
Milk products, excluding butter and cheese	1 915	1 945	1 869	1 868	1 800	5.1
Butter and cheese	250	229	205	190	180	0.6
Cheese and curd	2 238	2 003	2 015	1 952	1 823	5.5
<b>Fish or shellfish</b>	171	205	169	210	263	0.6
<b>Cereal products</b>						
Flour or meal from wheat or meslin	533	421	304	230	221	0.9
Cereal flour or meal, nec	55	51	49	44	41	0.1
Cereal etc, flour or starch	1 478	1 440	1 465	1 397	1 278	3.9
<b>Horticulture</b>						
Vegetables, prepared or preserved	707	663	668	630	582	1.8
Fruit, prepared or preserved	257	249	268	267	249	0.7
Fruit or vegetable juices	96	115	133	164	157	0.4
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	1 913	1 511	1 470	1 303	1 272	4.1
Sugar confectionery	203	190	203	186	162	0.5
Chocolate and cocoa preparations	1 028	825	782	736	632	2.2

*Continued*

## 7.7 *Value of food exports, France (continued)*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Animal and vegetable oil</b>						
Margarine and shortening	41	39	42	36	30	0.1
Animal oil or fat	104	107	113	86	84	0.3
Vegetable oil or fat, fixed, soft	443	451	473	339	287	1.1
Vegetable oils, fixed, not soft	36	36	28	27	23	0.1
Animal or vegetable oils, processed	90	66	60	52	52	0.2
<b>Other food</b>						
Coffee and coffee substitutes	448	289	298	240	197	0.8
Tea and mate	40	29	36	33	31	0.1
Spices	36	35	41	42	43	0.1
Edible products, nec	2 051	2 255	1 817	1 229	1 148	4.6
<b>Beverage</b>						
Beverages, nonalcoholic, nec	759	784	822	844	858	2.2
Alcoholic beverages	7 328	7 493	8 011	8 169	7 246	20.9
<b>Animal feed b</b>	1 365	1 312	1 354	1 301	1 189	3.6
<b>Total</b>	<b>39 501</b>	<b>37 758</b>	<b>37 365</b>	<b>35 836</b>	<b>32 786</b>	<b>100.0</b>

a Average, 1996–2000. b Excludes unmilled cereal. p Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 7.8 *Value of food exports, Netherlands*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	1 066	397	359	502	529	2.1
<b>Fish or shellfish</b>						
Fish, live or fresh	770	697	687	805	714	2.7
Fish, dried, salted or smoked	61	66	59	72	68	0.2
Shellfish	232	203	161	221	273	0.8
<b>Horticulture</b>						
Vegetables	3 269	2 741	2 825	2 872	2 709	10.8
Fruit and nuts	1 276	1 089	1 117	1 198	1 049	4.3
<b>Cocoa</b>	990	1 003	971	939	757	3.5
<b>Eggs, albumin</b>	557	461	403	412	422	1.7
<b>Grains and oilseeds</b>						
Barley	16	43	22	23	26	0.1
Maize	25	23	28	34	32	0.1
Oilseeds, not soft oil	29	31	31	23	23	0.1
Oilseeds, soft oil	213	304	422	296	282	1.1
Rice	102	107	105	87	60	0.3
Wheat or meslin	77	66	47	37	26	0.2
Other cereal grains, nec	41	18	16	17	13	0.1
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	1 325	1 358	1 346	1 399	1 179	4.9
Meat, fresh, chilled or frozen	3 063	2 517	2 312	2 397	2 404	9.5
Meat or offal, preserved	445	373	288	359	372	1.4
Meat or offal, preserved, nec	471	398	344	364	338	1.4
<b>Dairy</b>						
Milk products, excluding butter and cheese	1 501	1 248	1 310	1 280	1 275	4.9
Butter and cheese	565	492	540	468	333	1.8
Cheese and curd	2 288	1 747	1 893	1 662	1 510	6.8
<b>Fish or shellfish</b>	333	268	315	329	288	1.1
<b>Cereal products</b>						
Flour or meal from wheat or meslin	129	125	96	82	91	0.4
Cereal flour or meal, nec	9	14	12	6	3	0.0
Cereal etc, flour or starch	779	675	606	720	629	2.5
<b>Horticulture</b>						
Vegetables, prepared or preserved	1 378	1 247	1 243	1 409	1 170	4.8
Fruit, prepared or preserved	323	250	242	227	198	0.9
Fruit or vegetable juices	556	385	428	558	518	1.8
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	285	366	365	109	129	0.9
Sugar confectionery	294	239	195	157	136	0.8
Chocolate and cocoa preparations	655	572	511	596	591	2.2

*Continued*

## 7.8 *Value of food exports, Netherlands* (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>a</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	248	227	218	206	148	0.8
Animal oil or fat	87	88	82	57	59	0.3
Vegetable oil or fat, fixed, soft	645	634	755	643	418	2.3
Vegetable oils, fixed, not soft	327	372	439	428	282	1.4
Animal or vegetable oils, processed	458	416	421	386	318	1.5
<b>Other food</b>						
Coffee and coffee substitutes	158	201	120	122	120	0.5
Tea and mate	78	32	26	18	22	0.1
Spices	75	96	114	129	116	0.4
Edible products, nec	1 424	1 376	1 318	1 349	1 380	5.1
<b>Beverage</b>						
Beverages, nonalcoholic, nec	374	350	289	348	351	1.3
Alcoholic beverages	1 489	1 246	922	1 381	1 318	4.7
<b>Animal feed <sup>b</sup></b>	2 229	2 080	1 803	1 670	1 670	7.1
<b>Total</b>	30 713	26 640	25 803	26 398	24 350	100.0

<sup>a</sup> Average, 1996–2000. <sup>b</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 7.9 *Value of food exports, Germany*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	630	629	736	618	516	2.6
<b>Fish or shellfish</b>						
Fish, live or fresh	461	419	484	453	428	1.9
Fish, dried, salted or smoked	69	55	120	67	77	0.3
Shellfish	63	58	69	74	72	0.3
<b>Horticulture</b>						
Vegetables	434	350	405	459	365	1.7
Fruit and nuts	423	430	464	428	312	1.7
<b>Cocoa</b>	209	181	147	97	62	0.6
<b>Eggs, albumin</b>	126	100	110	103	99	0.5
<b>Grains and oilseeds</b>						
Barley	596	251	141	292	697	1.7
Maize	99	84	95	93	87	0.4
Oilseeds, not soft oil	16	21	21	27	14	0.1
Oilseeds, soft oil	176	173	184	258	145	0.8
Rice	53	35	36	46	43	0.2
Wheat or meslin	969	778	975	760	616	3.4
Other cereal grains, nec	296	113	106	142	153	0.7
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	993	1 018	1 033	1 098	847	4.2
Meat, fresh, chilled or frozen	691	631	800	965	840	3.3
Meat or offal, preserved	103	76	58	51	55	0.3
Meat or offal, preserved, nec	397	361	380	373	359	1.6
<b>Dairy</b>						
Milk products, excluding butter and cheese	3 205	2 953	3 070	2 863	2 563	12.3
Butter and cheese	192	156	141	151	134	0.7
Cheese and curd	1 801	1 707	1 668	1 505	1 395	6.8
<b>Fish or shellfish</b>	355	323	364	363	295	1.4
<b>Cereal products</b>						
Flour or meal from wheat or meslin	176	165	160	153	135	0.7
Cereal flour or meal, nec	29	21	17	16	14	0.1
Cereal etc, flour or starch	1 455	1 445	1 452	1 402	1 354	6.0
<b>Horticulture</b>						
Vegetables, prepared or preserved	380	366	414	390	372	1.6
Fruit, prepared or preserved	425	386	463	389	328	1.7
Fruit or vegetable juices	593	450	503	550	524	2.2
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	844	797	788	738	624	3.2
Sugar confectionery	399	369	385	359	317	1.5
Chocolate and cocoa preparations	1 583	1 306	1 290	1 079	933	5.2

*Continued*



## 7.9 *Value of food exports, Germany (continued)*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>a</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	160	299	292	119	72	0.8
Animal oil or fat	131	119	139	115	93	0.5
Vegetable oil or fat, fixed, soft	646	737	903	754	501	3.0
Vegetable oils, fixed, not soft	106	93	109	108	84	0.4
Animal or vegetable oils, processed	406	359	425	399	329	1.6
<b>Other food</b>						
Coffee and coffee substitutes	945	1 057	1 068	844	876	4.0
Tea and mate	80	84	91	82	80	0.4
Spices	70	81	86	81	71	0.3
Edible products, nec	1 448	1 298	1 508	1 544	1 473	6.1
<b>Beverage</b>						
Beverages, nonalcoholic, nec	277	276	283	346	292	1.2
Alcoholic beverages	1 694	1 445	1 421	1 483	1 220	6.1
<b>Animal feed <sup>b</sup></b>	1 525	1 567	1 598	1 294	1 210	6.0
<b>Total</b>	25 729	23 623	25 002	23 529	21 075	100.0

<sup>a</sup> Average, 1996–2000. <sup>b</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 7.10 *Value of food exports, Belgium–Luxembourg*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	517	421	387	448	412	2.5
<b>Fish or shellfish</b>						
Fish, live or fresh	105	195	201	187	192	1.0
Fish, dried, salted or smoked	13	11	9	13	14	0.1
Shellfish	124	168	160	179	167	0.9
<b>Horticulture</b>						
Vegetables	1 150	1 081	1 261	1 252	1 094	6.8
Fruit and nuts	512	1 643	1 773	1 751	1 483	8.3
<b>Cocoa</b>	16	81	116	58	80	0.4
<b>Eggs, albumin</b>	172	164	139	107	111	0.8
<b>Grains and oilseeds</b>						
Barley	77	82	27	40	40	0.3
Maize	81	39	25	20	14	0.2
Oilseeds, not soft oil	40	61	63	40	57	0.3
Oilseeds, soft oil	24	58	59	50	45	0.3
Rice	194	140	128	123	103	0.8
Wheat or meslin	98	92	137	196	142	0.8
Other cereal grains, nec	28	12	13	13	10	0.1
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	459	431	395	346	322	2.3
Meat, fresh, chilled or frozen	1 928	1 806	1 613	1 308	1 483	9.4
Meat or offal, preserved	126	117	106	92	92	0.6
Meat or offal, preserved, nec	628	666	620	448	425	3.2
<b>Dairy</b>						
Milk products, excluding butter and cheese	1 382	1 192	1 287	1 247	1 232	7.4
Butter and cheese	372	365	412	335	320	2.1
Cheese and curd	462	403	419	428	394	2.4
<b>Fish or shellfish</b>	85	93	103	118	99	0.6
<b>Cereal products</b>						
Flour or meal from wheat or meslin	254	240	186	206	170	1.2
Cereal flour or meal, nec	13	9	8	9	9	0.1
Cereal etc, flour or starch	1 103	1 152	1 202	1 233	1 129	6.7
<b>Horticulture</b>						
Vegetables, prepared or preserved	572	484	543	665	564	3.3
Fruit, prepared or preserved	200	211	220	230	214	1.2
Fruit or vegetable juices	276	401	528	588	491	2.6
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	456	521	551	386	494	2.8
Sugar confectionery	257	228	237	248	236	1.4
Chocolate and cocoa preparations	1 081	958	959	1 031	1 008	5.8

*Continued*

## 7.10 *Value of food exports, Belgium–Luxembourg* (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>a</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	258	233	226	190	156	1.2
Animal oil or fat	82	90	64	38	37	0.4
Vegetable oil or fat, fixed, soft	464	528	480	481	355	2.7
Vegetable oils, fixed, not soft	83	95	97	117	81	0.5
Animal or vegetable oils, processed	67	75	136	128	187	0.7
<b>Other food</b>						
Coffee and coffee substitutes	318	490	470	382	343	2.3
Tea and mate	31	36	47	45	46	0.2
Spices	11	17	21	22	19	0.1
Edible products, nec	698	679	691	698	690	4.0
<b>Beverage</b>						
Beverages, nonalcoholic, nec	367	362	300	432	425	2.2
Alcoholic beverages	561	521	532	648	635	3.4
<b>Animal feed <sup>b</sup></b>	913	1 057	932	946	866	5.5
<b>Total</b>	16 661	17 707	17 886	17 523	16 483	100.0

<sup>a</sup> Average, 1996–2000. <sup>b</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.1 *Value of world trade in processed food, by major importing countries <sup>a</sup>*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share <sup>b</sup> %
<b>Meat</b>						
Australia	43	52	37	64	99	0.1
Germany	5 852	5 016	4 778	4 253	3 589	10.9
Italy	3 633	3 447	3 512	3 208	3 030	7.8
Japan	9 373	7 584	6 759	7 813	8 551	18.6
United Kingdom	3 937	3 678	3 354	3 474	3 590	8.4
Other	22 461	23 689	23 250	23 329	24 273	54.2
Total	45 299	43 467	41 689	42 141	43 131	100.0
<b>Dairy</b>						
Australia	154	141	148	173	166	0.6
Belgium-Luxembourg	2 265	1 975	2 129	2 064	1 972	8.0
Germany	3 627	3 376	3 328	3 351	2 551	12.5
Italy	2 993	2 731	2 759	2 657	2 370	10.4
Netherlands	2 280	1 969	1 943	1 982	1 846	7.7
Other	15 884	15 467	15 976	15 840	15 577	60.7
Total	27 204	25 660	26 284	26 068	24 482	100.0
<b>Seafood</b>						
Australia	175	160	165	173	172	1.8
France	774	698	793	614	609	7.5
Japan	2 419	2 382	1 904	2 105	2 499	24.4
United Kingdom	851	838	898	804	714	8.9
United States	1 074	1 241	1 431	1 690	1 821	15.6
Other	3 992	3 840	3 977	3 899	3 657	41.8
Total	9 285	9 158	9 168	9 285	9 471	100.0
<b>Horticulture</b>						
Australia	255	221	215	251	249	1.0
France	2 001	1 835	1 980	2 039	1 904	8.6
Germany	3 545	3 100	3 177	3 198	2 704	13.9
Japan	2 549	2 316	2 214	2 571	2 558	10.8
United States	2 739	2 819	2 769	3 201	3 201	13.0
Other	11 946	11 536	12 145	12 581	11 619	52.7
Total	23 035	21 828	22 500	23 840	22 235	100.0
<b>Beverages <sup>c</sup></b>						
Australia	267	297	272	320	377	1.0
Germany	3 123	3 000	3 307	3 589	2 955	9.9
Japan	1 972	1 902	2 420	2 069	1 995	6.4
United Kingdom	3 482	3 913	4 324	4 478	4 076	12.6
United States	5 647	6 376	6 896	7 816	8 567	21.9
Other	15 570	15 767	15 349	15 817	15 244	48.2
Total	30 061	31 255	32 569	34 090	33 213	100.0
<b>Sugar and confectionery</b>						
Australia	148	163	157	154	157	0.7
France	1 671	1 527	1 524	1 484	1 377	6.5
Germany	1 866	1 778	1 836	1 723	1 429	7.4
United Kingdom	1 951	1 857	1 823	1 795	1 651	7.8
United States	2 464	2 562	2 385	2 332	2 378	10.4
Other	17 735	16 386	15 922	15 046	13 402	67.3
Total	25 835	24 273	23 646	22 535	20 394	100.0

*Continued*

## 8.1 Value of world trade in processed foods, by major importing countries <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Australia	218	204	173	189	181	0.8
Germany	1 404	1 378	1 460	1 281	1 122	5.6
Italy	1 802	1 849	1 492	1 524	1 240	6.6
United Kingdom	1 173	1 128	1 042	998	889	4.4
United States	1 660	1 650	1 603	1 500	1 508	6.7
Other	18 022	18 872	21 636	18 710	13 119	75.9
Total	24 279	25 082	27 406	24 202	18 058	100.0
<b>Animal feed <sup>d</sup></b>						
Australia	82	99	98	93	97	0.4
China	1 298	1 791	1 405	619	908	5.4
France	1 700	1 714	1 524	1 266	1 462	6.8
Germany	1 969	1 841	1 831	1 422	1 479	7.6
Japan	2 287	2 374	2 046	1 944	2 036	9.5
Other	17 330	16 883	15 319	14 361	14 735	70.2
Total	24 666	24 701	22 223	19 705	20 716	100.0
<b>Cereal products</b>						
Australia	107	122	121	138	163	0.9
France	1 445	1 344	1 371	1 373	1 277	9.2
Germany	1 449	1 273	1 436	1 359	1 060	8.9
United Kingdom	881	988	1 055	1 057	1 007	6.7
United States	1 288	1 407	1 541	1 710	1 855	10.5
Other	10 325	9 629	9 279	9 173	8 786	63.8
Total	15 495	14 763	14 803	14 810	14 150	100.0
<b>Other processed food</b>						
Australia	634	676	671	670	713	1.8
France	2 112	2 232	2 247	1 997	1 798	5.7
Germany	4 258	4 554	4 458	3 806	3 117	11.0
Japan	2 632	2 775	2 549	2 450	2 451	7.0
United States	4 253	5 493	5 271	4 964	4 871	13.6
Other	21 395	23 151	23 462	22 202	21 133	60.8
Total	35 283	38 881	38 658	36 091	34 083	100.0
<b>All processed food</b>						
Australia	2 083	2 135	2 057	2 226	2 374	0.9
Germany	27 692	25 851	26 185	24 531	20 489	9.8
Japan	24 696	22 657	20 942	21 772	22 884	8.9
United Kingdom	19 478	19 727	19 908	19 645	18 287	7.6
United States	23 044	25 849	26 544	28 322	29 911	10.5
Other	163 448	162 849	163 312	156 270	145 989	62.3
Total	260 441	259 068	258 947	252 766	239 934	100.0

<sup>a</sup> Based on over 100 reporting countries representing more than 90 per cent of world trade. <sup>b</sup> Average, 1996-2000. <sup>c</sup> Alcoholic and nonalcoholic. <sup>d</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.2 *World trade in food, by level of transformation <sup>a</sup>*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b><i>Minimally transformed</i></b>						
<b>Live animals except fish</b>	9 534	8 447	8 642	8 683	8 605	2.1
<b>Fish or shellfish</b>						
Fish, live or fresh	23 483	23 233	23 007	24 701	24 659	5.7
Fish, dried, salted or smoked	2 828	2 546	2 597	2 694	2 684	0.6
Shellfish	17 315	17 054	16 554	17 301	18 947	4.2
<b>Horticulture</b>						
Vegetables	21 775	20 441	21 872	21 419	19 942	5.0
Fruit and nuts	32 456	32 025	31 798	32 034	29 621	7.5
<b>Cocoa</b>	6 110	5 743	6 391	5 960	4 556	1.4
<b>Eggs, albumin</b>	1 639	1 584	1 483	1 336	1 296	0.4
<b>Grains and oilseeds</b>						
Barley	3 579	2 449	2 188	2 405	2 840	0.6
Maize	12 199	10 102	9 320	8 916	8 644	2.3
Oilseeds, not soft oil	856	945	917	749	665	0.2
Oilseeds, soft oil	14 963	15 925	14 572	13 458	14 691	3.5
Rice	7 037	5 982	7 841	7 093	5 289	1.6
Wheat or meslin	19 473	17 762	15 051	14 386	12 925	3.8
Other cereal grains, nec	2 446	1 703	1 511	1 498	1 625	0.4
<b><i>Substantially transformed</i></b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	12 882	13 293	13 228	13 923	13 685	3.2
Meat, fresh, chilled or frozen	25 210	23 231	21 699	21 489	22 560	5.4
Meat or offal, preserved	1 888	1 748	1 563	1 546	1 718	0.4
Meat or offal, preserved, nec	5 319	5 195	5 200	5 184	5 168	1.2
<b>Dairy</b>						
Milk products, excluding butter and cheese	13 323	12 649	13 016	13 081	12 741	3.1
Butter and cheese	3 193	3 225	3 216	2 850	2 565	0.7
Cheese and curd	10 688	9 785	10 052	10 136	9 176	2.4
<b>Fish or shellfish</b>	9 285	9 158	9 168	9 285	9 471	2.2
<b>Cereal products</b>						
Flour or meal from wheat or meslin	1 701	1 546	1 179	983	939	0.3
Cereal flour or meal, nec	420	419	400	399	341	0.1
Cereal etc, flour or starch	13 375	12 798	13 224	13 428	12 870	3.1
<b>Horticulture</b>						
Vegetables, prepared or preserved	9 825	9 481	9 861	10 436	9 562	2.3
Fruit, prepared or preserved	6 399	6 356	6 384	6 540	6 179	1.5
Fruit or vegetable juices	6 811	5 991	6 255	6 863	6 494	1.5
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	15 270	13 850	13 265	12 024	10 128	3.1
Sugar confectionery	3 694	3 715	3 646	3 822	3 832	0.9
Chocolate and cocoa preparations	6 871	6 708	6 735	6 689	6 435	1.6

*Continued*

## 8.2 *World trade in food, by level of transformation* <sup>a</sup> (continued)

	1996	1997	1998	1999	2000 <sup>p</sup>	Share <sup>b</sup>
	US\$m	US\$m	US\$m	US\$m	US\$m	%
<b>Animal and vegetable oil</b>						
Margarine and shortening	1 055	1 196	1 258	1 242	1 204	0.3
Animal oil or fat	2 136	2 048	2 046	1 779	1 571	0.5
Vegetable oil or fat, fixed, soft	10 580	11 461	12 374	10 322	7 251	2.5
Vegetable oils, fixed, not soft	7 570	7 596	8 696	7 808	5 353	1.8
Animal or vegetable oils, processed	2 937	2 781	3 032	3 052	2 680	0.7
<b>Other food</b>						
Coffee and coffee substitutes	14 327	17 538	16 379	13 287	12 144	3.5
Tea and mate	2 440	2 582	2 938	2 736	2 598	0.6
Spices	2 020	2 288	2 403	2 591	2 533	0.6
Edible products, nec	16 496	16 473	16 938	17 478	16 808	4.0
<b>Beverage</b>						
Beverages, nonalcoholic, nec	3 802	3 954	4 158	4 696	4 737	1.0
Alcoholic beverages	26 260	27 302	28 411	29 394	28 477	6.7
<b>Animal feed <sup>c</sup></b>	24 666	24 701	22 223	19 705	20 716	5.3
<b>Total</b>	436 135	425 007	422 690	415 399	396 924	100.0

<sup>a</sup> Based on over 100 reporting countries representing more than 90 per cent of world trade. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.

Source: International Trade Centre, UNCTAD/WTO; ABARE.

## 8.3 Value of food imports, European Union

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	4 774	4 036	4 164	4 266	4 063	2.3
<b>Fish or shellfish</b>						
Fish, live or fresh	8 292	8 020	9 037	8 872	8 414	4.6
Fish, dried, salted or smoked	1 401	1 257	1 439	1 500	1 322	0.7
Shellfish	4 619	4 661	5 221	5 087	5 086	2.6
<b>Horticulture</b>						
Vegetables	12 235	10 852	11 549	11 321	10 160	6.0
Fruit and nuts	18 119	17 548	17 430	16 967	14 762	9.1
<b>Cocoa</b>	3 683	3 133	3 517	3 386	2 391	1.7
<b>Eggs, albumin</b>	981	914	820	747	736	0.4
<b>Grains and oilseeds</b>						
Barley	1 266	841	669	646	571	0.4
Maize	2 535	2 119	2 014	1 917	1 691	1.1
Oilseeds, not soft oil	413	457	471	368	322	0.2
Oilseeds, soft oil	7 102	6 672	6 506	5 478	5 023	3.3
Rice	1 473	1 273	1 182	1 124	984	0.6
Wheat or meslin	4 096	3 822	3 697	3 379	2 998	1.9
Other cereal grains, nec	581	307	282	253	224	0.2
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	5 559	5 306	5 637	5 861	5 036	2.9
Meat, fresh, chilled or frozen	13 026	11 910	10 854	9 996	9 778	5.9
Meat or offal, preserved	1 626	1 383	1 218	1 253	1 387	0.7
Meat or offal, preserved, nec	2 866	2 732	2 836	2 819	2 712	1.5
<b>Dairy</b>						
Milk products, excluding butter and cheese	7 410	6 852	7 408	7 418	7 047	3.9
Butter and cheese	2 298	2 367	2 337	2 107	1 850	1.2
Cheese and curd	7 934	7 177	7 245	7 319	6 317	3.8
<b>Fish or shellfish</b>	4 014	3 789	4 143	3 839	3 501	2.1
<b>Cereal products</b>						
Flour or meal from wheat or meslin	338	306	320	324	286	0.2
Cereal flour or meal, nec	123	115	112	110	89	0.1
Cereal etc, flour or starch	6 684	6 439	6 854	7 040	6 315	3.6
<b>Horticulture</b>						
Vegetables, prepared or preserved	5 295	4 719	4 997	5 273	4 422	2.6
Fruit, prepared or preserved	3 423	3 360	3 564	3 401	3 058	1.8
Fruit or vegetable juices	3 746	3 255	3 645	4 054	3 678	2.0
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	4 832	4 396	4 394	4 191	3 417	2.3
Sugar confectionery	1 638	1 578	1 541	1 642	1 531	0.8
Chocolate and cocoa preparations	4 080	3 914	4 054	4 047	3 643	2.1

Continued



## 8.3 Value of food imports, *European Union* (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Animal and vegetable oil</b>						
Margarine and shortening	537	532	559	551	485	0.3
Animal oil or fat	886	843	727	577	488	0.4
Vegetable oil or fat, fixed, soft	3 998	3 907	3 710	3 692	2 704	1.9
Vegetable oils, fixed, not soft	2 561	2 343	2 851	2 497	2 055	1.3
Animal or vegetable oils, processed	1 563	1 417	1 541	1 420	1 252	0.8
<b>Other food</b>						
Coffee and coffee substitutes	7 484	8 889	8 167	6 360	5 532	3.9
Tea and mate	780	816	870	804	753	0.4
Spices	600	756	795	814	789	0.4
Edible products, nec	7 492	6 984	7 385	7 486	6 554	3.8
<b>Beverage</b>						
Beverages, nonalcoholic, nec	1 761	1 725	1 951	2 383	2 253	1.1
Alcoholic beverages	13 029	13 216	14 103	14 706	13 013	7.3
<b>Animal feed b</b>	12 757	11 571	10 664	9 677	9 777	5.8
<b>Total</b>	199 910	188 509	192 482	186 973	168 467	100.0

a Average, 1996–2000. b Excludes unmilled cereal. p Preliminary.  
Source: International Trade Centre, UNCTAD/WTO. ABARE.

## 8.4 Value of food imports, NAFTA

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	1 870	2 059	2 113	2 064	2 473	3.3
<b>Fish or shellfish</b>						
Fish, live or fresh	2 907	3 154	3 378	3 747	3 944	5.4
Fish, dried, salted or smoked	181	184	200	205	215	0.3
Shellfish	3 769	4 395	4 469	4 833	5 606	7.3
<b>Horticulture</b>						
Vegetables	3 252	3 378	3 985	3 883	4 122	5.9
Fruit and nuts	4 997	5 241	5 502	6 304	6 454	9.0
<b>Cocoa</b>	1 185	1 197	1 391	1 188	1 005	1.9
<b>Eggs, albumin</b>	88	100	115	88	83	0.1
<b>Grains and oilseeds</b>						
Barley	207	174	147	127	129	0.2
Maize	1 342	641	949	893	953	1.5
Oilseeds, not soft oil	120	132	118	114	101	0.2
Oilseeds, soft oil	1 671	1 918	1 666	1 561	1 701	2.7
Rice	410	489	434	454	425	0.7
Wheat or meslin	699	712	648	630	602	1.0
Other cereal grains, nec	596	607	596	642	722	1.0
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	1 830	2 312	2 622	3 039	3 572	4.2
Meat, fresh, chilled or frozen	1 310	1 528	1 521	1 607	2 145	2.6
Meat or offal, preserved	101	110	104	127	185	0.2
Meat or offal, preserved, nec	677	712	749	756	795	1.2
<b>Dairy</b>						
Milk products, excluding butter and cheese	596	623	597	627	773	1.0
Butter and cheese	64	83	145	131	121	0.2
Cheese and curd	804	783	875	977	1 005	1.4
<b>Fish or shellfish</b>	1 320	1 483	1 694	1 969	2 097	2.7
<b>Cereal products</b>						
Flour or meal from wheat or meslin	74	65	61	62	67	0.1
Cereal flour or meal, nec	75	80	74	72	67	0.1
Cereal etc, flour or starch	1 884	2 073	2 286	2 486	2 735	3.6
<b>Horticulture</b>						
Vegetables, prepared or preserved	1 255	1 400	1 585	1 759	1 794	2.5
Fruit, prepared or preserved	1 003	1 108	1 052	1 278	1 313	1.8
Fruit or vegetable juices	1 400	1 343	1 201	1 319	1 329	2.1
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	2 086	1 948	1 608	1 348	1 305	2.6
Sugar confectionery	675	759	857	977	1 070	1.4
Chocolate and cocoa preparations	771	877	943	982	1 083	1.5

Continued

## 8.4 Value of food imports, NAFTA (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>a</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	46	51	52	59	64	0.1
Animal oil or fat	269	297	284	248	225	0.4
Vegetable oil or fat, fixed, soft	1 283	1 186	1 172	1 052	1 082	1.8
Vegetable oils, fixed, not soft	700	820	758	703	660	1.2
Animal or vegetable oils, processed	216	241	276	270	296	0.4
<b>Other food</b>						
Coffee and coffee substitutes	3 363	4 605	4 186	3 543	3 303	6.0
Tea and mate	252	273	314	312	325	0.5
Spices	458	538	595	638	671	0.9
Edible products, nec	1 623	1 878	2 163	2 524	2 738	3.5
<b>Beverage</b>						
Beverages, nonalcoholic, nec	596	757	836	913	993	1.3
Alcoholic beverages	5 928	6 660	7 213	8 203	8 965	11.7
<b>Animal feed <sup>b</sup></b>	1 539	1 623	1 588	1 514	1 651	2.5
<b>Total</b>	55 488	60 601	63 120	66 230	70 967	100.0

<sup>a</sup> Average, 1996–2000. <sup>b</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.5 Value of food imports, APEC <sup>a</sup>

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share b %
<b>Minimally transformed</b>						
<b>Live animals except fish</b>	3 431	3 608	3 335	3 284	3 646	2.1
<b>Fish or shellfish</b>						
Fish, live or fresh	13 004	13 091	11 450	13 695	14 148	7.9
Fish, dried, salted or smoked	1 094	972	827	889	1 108	0.6
Shellfish	12 411	12 119	11 028	11 898	13 533	7.4
<b>Horticulture</b>						
Vegetables	6 732	6 728	7 217	7 221	7 387	4.3
Fruit and nuts	10 247	10 636	10 104	10 901	11 492	6.5
<b>Cocoa</b>	1 823	1 883	2 091	1 809	1 582	1.1
<b>Eggs, albumin</b>	425	425	383	361	342	0.2
<b>Grains and oilseeds</b>						
Barley	983	924	656	709	778	0.5
Maize	7 001	5 321	4 691	4 442	4 656	3.2
Oilseeds, not soft oil	306	308	275	258	245	0.2
Oilseeds, soft oil	6 083	7 162	6 358	6 556	8 003	4.1
Rice	2 980	2 242	3 247	3 261	1 979	1.7
Wheat or meslin	7 717	5 323	4 361	4 114	4 019	3.1
Other cereal grains, nec	1 506	1 153	1 066	1 076	1 138	0.7
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	6 267	6 883	6 360	7 054	7 908	4.2
Meat, fresh, chilled or frozen	10 188	9 493	8 397	9 402	10 785	5.9
Meat or offal, preserved	181	265	247	199	250	0.1
Meat or offal, preserved, nec	2 065	2 030	1 885	1 869	2 053	1.2
<b>Dairy</b>						
Milk products, excluding butter and cheese	3 263	3 288	2 742	2 719	3 110	1.8
Butter and cheese	497	522	446	357	366	0.3
Cheese and curd	1 778	1 791	1 795	1 847	1 933	1.1
<b>Fish or shellfish</b>	4 554	4 659	4 185	4 701	5 279	2.8
<b>Cereal products</b>						
Flour or meal from wheat or meslin	486	349	270	305	315	0.2
Cereal flour or meal, nec	173	164	146	153	132	0.1
Cereal etc, flour or starch	4 056	4 194	4 055	4 070	4 430	2.5
<b>Horticulture</b>						
Vegetables, prepared or preserved	3 506	3 682	3 600	3 937	3 999	2.3
Fruit, prepared or preserved	2 341	2 391	2 141	2 499	2 519	1.4
Fruit or vegetable juices	2 429	2 179	1 929	2 121	2 141	1.3
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	6 743	5 945	5 357	4 837	4 075	3.3
Sugar confectionery	1 390	1 462	1 374	1 496	1 669	0.9
Chocolate and cocoa preparations	1 786	1 866	1 720	1 724	1 937	1.1

Continued

## 8.5 Value of food imports, APEC <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	257	369	329	322	402	0.2
Animal oil or fat	645	639	617	663	634	0.4
Vegetable oil or fat, fixed, soft	3 608	4 135	3 985	2 887	2 340	2.1
Vegetable oils, fixed, not soft	2 518	2 700	2 535	2 450	2 110	1.5
Animal or vegetable oils, processed	675	647	683	781	787	0.4
<b>Other food</b>						
Coffee and coffee substitutes	5 102	6 769	6 141	5 139	4 862	3.4
Tea and mate	870	969	1 020	985	974	0.6
Spices	1 047	1 174	1 106	1 287	1 340	0.7
Edible products, nec	5 827	6 218	5 797	6 271	6 738	3.7
<b>Beverage</b>						
Beverages, nonalcoholic, nec	1 489	1 646	1 628	1 699	1 853	1.0
Alcoholic beverages	10 750	11 532	11 773	12 138	13 031	7.2
<b>Animal feed <sup>c</sup></b>	8 307	9 143	7 440	6 410	7 368	4.7
<b>Total</b>	168 545	169 000	156 792	160 797	169 396	100.0

<sup>a</sup> No data available for Viet Nam. Not including Chinese Taipei. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary  
Source: International Trade Centre, UNCTAD/WTO; ABARE.

## 8.6 *Value of food imports, ASEAN <sup>a</sup>*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share b %
<b><i>Minimally transformed</i></b>						
<b>Live animals except fish</b>	656	643	394	352	338	2.9
<b>Fish or shellfish</b>						
Fish, live or fresh	1 051	1 169	1 008	1 009	939	6.3
Fish, dried, salted or smoked	65	65	39	46	57	0.3
Shellfish	480	477	399	424	501	2.8
<b>Horticulture</b>						
Vegetables	701	704	545	563	547	3.7
Fruit and nuts	822	781	517	559	638	4.0
<b>Cocoa</b>	139	151	193	154	176	1.0
<b>Eggs, albumin</b>	67	67	58	70	65	0.4
<b>Grains and oilseeds</b>						
Barley	6	6	2	3	3	0.0
Maize	679	653	398	398	520	3.2
Oilseeds, not soft oil	33	28	37	44	37	0.2
Oilseeds, soft oil	817	931	573	905	889	5.0
Rice	1 427	763	1 886	1 905	768	8.2
Wheat or meslin	1 947	1 627	1 247	1 163	1 207	8.7
Other cereal grains, nec	40	10	6	7	10	0.1
<b><i>Substantially transformed</i></b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	284	320	208	233	306	1.6
Meat, fresh, chilled or frozen	269	283	218	333	387	1.8
Meat or offal, preserved	8	9	7	9	10	0.1
Meat or offal, preserved, nec	88	90	68	99	81	0.5
<b>Dairy</b>						
Milk products, excluding butter and cheese	1 395	1 402	1 026	1 040	1 277	7.4
Butter and cheese	162	120	102	105	107	0.7
Cheese and curd	88	98	78	77	81	0.5
<b>Fish or shellfish</b>	163	168	102	143	170	0.9
<b>Cereal products</b>						
Flour or meal from wheat or meslin	72	59	47	126	137	0.5
Cereal flour or meal, nec	26	29	23	25	28	0.2
Cereal etc, flour or starch	499	463	342	357	368	2.5
<b>Horticulture</b>						
Vegetables, prepared or preserved	227	226	168	192	203	1.2
Fruit, prepared or preserved	143	142	83	104	104	0.7
Fruit or vegetable juices	66	71	53	59	61	0.4
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	1 246	978	898	1 058	758	6.0
Sugar confectionery	94	104	64	78	91	0.5
Chocolate and cocoa preparations	127	163	97	111	125	0.8

*Continued*

## 8.6 *Value of food imports, ASEAN* <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	30	26	25	34	35	0.2
Animal oil or fat	27	27	26	37	35	0.2
Vegetable oil or fat, fixed, soft	196	240	245	239	138	1.3
Vegetable oils, fixed, not soft	349	384	331	367	274	2.1
Animal or vegetable oils, processed	148	130	142	144	119	0.8
<b>Other food</b>						
Coffee and coffee substitutes	114	163	127	111	122	0.8
Tea and mate	40	45	37	35	41	0.2
Spices	205	261	208	327	327	1.6
Edible products, nec	962	1 012	761	808	925	5.4
<b>Beverage</b>						
Beverages, nonalcoholic, nec	127	164	101	85	104	0.7
Alcoholic beverages	979	778	494	581	613	4.2
<b>Animal feed <sup>c</sup></b>	1 848	2 009	1 248	1 201	1 559	9.5
<b>Total</b>	18 913	18 038	14 630	15 720	15 282	100.0

<sup>a</sup> No data available for Laos, Myanmar and Viet Nam. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO; ABARE.

## 8.7 *Value of food imports, United States <sup>a</sup>*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share b %
<b>Minimally transformed</b>						
Live animals except fish	1 636	1 697	1 765	1 685	1 976	3.9
<b>Fish or shellfish</b>						
Fish, live or fresh	2 511	2 766	2 949	3 268	3 461	6.7
Fish, dried, salted or smoked	133	132	140	148	151	0.3
Shellfish	3 309	3 939	4 003	4 267	4 981	9.1
<b>Horticulture</b>						
Vegetables	2 290	2 340	2 832	2 768	2 891	5.9
Fruit and nuts	3 570	3 715	3 971	4 605	4 570	9.1
<b>Cocoa</b>	1 031	1 008	1 162	998	822	2.2
<b>Eggs, albumin</b>	25	20	15	21	19	0.0
<b>Grains and oilseeds</b>						
Barley	136	133	101	84	83	0.2
Maize	125	113	168	175	174	0.3
Oilseeds, not soft oil	96	96	81	82	64	0.2
Oilseeds, soft oil	280	333	316	267	314	0.7
Rice	178	236	203	217	210	0.5
Wheat or meslin	256	376	298	290	245	0.7
Other cereal grains, nec	229	298	216	189	185	0.5
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	1 230	1 522	1 728	2 025	2 340	3.9
Meat, fresh, chilled or frozen	710	772	753	847	1 098	1.9
Meat or offal, preserved	70	72	63	81	111	0.2
Meat or offal, preserved, nec	458	453	472	474	465	1.0
<b>Dairy</b>						
Milk products, excluding butter and cheese	98	122	175	237	246	0.4
Butter and cheese	12	24	86	55	37	0.1
Cheese and curd	624	584	675	755	730	1.5
<b>Fish or shellfish</b>	1 074	1 241	1 431	1 690	1 821	3.2
<b>Cereal products</b>						
Flour or meal from wheat or meslin	49	42	45	44	50	0.1
Cereal flour or meal, nec	23	22	24	24	23	0.1
Cereal etc, flour or starch	1 216	1 343	1 473	1 641	1 782	3.3
<b>Horticulture</b>						
Vegetables, prepared or preserved	937	1 016	1 160	1 324	1 338	2.6
Fruit, prepared or preserved	791	860	796	974	956	2.0
Fruit or vegetable juices	1 011	944	814	903	906	2.0
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	1 488	1 444	1 137	960	877	2.6
Sugar confectionery	516	569	655	760	826	1.5
Chocolate and cocoa preparations	460	548	593	613	676	1.3

*Continued*



## 8.7 *Value of food imports, United States* <sup>a</sup> (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>b</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	6	9	10	15	16	0.0
Animal oil or fat	45	58	49	50	54	0.1
Vegetable oil or fat, fixed, soft	911	785	767	718	740	1.7
Vegetable oils, fixed, not soft	571	670	632	568	529	1.3
Animal or vegetable oils, processed	127	128	145	149	170	0.3
<b>Other food</b>						
Coffee and coffee substitutes	2 884	3 988	3 534	3 001	2 814	7.2
Tea and mate	178	190	233	225	232	0.5
Spices	378	440	478	523	548	1.1
Edible products, nec	813	875	1 026	1 215	1 276	2.3
<b>Beverage</b>						
Beverages, nonalcoholic, nec	482	585	622	671	747	1.4
Alcoholic beverages	5 165	5 791	6 274	7 145	7 820	14.4
<b>Animal feed <sup>b</sup></b>	718	750	696	635	682	1.6
<b>Total</b>	38 849	43 051	44 764	47 385	50 056	100.0

<sup>a</sup> Includes Puerto Rico and the US Virgin Islands. <sup>b</sup> Average, 1996–2000. <sup>c</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.8 Value of food imports, Japan

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	268	216	179	192	232	0.5
<b>Fish or shellfish</b>						
Fish, live or fresh	7 117	6 641	5 447	6 833	6 839	14.3
Fish, dried, salted or smoked	444	313	227	257	267	0.7
Shellfish	6 686	5 852	4 998	5 284	5 698	12.4
<b>Horticulture</b>						
Vegetables	1 797	1 666	1 780	1 840	1 820	3.9
Fruit and nuts	1 862	1 794	1 681	1 918	1 969	4.0
<b>Cocoa</b>	181	171	170	162	135	0.4
<b>Eggs, albumin</b>	115	114	96	108	105	0.2
<b>Grains and oilseeds</b>						
Barley	334	268	217	219	244	0.6
Maize	3 048	2 448	2 119	1 887	1 886	4.9
Oilseeds, not soft oil	44	50	42	36	29	0.1
Oilseeds, soft oil	2 585	2 715	2 343	2 035	1 963	5.0
Rice	267	331	273	315	264	0.6
Wheat or meslin	1 561	1 363	1 096	1 075	1 030	2.7
Other cereal grains, nec	579	496	416	335	315	0.9
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	2 716	2 614	2 341	2 449	2 590	5.5
Meat, fresh, chilled or frozen	5 973	4 328	3 769	4 610	5 062	10.3
Meat or offal, preserved	10	15	18	19	24	0.0
Meat or offal, preserved, nec	674	627	631	736	875	1.5
<b>Dairy</b>						
Milk products, excluding butter and cheese	301	299	236	227	217	0.6
Butter and cheese	2	2	2	2	1	0.0
Cheese and curd	515	524	559	543	548	1.2
<b>Fish or shellfish</b>	2 419	2 382	1 904	2 105	2 499	4.9
<b>Cereal products</b>						
Flour or meal from wheat or meslin	0	1	1	1	1	0.0
Cereal flour or meal, nec	2	2	2	3	4	0.0
Cereal etc, flour or starch	707	647	603	551	556	1.3
<b>Horticulture</b>						
Vegetables, prepared or preserved	1 266	1 226	1 187	1 344	1 330	2.8
Fruit, prepared or preserved	745	676	639	759	749	1.5
Fruit or vegetable juices	538	413	388	468	480	1.0
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	732	700	579	450	463	1.3
Sugar confectionery	66	67	53	60	78	0.1
Chocolate and cocoa preparations	358	318	287	299	317	0.7

Continued

## 8.8 Value of food imports, Japan (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Animal and vegetable oil</b>						
Margarine and shortening	9	10	13	13	13	0.0
Animal oil or fat	125	114	83	75	84	0.2
Vegetable oil or fat, fixed, soft	201	220	213	171	157	0.4
Vegetable oils, fixed, not soft	322	341	350	309	250	0.7
Animal or vegetable oils, processed	124	81	71	117	105	0.2
<b>Other food</b>						
Coffee and coffee substitutes	1 073	1 230	1 176	974	917	2.3
Tea and mate	217	217	198	199	227	0.5
Spices	239	237	186	198	200	0.5
Edible products, nec	1 103	1 091	990	1 079	1 107	2.3
<b>Beverage</b>						
Beverages, nonalcoholic, nec	224	176	154	198	241	0.4
Alcoholic beverages	1 748	1 725	2 266	1 871	1 754	4.1
<b>Animal feed b</b>	2 287	2 374	2 046	1 944	2 036	4.6
<b>Total</b>	<b>51 585</b>	<b>47 093</b>	<b>42 026</b>	<b>44 267</b>	<b>45 679</b>	<b>100.0</b>

a Average, 1996–2000. b Excludes unmilled cereal. p Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.9 Value of food imports, Germany

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	720	374	405	404	351	1.2
<b>Fish or shellfish</b>						
Fish, live or fresh	1 407	1 296	1 529	1 349	1 214	3.5
Fish, dried, salted or smoked	235	197	211	189	167	0.5
Shellfish	212	202	238	208	206	0.6
<b>Horticulture</b>						
Vegetables	3 878	3 257	3 427	3 253	2 704	8.5
Fruit and nuts	5 603	4 951	4 727	4 524	3 659	12.1
<b>Cocoa</b>	825	792	854	728	506	1.9
<b>Eggs, albumin</b>	473	432	369	315	265	1.0
<b>Grains and oilseeds</b>						
Barley	216	104	78	84	90	0.3
Maize	328	266	267	245	177	0.7
Oilseeds, not soft oil	131	130	143	115	105	0.3
Oilseeds, soft oil	1 541	1 576	1 625	1 459	1 266	3.9
Rice	210	165	166	158	144	0.4
Wheat or meslin	296	176	179	204	167	0.5
Other cereal grains, nec	67	40	31	31	33	0.1
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	930	709	746	764	577	1.9
Meat, fresh, chilled or frozen	4 084	3 558	3 135	2 657	2 242	8.1
Meat or offal, preserved	142	128	178	190	216	0.4
Meat or offal, preserved, nec	695	621	719	643	553	1.7
<b>Dairy</b>						
Milk products, excluding butter and cheese	620	586	711	702	647	1.7
Butter and cheese	543	579	552	494	375	1.3
Cheese and curd	2 464	2 210	2 065	2 155	1 529	5.4
<b>Fish or shellfish</b>	601	535	574	548	485	1.4
<b>Cereal products</b>						
Flour or meal from wheat or meslin	33	31	29	23	14	0.1
Cereal flour or meal, nec	16	13	14	9	9	0.0
Cereal etc, flour or starch	1 400	1 229	1 393	1 327	1 037	3.3
<b>Horticulture</b>						
Vegetables, prepared or preserved	1 494	1 191	1 274	1 328	1 036	3.3
Fruit, prepared or preserved	1 055	1 045	1 090	1 023	898	2.6
Fruit or vegetable juices	996	864	813	847	770	2.2
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	679	552	587	544	479	1.5
Sugar confectionery	344	318	319	347	304	0.8
Chocolate and cocoa preparations	842	908	930	832	646	2.2

Continued

## 8.9 Value of food imports, Germany (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Animal and vegetable oil</b>						
Margarine and shortening	64	56	56	54	42	0.1
Animal oil or fat	118	97	83	65	61	0.2
Vegetable oil or fat, fixed, soft	286	256	314	287	247	0.7
Vegetable oils, fixed, not soft	588	654	681	580	519	1.6
Animal or vegetable oils, processed	348	315	326	295	253	0.8
<b>Other food</b>						
Coffee and coffee substitutes	2 145	2 718	2 469	1 893	1 637	5.6
Tea and mate	169	136	147	139	106	0.4
Spices	145	182	191	203	180	0.5
Edible products, nec	1 798	1 518	1 651	1 572	1 194	4.0
<b>Beverage</b>						
Beverages, nonalcoholic, nec	274	242	335	463	434	0.9
Alcoholic beverages	2 849	2 759	2 972	3 126	2 521	7.4
<b>Animal feed b</b>	1 969	1 841	1 831	1 422	1 479	4.4
<b>Total</b>	<b>43 834</b>	<b>39 808</b>	<b>40 433</b>	<b>37 798</b>	<b>31 542</b>	<b>100.0</b>

a Average, 1996–2000. b Excludes unmilled cereal. p Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.10 *Value of food imports, United Kingdom*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
<b>Live animals except fish</b>	309	341	378	370	517	1.4
<b>Fish or shellfish</b>						
Fish, live or fresh	808	804	927	957	951	3.2
Fish, dried, salted or smoked	15	14	13	13	12	0.0
Shellfish	227	260	311	303	342	1.1
<b>Horticulture</b>						
Vegetables	1 837	1 893	2 020	1 978	1 881	7.0
Fruit and nuts	2 813	2 872	2 911	2 707	2 463	10.0
<b>Cocoa</b>	480	419	488	476	232	1.5
<b>Eggs, albumin</b>	61	60	48	51	65	0.2
<b>Grains and oilseeds</b>						
Barley	26	30	34	24	11	0.1
Maize	354	303	229	219	214	1.0
Oilseeds, not soft oil	45	62	43	13	11	0.1
Oilseeds, soft oil	571	571	492	313	329	1.7
Rice	311	304	284	289	228	1.0
Wheat or meslin	157	225	236	208	195	0.7
Other cereal grains, nec	14	17	11	11	11	0.0
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	471	553	427	490	489	1.8
Meat, fresh, chilled or frozen	1 640	1 516	1 522	1 540	1 569	5.7
Meat or offal, preserved	1 064	838	625	648	705	2.8
Meat or offal, preserved, nec	763	771	780	796	827	2.9
<b>Dairy</b>						
Milk products, excluding butter and cheese	413	469	489	463	463	1.7
Butter and cheese	367	352	351	367	355	1.3
Cheese and curd	983	936	978	987	905	3.5
<b>Fish or shellfish</b>	851	838	898	804	714	3.0
<b>Cereal products</b>						
Flour or meal from wheat or meslin	23	28	24	28	30	0.1
Cereal flour or meal, nec	14	13	13	19	16	0.1
Cereal etc, flour or starch	844	947	1 018	1 010	962	3.5
<b>Horticulture</b>						
Vegetables, prepared or preserved	919	904	963	969	819	3.3
Fruit, prepared or preserved	518	511	501	454	414	1.7
Fruit or vegetable juices	469	371	441	436	377	1.5
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	1 207	1 111	1 071	970	836	3.8
Sugar confectionery	177	201	211	220	231	0.8
Chocolate and cocoa preparations	567	545	542	606	584	2.1

*Continued*

## 8.10 *Value of food imports, United Kingdom (continued)*

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>a</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	71	71	67	92	85	0.3
Animal oil or fat	147	135	116	98	90	0.4
Vegetable oil or fat, fixed, soft	340	341	369	340	272	1.2
Vegetable oils, fixed, not soft	445	411	347	333	300	1.3
Animal or vegetable oils, processed	170	170	144	135	142	0.6
<b>Other food</b>						
Coffee and coffee substitutes	542	635	637	473	423	2.0
Tea and mate	328	364	374	330	320	1.3
Spices	69	94	96	88	96	0.3
Edible products, nec	1 260	1 357	1 418	1 423	1 142	4.8
<b>Beverage</b>						
Beverages, nonalcoholic, nec	218	233	307	428	432	1.2
Alcoholic beverages	3 264	3 680	4 017	4 050	3 644	13.6
<b>Animal feed <sup>b</sup></b>	1 333	1 330	1 164	1 049	1 047	4.3
<b>Total</b>	27 506	27 901	28 333	27 577	25 750	100.0

<sup>a</sup> Average, 1996–2000. <sup>b</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 8.11 Value of food imports, France

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 p US\$m	Share a %
<b>Minimally transformed</b>						
Live animals except fish	484	322	307	373	364	1.5
<b>Fish or shellfish</b>						
Fish, live or fresh	1 415	1 334	1 484	1 489	1 339	5.6
Fish, dried, salted or smoked	126	113	125	111	106	0.5
Shellfish	891	865	1 014	985	926	3.7
<b>Horticulture</b>						
Vegetables	1 545	1 354	1 451	1 432	1 368	5.7
Fruit and nuts	2 512	2 357	2 393	2 220	2 040	9.2
<b>Cocoa</b>	518	486	542	554	398	2.0
<b>Eggs, albumin</b>	115	94	83	75	85	0.4
<b>Grains and oilseeds</b>						
Barley	24	12	3	4	12	0.0
Maize	97	85	104	83	82	0.4
Oilseeds, not soft oil	22	22	21	21	24	0.1
Oilseeds, soft oil	392	338	342	282	180	1.2
Rice	269	249	240	231	220	1.0
Wheat or meslin	93	90	81	54	72	0.3
Other cereal grains, nec	17	15	15	13	13	0.1
<b>Substantially transformed</b>						
<b>Meat</b>						
Beef, fresh, chilled or frozen	982	836	920	947	833	3.6
Meat, fresh, chilled or frozen	2 152	1 947	1 760	1 637	1 641	7.3
Meat or offal, preserved	205	202	202	180	184	0.8
Meat or offal, preserved, nec	313	269	264	233	237	1.1
<b>Dairy</b>						
Milk products, excluding butter and cheese	870	830	1 015	1 005	977	3.7
Butter and cheese	432	477	482	395	399	1.7
Cheese and curd	729	636	683	681	654	2.7
<b>Fish or shellfish</b>	774	698	793	614	609	2.8
<b>Cereal products</b>						
Flour or meal from wheat or meslin	67	61	72	60	59	0.3
Cereal flour or meal, nec	19	22	21	16	14	0.1
Cereal etc, flour or starch	1 359	1 260	1 278	1 297	1 204	5.1
<b>Horticulture</b>						
Vegetables, prepared or preserved	830	726	775	815	720	3.1
Fruit, prepared or preserved	611	598	661	621	582	2.5
Fruit or vegetable juices	560	511	544	603	602	2.3
<b>Sugar and confectionery</b>						
Sugar, molasses and honey	485	423	396	434	395	1.7
Sugar confectionery	224	200	202	185	174	0.8
Chocolate and cocoa preparations	962	903	926	866	808	3.6

Continued



## 8.11 Value of food imports, *France* (continued)

	1996 US\$m	1997 US\$m	1998 US\$m	1999 US\$m	2000 <sup>p</sup> US\$m	Share <sup>a</sup> %
<b>Animal and vegetable oil</b>						
Margarine and shortening	156	140	128	117	99	0.5
Animal oil or fat	86	86	82	54	47	0.3
Vegetable oil or fat, fixed, soft	587	564	540	485	414	2.1
Vegetable oils, fixed, not soft	211	220	253	228	210	0.9
Animal or vegetable oils, processed	211	185	218	169	163	0.8
<b>Other food</b>						
Coffee and coffee substitutes	1 110	1 250	1 149	888	764	4.1
Tea and mate	69	75	85	88	84	0.3
Spices	76	87	98	99	103	0.4
Edible products, nec	857	820	915	923	847	3.5
<b>Beverage</b>						
Beverages, nonalcoholic, nec	279	273	307	308	302	1.2
Alcoholic beverages	1 373	1 280	1 421	1 384	1 206	5.3
<b>Animal feed <sup>b</sup></b>	1 700	1 714	1 524	1 266	1 462	6.1
<b>Total</b>	26 809	25 029	25 918	24 523	23 020	100.0

<sup>a</sup> Average, 1996–2000. <sup>b</sup> Excludes unmilled cereal. <sup>p</sup> Preliminary.  
Source: International Trade Centre, UNCTAD/WTO.

## 9.1 *Supply and consumption of alcoholic beverages, by selected country <sup>a</sup>*

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	24 634	374	527	24 479	23 296	31
Egypt	97	0	3	95	44	1
Nigeria	8 365	6	1	8 371	7 631	71
South Africa	3 083	62	403	2 743	2 698	64
<b>Asia <sup>c</sup></b>	54 014	1 932	847	55 089	52 062	15
China	32 872	496	307	33 061	32 966	26
India	3 546	14	37	3 522	1 468	2
Indonesia	228	2	21	209	147	1
Japan	8 064	892	81	8 875	8 485	67
Korea, Rep. of	2 976	189	95	3 070	2 896	63
Malaysia	115	13	39	89	86	4
Pakistan	49	1	6	44	34	0
Philippines	1 187	21	13	1 196	1 124	15
Thailand	2 115	28	79	2 064	2 040	33
Viet Nam	565	4	4	565	565	7
<b>Europe</b>	70 447	9 384	12 280	67 415	61 963	85
Austria	1 293	134	88	1 312	1 222	151
Belgium–Luxembourg	1 584	578	644	1 512	1 429	134
Czech Republic	1 976	97	209	1 864	1 803	175
Denmark	925	232	256	854	814	154
France	9 025	1 256	2 482	7 965	6 169	105
Germany	12 206	1 766	1 261	12 676	12 452	152
Greece	845	105	92	788	639	60
Italy	7 024	547	1 879	5 498	4 580	80
Malta	22	6	1	26	23	59
Netherlands	2 422	503	1 023	1 896	1 824	116
Norway	259	66	5	320	297	67
Poland	2 845	102	21	2 926	2 784	72
Portugal	1 361	222	280	1 394	1 283	129
Russian Federation	4 966	348	120	5 194	5 054	34
Slovenia	284	27	46	265	247	124
Spain	5 987	472	1 105	5 148	4 234	106
Sweden	586	217	69	737	685	77
Turkey	861	10	44	827	782	12
United Kingdom	6 745	1 635	1 312	7 154	7 041	119
<b>Middle East</b>						
Iran	0	0	1	- 1	0	0
Iraq	76	3	0	79	79	4
Kuwait	0	0	0	0	0	0
Saudi Arabia	0	0	0	16	15	1
United Arab Emirates	0	42	0	42	0	0

*continued*

## 9.1 *Supply and consumption of alcoholic beverages, by selected country* <sup>a</sup> (continued)

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	6 390	258	1 104	5 544	5 302	41
<b>North America</b>	38 974	3 860	2 801	39 837	35 867	90
Canada	3 020	424	462	2 983	2 947	98
Mexico	5 760	162	977	4 944	4 665	49
United States	30 194	3 274	1 361	31 910	28 255	102
<b>South America</b>	30 444	556	913	30 148	15 843	47
Argentina	2 878	56	204	2 737	2 577	71
Brazil	21 847	235	254	21 830	7 730	47
Chile	846	32	317	614	610	41
Uruguay	223	20	13	230	226	69
<b>Oceania</b>	3 019	171	465	2 759	2 640	91
Australia	2 527	100	426	2 231	2 163	116
New Zealand	394	51	36	412	375	101
Papua New Guinea	54	1	2	54	50	11
<b>World</b>	223 016	16 446	18 073	221 141	193 114	33

<sup>a</sup> Annual average, 1997–99. Wine, beer from barley, and other fermented and alcoholic beverages. Includes nonfood alcohol.

<sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.2 *Supply and consumption of cereals, by selected country <sup>a</sup>*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	107 105	39 881	2 969	146 355	109 151	145
Egypt	16 723	10 085	318	24 311	16 341	249
Nigeria	21 009	2 110	47	23 073	16 347	152
South Africa	11 117	1 591	1 486	12 577	7 529	179
<b>Asia <sup>c</sup></b>	833 430	116 157	33 727	912 060	631 832	177
China	386 157	11 439	8 732	394 781	248 664	197
India	185 763	1 728	3 363	175 533	156 470	160
Indonesia	42 608	6 873	283	48 582	41 641	202
Japan	8 605	28 658	556	36 599	14 764	117
Korea, Rep. of	5 132	11 673	152	17 176	7 602	165
Malaysia	1 408	4 683	343	5 740	2 993	140
Pakistan	24 332	2 763	1 849	24 500	21 241	159
Philippines	11 274	4 076	12	14 934	9 744	134
Thailand	19 974	1 116	6 674	14 061	7 028	115
Viet Nam	21 251	793	4 031	17 703	13 839	182
<b>Europe</b>	400 161	60 536	82 842	375 994	95 680	131
Austria	4 864	603	1 008	4 722	873	108
Belgium-Luxembourg	2 476	6 383	4 134	4 770	1 142	107
Czech Republic	6 869	468	673	6 662	1 305	127
Denmark	9 218	860	2 366	7 784	596	113
France	65 599	2 531	32 970	32 899	6 660	113
Germany	44 840	4 224	10 056	35 634	7 742	94
Greece	4 490	1 387	564	4 990	1 582	150
Italy	20 067	8 649	4 515	23 352	9 173	160
Malta	11	195	3	203	61	158
Netherlands	1 402	6 680	2 272	5 986	1 158	74
Norway	1 333	601	15	1 902	544	123
Poland	26 103	1 501	310	28 052	5 850	151
Portugal	1 570	3 072	158	4 393	1 272	127
Russian Federation	62 407	5 266	1 735	66 458	22 159	151
Slovenia	523	625	79	1 060	268	135
Spain	19 681	6 915	2 006	25 709	3 986	100
Sweden	5 512	386	1 615	4 589	877	99
Turkey	29 726	3 273	2 729	30 204	14 228	220
United Kingdom	22 816	3 967	6 356	21 498	5 904	99
<b>Middle East</b>						
Iran	15 502	7 325	137	22 422	13 023	191
Iraq	2 025	3 169	0	5 061	3 592	165
Kuwait	2	659	22	547	235	132
Saudi Arabia	2 331	6 441	27	10 041	3 271	173
United Arab Emirates	0	1 545	208	1 109	294	117

*Continued*

## 9.2 *Supply and consumption of cereals, by selected country* <sup>a</sup> (continued)

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	31 905	14 266	880	45 446	21 152	162
<b>North America</b>	417 459	20 592	107 618	316 569	51 727	130
Canada	51 444	2 213	22 870	31 520	3 200	106
Mexico	28 390	11 342	686	39 076	16 666	174
United States	337 625	7 037	84 062	245 973	31 861	115
<b>South America</b>	92 396	21 511	25 081	91 035	37 061	110
Argentina	35 597	162	22 426	14 656	4 613	128
Brazil	41 279	9 503	203	51 067	17 692	107
Chile	2 753	1 661	237	4 141	2 027	137
Uruguay	1 732	128	1 112	837	403	122
<b>Oceania</b>	33 411	1 109	22 866	11 410	2 571	89
Australia	32 478	133	22 794	9 716	1 659	89
New Zealand	908	316	64	1 038	333	90
Papua New Guinea	10	364	0	362	351	76
<b>World</b>	1 888 677	266 925	275 392	1 864 972	935 574	159

<sup>a</sup> Annual average, 1997–99. Includes wheat, rice (milled equivalent), barley (excluding beer), maize, rye, oats, millet, sorghum and other cereals. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.3 *Supply and consumption of starchy roots, by selected country <sup>a</sup>*

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	154 027	688	478	154 431	99 220	132
Egypt	2 154	71	252	2 007	1 511	23
Nigeria	62 213	2	0	62 215	25 248	234
South Africa	1 660	110	65	1 705	1 239	29
<b>Asia <sup>c</sup></b>	279 542	8 875	16 480	270 905	154 357	43
China	179 308	4 162	578	182 893	86 346	68
India	28 887	2	53	28 820	22 805	23
Indonesia	18 451	379	1 419	17 411	14 276	69
Japan	4 752	1 196	2	5 946	4 463	35
Korea, Rep. of	979	1 716	2	2 694	763	17
Malaysia	482	552	57	977	514	24
Pakistan	1 819	16	69	1 766	1 516	11
Philippines	2 789	218	4	3 011	2 718	37
Thailand	16 956	134	13 526	2 510	1 011	17
Viet Nam	3 999	13	324	3 688	3 091	41
<b>Europe</b>	138 973	21 804	11 569	152 099	68 377	94
Austria	679	115	20	782	509	63
Belgium-Luxembourg	2 787	3 677	2 095	4 306	1 111	104
Czech Republic	1 443	71	52	1 472	821	80
Denmark	1 501	168	364	1 367	385	73
France	6 462	1 111	1 372	6 146	3 936	67
Germany	11 937	1 483	2 839	10 571	6 352	77
Greece	877	207	21	1 064	741	70
Italy	2 107	1 020	289	2 785	2 235	39
Malta	38	11	8	40	31	81
Netherlands	7 141	5 742	3 417	9 466	1 279	81
Norway	440	44	0	453	350	79
Poland	22 217	59	293	22 680	5 229	135
Portugal	1 238	1 031	33	2 286	1 278	128
Russian Federation	33 267	360	27	34 654	18 169	124
Slovenia	193	32	16	208	112	56
Spain	3 278	3 951	245	7 252	3 471	87
Sweden	1 135	255	22	1 210	482	54
Turkey	5 297	186	116	5 367	4 243	66
United Kingdom	6 893	1 453	279	8 131	6 580	111
<b>Middle East</b>						
Iran	3 383	8	64	3 326	2 825	41
Iraq	395	14	0	409	279	13
Kuwait	26	30	0	58	57	32
Saudi Arabia	357	106	29	434	351	19
United Arab Emirates	5	66	8	78	67	27

*Continued*

### 9.3 *Supply and consumption of starchy roots, by selected country <sup>a</sup> (continued)*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	2 103	332	235	2 201	1 776	14
<b>North America</b>	27 783	2 736	3 289	27 180	21 086	53
Canada	4 256	385	1 398	3 243	1 778	59
Mexico	1 488	256	24	1 720	1 393	15
United States	22 039	2 094	1 867	22 216	17 915	65
<b>South America</b>	43 299	546	255	43 580	22 498	67
Argentina	3 744	71	146	3 669	3 068	85
Brazil	23 473	184	60	23 597	9 532	57
Chile	974	27	10	992	775	52
Uruguay	200	35	1	221	158	48
<b>Oceania</b>	3 362	173	105	3 435	2 745	95
Australia	1 334	84	43	1 376	1 130	60
New Zealand	500	52	55	503	306	82
Papua New Guinea	1 220	4	0	1 224	1 009	220
<b>World</b>	<b>649 616</b>	<b>35 018</b>	<b>32 430</b>	<b>654 200</b>	<b>370 328</b>	<b>63</b>

<sup>a</sup> Annual average, 1997–99. Includes cassava, potatoes, yams and other roots. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.4 *Supply and consumption of sweeteners, by selected country <sup>a</sup>*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	9 039	5 913	2 735	11 620	11 140	15
Egypt	1 332	1 242	4	2 231	2 012	31
Nigeria	51	935	0	986	986	9
South Africa	2 716	18	1 153	1 564	1 561	37
<b>Asia <sup>c</sup></b>	57 471	15 594	6 526	66 535	64 478	18
China	9 880	1 347	767	10 728	10 647	8
India	25 097	827	84	25 407	24 922	26
Indonesia	2 221	1 567	29	3 705	3 695	18
Japan	2 055	1 821	21	3 870	3 747	30
Korea, Rep. of	706	1 446	434	1 618	1 525	33
Malaysia	120	1 152	235	1 079	1 074	50
Pakistan	4 041	10	601	3 823	3 825	29
Philippines	1 908	360	184	2 092	2 092	29
Thailand	5 268	11	3 361	1 782	1 777	29
Viet Nam	779	197	9	966	966	13
<b>Europe</b>	30 622	14 819	13 622	32 706	27 902	38
Austria	768	230	212	828	380	47
Belgium-Luxembourg	1 163	1 300	1 838	553	529	50
Czech Republic	557	87	125	519	481	47
Denmark	683	205	330	460	290	55
France	5 877	795	4 087	2 719	2 365	40
Germany	4 502	942	2 039	3 587	3 470	42
Greece	344	78	26	409	337	32
Italy	2 160	523	535	2 049	1 816	32
Malta	0	26	0	26	21	54
Netherlands	1 964	464	625	1 857	736	47
Norway	7	222	20	211	207	47
Poland	2 236	78	519	1 802	1 674	43
Portugal	76	350	84	362	349	35
Russian Federation	1 569	4 647	98	6 127	5 719	39
Slovenia	71	43	11	104	39	20
Spain	1 263	537	420	1 440	1 249	31
Sweden	424	76	100	408	391	44
Turkey	2 399	36	445	2 034	1 987	31
United Kingdom	2 169	1 815	1 074	2 910	2 234	38
<b>Middle East</b>						
Iran	926	1 144	26	1 916	1 913	28
Iraq	2	376	0	381	372	17
Kuwait	0	79	2	74	74	42
Saudi Arabia	0	651	17	538	536	28
United Arab Emirates	0	722	247	479	80	32

*Continued*



## 9.4 *Supply and consumption of sweeteners, by selected country* <sup>a</sup> (continued)

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	8 558	545	2 837	6 506	6 175	47
<b>North America</b>	25 150	4 703	2 471	27 065	26 329	66
Canada	264	1 328	437	1 219	1 338	44
Mexico	5 125	469	1 019	4 918	4 712	49
United States	19 761	2 906	1 015	20 928	20 280	73
<b>South America</b>	27 598	1 373	11 100	17 642	16 831	50
Argentina	2 005	42	328	1 628	1 636	45
Brazil	19 032	39	9 328	9 547	9 559	58
Chile	430	272	17	701	701	47
Uruguay	22	116	13	123	123	37
<b>Oceania</b>	6 072	329	4 714	1 409	1 159	40
Australia	5 699	43	4 364	1 091	857	46
New Zealand	30	248	62	215	208	56
Papua New Guinea	48	5	0	57	57	12
<b>World</b>	164 151	43 201	46 571	160 046	150 773	26

<sup>a</sup> Annual average, 1997–99. Includes sugar (in raw equivalent terms from both sugar cane and sugar beet), honey and other sweeteners. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.  
Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.5 *Supply and consumption of pulses, by selected country <sup>a</sup>*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	7 845	690	135	8 431	6 200	8
Egypt	498	205	11	699	533	8
Nigeria	2 074	0	0	2 074	1 068	10
South Africa	83	67	11	139	119	3
<b>Asia <sup>c</sup></b>	26 248	2 291	2 125	26 414	19 631	6
China	4 537	248	635	4 150	1 719	1
India	14 009	789	132	14 666	12 138	12
Indonesia	891	43	6	928	808	4
Japan	104	168	0	277	252	2
Korea, Rep. of	32	44	0	75	71	2
Malaysia	0	70	4	66	66	3
Pakistan	1 081	165	11	1 239	873	7
Philippines	59	61	0	120	117	2
Thailand	269	6	38	237	207	3
Viet Nam	239	4	3	240	212	3
<b>Europe</b>	9 130	3 013	1 938	10 234	1 960	3
Austria	81	12	10	82	5	1
Belgium-Luxembourg	17	578	92	503	24	2
Czech Republic	118	15	61	62	19	2
Denmark	323	17	99	258	5	1
France	3 050	113	1 071	2 092	127	2
Germany	724	199	51	872	162	2
Greece	43	36	2	78	51	5
Italy	124	404	6	530	343	6
Malta	1	1	0	2	2	4
Netherlands	17	544	93	469	46	3
Norway	0	5	0	5	4	1
Poland	289	7	18	278	95	2
Portugal	30	47	7	70	44	4
Russian Federation	1 088	27	7	1 109	0	0
Slovenia	5	2	0	8	5	3
Spain	332	732	19	1 058	227	6
Sweden	150	7	4	152	12	1
Turkey	1 550	126	360	1 298	739	11
United Kingdom	727	173	204	697	372	6
<b>Middle East</b>						
Iran	517	4	79	442	345	5
Iraq	37	14	0	52	47	2
Kuwait	0	14	0	15	15	8
Saudi Arabia	8	67	1	74	72	4
United Arab Emirates	0	75	16	38	22	9

*Continued*

## 9.5 Supply and consumption of pulses, by selected country <sup>a</sup> (continued)

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	1 783	231	147	1 957	1 741	13
<b>North America</b>	6 139	404	2 454	3 717	2 727	7
Canada	2 953	69	1 700	943	182	6
Mexico	1 390	181	130	1 541	1 367	14
United States	1 796	154	624	1 233	1 179	4
<b>South America</b>	3 547	550	375	3 828	3 440	10
Argentina	363	6	305	84	44	1
Brazil	2 636	196	3	2 897	2 636	16
Chile	82	22	26	81	53	4
Uruguay	6	4	0	11	9	3
<b>Oceania</b>	2 638	25	1 113	1 563	173	6
Australia	2 574	12	1 082	1 523	147	8
New Zealand	57	4	31	25	13	3
Papua New Guinea	2	0	0	3	2	0
<b>World</b>	56 103	7 271	8 169	54 993	34 873	6

<sup>a</sup> Annual average, 1997–99. Includes beans, peas and other pulses. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.6 *Supply and consumption of vegetables, by selected country <sup>a</sup>*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	42 535	994	943	42 493	38 199	51
Egypt	12 668	11	225	12 281	11 019	168
Nigeria	7 514	3	2	7 515	6 664	62
South Africa	2 223	43	60	2 206	1 918	46
<b>Asia <sup>c</sup></b>	421 249	6 762	8 235	419 776	375 049	105
China	251 349	935	3 556	248 728	224 767	178
India	58 102	17	395	57 723	54 035	55
Indonesia	5 976	304	75	6 205	5 690	28
Japan	12 913	2 553	12	15 454	14 071	111
Korea, Rep. of	10 876	293	51	11 110	9 599	208
Malaysia	516	541	323	735	720	34
Pakistan	4 492	104	57	4 540	4 369	33
Philippines	4 602	105	30	4 677	4 453	61
Thailand	2 753	25	372	2 406	2 164	35
Viet Nam	4 817	2	13	4 807	4 339	57
<b>Europe</b>	92 083	20 470	18 825	93 675	80 076	110
Austria	621	392	118	895	774	96
Belgium-Luxembourg	2 304	1 439	1 693	2 050	1 481	139
Czech Republic	533	349	24	859	804	78
Denmark	309	306	68	547	517	98
France	8 045	2 473	1 563	8 959	7 257	123
Germany	2 565	4 958	550	6 974	6 016	73
Greece	4 239	125	779	3 586	2 865	271
Italy	14 850	1 034	3 924	12 126	10 102	176
Malta	66	8	0	74	61	159
Netherlands	3 642	1 299	3 322	1 619	1 471	94
Norway	148	152	4	297	275	62
Poland	5 832	386	492	5 743	4 954	128
Portugal	2 355	201	466	2 090	1 836	184
Russian Federation	11 769	1 882	24	13 360	12 091	82
Slovenia	107	93	5	195	175	88
Spain	11 980	377	4 288	8 069	6 402	161
Sweden	305	462	45	722	662	75
Turkey	21 946	27	1 168	20 805	13 926	215
United Kingdom	2 968	2 855	273	5 551	5 055	85
<b>Middle East</b>						
Iran	11 734	1	533	11 202	9 840	144
Iraq	2 774	56	0	2 830	2 551	117
Kuwait	118	262	5	376	360	203
Saudi Arabia	2 090	518	67	2 541	2 312	122
United Arab Emirates	1 050	505	71	1 461	616	245

*Continued*

## 9.6 *Supply and consumption of vegetables, by selected country* <sup>a</sup> (continued)

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	10 393	442	3 830	7 005	6 415	49
<b>North America</b>	47 750	7 005	7 692	47 063	43 969	111
Canada	2 349	2 047	490	3 905	3 679	122
Mexico	9 030	246	3 228	6 048	5 546	58
United States	36 371	4 712	3 973	37 110	34 744	125
<b>South America</b>	18 081	956	1 405	17 632	15 103	45
Argentina	3 231	180	425	2 986	2 658	74
Brazil	6 809	526	151	7 184	6 451	39
Chile	2 492	12	622	1 882	1 405	95
Uruguay	152	38	3	188	164	50
<b>Oceania</b>	3 188	270	642	2 825	2 657	92
Australia	1 790	189	247	1 740	1 690	90
New Zealand	967	50	391	626	552	149
Papua New Guinea	383	3	0	387	348	76
<b>World</b>	627 549	36 763	38 402	625 773	557 144	95

<sup>a</sup> Annual average, 1997–99. Does not include starchy roots. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.7 Supply and consumption of fruit, by selected country <sup>a</sup>

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	58 569	514	3 561	55 528	41 790	55
Egypt	6 402	76	156	6 277	5 633	86
Nigeria	8 641	2	0	8 642	7 733	72
South Africa	4 534	36	1 751	2 848	1 596	38
<b>Asia <sup>c</sup></b>	183 792	10 484	10 952	183 557	161 106	45
China	58 282	2 341	1 752	58 871	51 263	41
India	45 074	201	218	45 058	39 195	40
Indonesia	7 324	161	277	7 229	6 556	32
Japan	4 230	3 277	22	7 485	6 451	51
Korea, Rep. of	2 468	732	42	3 157	2 929	64
Malaysia	1 073	420	280	1 213	1 038	49
Pakistan	5 436	118	227	5 327	5 098	38
Philippines	9 449	198	2 090	7 556	7 532	104
Thailand	7 271	56	1 173	6 153	5 575	91
Viet Nam	3 925	46	39	3 932	3 576	47
<b>Europe</b>	73 171	42 227	26 295	89 295	55 625	76
Austria	1 009	932	490	1 452	864	107
Belgium–Luxembourg	674	4 578	3 867	1 378	1 200	113
Czech Republic	487	607	195	898	756	73
Denmark	62	590	153	501	500	95
France	11 020	5 320	2 359	13 976	5 042	86
Germany	4 754	8 800	2 947	10 755	9 391	115
Greece	3 830	290	1 340	2 732	1 613	153
Italy	16 989	2 030	3 872	15 181	7 076	123
Malta	11	41	1	52	41	107
Netherlands	692	4 018	2 725	1 985	1 920	122
Norway	30	456	7	479	466	105
Poland	2 598	1 157	990	2 764	1 979	51
Portugal	1 652	516	116	2 035	1 204	121
Russian Federation	2 686	2 425	45	5 160	4 779	33
Slovenia	226	139	30	335	166	83
Spain	14 795	959	5 286	10 341	4 481	112
Sweden	95	906	55	946	907	102
Turkey	10 332	183	1 969	8 546	7 038	109
United Kingdom	306	5 093	249	5 150	4 998	84
<b>Middle East</b>						
Iran	11 035	192	809	10 421	9 320	137
Iraq	1 484	3	73	1 564	1 194	55
Kuwait	8	198	15	191	182	103
Saudi Arabia	1 164	980	134	2 010	1 938	102
United Arab Emirates	354	621	322	676	366	146

*Continued*

## 9.7 Supply and consumption of fruit, by selected country <sup>a</sup> (continued)

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	19 828	863	6 771	13 920	11 685	90
<b>North America</b>	43 348	16 885	9 286	50 972	44 924	113
Canada	791	3 514	381	3 921	3 792	126
Mexico	11 905	444	1 581	10 767	9 474	99
United States	30 652	12 927	7 324	36 283	31 657	114
<b>South America</b>	70 703	1 830	25 509	47 030	33 710	100
Argentina	6 900	554	1 594	5 862	3 375	93
Brazil	37 701	525	15 365	22 861	17 495	105
Chile	3 986	186	2 123	2 052	1 014	68
Uruguay	595	73	203	465	284	86
<b>Oceania</b>	5 020	519	1 075	4 474	3 106	107
Australia	2 786	270	476	2 595	1 662	89
New Zealand	985	219	596	603	410	110
Papua New Guinea	1 184	5	0	1 189	953	207
<b>World</b>	446 913	73 094	82 301	438 177	345 963	59

<sup>a</sup> Annual average, 1997–99. Includes oranges, mandarines, lemons, limes, grapefruit, other citrus, bananas, plantains, apples (excluding cyder), pineapples, dates, grapes (excluding wine) and other fruit. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.8 *Supply and consumption of meat, by selected country <sup>a</sup>*

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	10 219	591	119	10 666	10 648	14
Egypt	1 307	147	1	1 445	1 445	22
Nigeria	874	7	0	882	882	8
South Africa	1 235	158	19	1 374	1 368	32
<b>Asia <sup>c</sup></b>	86 478	6 184	2 128	90 444	90 070	25
China	58 480	1 881	1 407	58 954	58 917	47
India	4 705	0	179	4 526	4 526	5
Indonesia	1 896	29	8	1 917	1 922	9
Japan	3 036	2 442	6	5 388	5 280	42
Korea, Rep. of	1 652	349	117	1 886	1 858	40
Malaysia	1 076	126	15	1 187	1 154	54
Pakistan	1 688	0	0	1 688	1 688	13
Philippines	1 704	113	0	1 817	1 817	25
Thailand	1 902	3	272	1 634	1 615	26
Viet Nam	1 677	1	7	1 670	1 670	22
<b>Europe</b>	52 275	11 140	11 475	52 046	51 667	71
Austria	869	131	186	813	809	100
Belgium-Luxembourg	1 745	398	1 289	854	853	80
Czech Republic	837	46	32	851	835	81
Denmark	1 957	161	1 560	568	561	106
France	6 645	1 120	1 851	5 949	5 899	100
Germany	6 183	1 809	970	7 022	7 011	85
Greece	513	422	17	919	882	83
Italy	4 096	1 342	376	5 069	5 051	88
Malta	19	15	0	34	30	78
Netherlands	2 867	523	1 981	1 419	1 388	88
Norway	257	8	12	253	254	57
Poland	2 951	102	365	2 672	2 639	68
Portugal	734	173	20	886	884	89
Russian Federation	4 624	2 212	22	6 818	6 804	46
Slovenia	181	30	26	186	185	93
Spain	4 608	301	522	4 357	4 354	109
Sweden	588	99	64	624	619	70
Turkey	1 297	1	9	1 289	1 289	20
United Kingdom	3 667	1 405	611	4 493	4 465	75
<b>Middle East</b>						
Iran	1 452	81	6	1 528	1 528	22
Iraq	112	2	0	114	114	5
Kuwait	76	75	1	150	124	70
Saudi Arabia	580	395	25	951	951	50
United Arab Emirates	87	183	19	239	185	74

*Continued*



## 9.8 Supply and consumption of meat, by selected country <sup>a</sup> (continued)

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	4 910	846	127	5 630	5 626	43
<b>North America</b>	43 702	2 900	5 193	41 437	41 182	104
Canada	3 562	458	976	3 038	2 921	97
Mexico	4 114	776	69	4 821	4 822	50
United States	36 026	1 665	4 149	33 578	33 438	120
<b>South America</b>	22 446	442	1 913	20 976	20 503	61
Argentina	3 808	150	441	3 517	3 349	93
Brazil	12 790	93	1 134	11 749	11 750	71
Chile	838	103	38	903	900	61
Uruguay	594	8	259	342	343	104
<b>Oceania</b>	4 901	141	2 378	2 678	2 569	89
Australia	3 469	25	1 508	1 986	1 964	105
New Zealand	1 322	26	867	495	416	112
Papua New Guinea	69	43	1	111	111	24
<b>World</b>	221 581	21 698	23 269	220 046	218 419	37

<sup>a</sup> Annual average, 1997-99. Includes beef and veal, mutton, goat meat, pigmeat, poultry meat and other meat and offal. <sup>b</sup>

Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.9 Supply and consumption of eggs, by selected country <sup>a</sup>

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	1 851	20	7	1 864	1 545	2
Egypt	168	1	0	169	136	2
Nigeria	378	1	0	379	333	3
South Africa	310	0	4	306	247	6
<b>Asia <sup>c</sup></b>	30 439	246	182	30 505	27 386	8
China	20 563	91	59	20 595	18 699	15
India	1 654	0	15	1 640	1 424	1
Indonesia	614	2	0	615	488	2
Japan	2 533	37	0	2 569	2 448	19
Korea, Rep. of	478	3	0	480	428	9
Malaysia	402	2	37	366	299	14
Pakistan	299	0	0	299	250	2
Philippines	593	2	0	595	549	8
Thailand	812	1	7	806	628	10
Viet Nam	164	2	4	162	150	2
<b>Europe</b>	9 559	780	845	9 498	8 749	12
Austria	97	22	5	114	110	14
Belgium-Luxembourg	230	57	114	174	155	15
Czech Republic	188	4	9	183	168	16
Denmark	82	24	14	93	81	15
France	1 027	77	82	1 023	931	16
Germany	857	301	76	1 082	1 023	12
Greece	118	4	1	121	108	10
Italy	756	28	12	772	724	13
Malta	7	1	0	8	7	17
Netherlands	631	69	389	311	269	17
Norway	48	2	2	47	44	10
Poland	417	7	2	425	399	10
Portugal	108	6	4	110	91	9
Russian Federation	1 832	48	5	1 875	1 786	12
Slovenia	24	1	1	24	20	10
Spain	645	9	30	623	567	14
Sweden	107	9	6	110	103	12
Turkey	653	1	28	626	559	9
United Kingdom	623	33	20	636	561	9
<b>Middle East</b>						
Iran	502	2	2	502	422	6
Iraq	8	2	0	10	7	0
Kuwait	15	11	2	24	21	12
Saudi Arabia	135	5	14	126	91	5
United Arab Emirates	14	17	1	30	27	11

*Continued*

## 9.9 Supply and consumption of eggs, by selected country <sup>a</sup> (continued)

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	1 752	24	12	1 763	1 517	12
<b>North America</b>	6 564	59	121	6 502	5 490	14
Canada	341	41	10	372	331	11
Mexico	1 475	12	1	1 486	1 269	13
United States	4 748	6	110	4 644	3 891	14
<b>South America</b>	2 671	12	13	2 670	2 158	6
Argentina	275	3	2	277	214	6
Brazil	1 462	2	5	1 460	1 168	7
Chile	95	0	2	93	70	5
Uruguay	34	0	0	34	28	9
<b>Oceania</b>	204	2	2	204	166	6
Australia	145	1	1	145	117	6
New Zealand	48	0	1	47	39	10
Papua New Guinea	4	0	0	4	3	1
<b>World</b>	51 727	1 139	1 182	51 690	45 883	8

<sup>a</sup> Annual average, 1997–99. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.  
Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.10 *Supply and consumption of seafood, by selected country <sup>a</sup>*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	5 801	2 229	1 370	3 009	5 243	7
Egypt	419	272	1	689	658	10
Nigeria	383	240	9	615	609	6
South Africa	514	852	159	1 207	311	7
<b>Asia <sup>c</sup></b>	68 416	18 273	6 361	78 342	62 796	18
China	36 081	7 949	2 454	41 616	32 500	26
India	5 378	76	384	5 070	4 546	5
Indonesia	4 359	639	669	4 330	3 688	18
Japan	6 659	5 519	416	11 762	8 395	66
Korea, Rep. of	2 563	791	709	2 644	2 283	50
Malaysia	1 222	445	150	1 519	1 126	53
Pakistan	597	0	109	488	299	2
Philippines	2 135	793	167	2 760	2 160	30
Thailand	3 458	532	809	3 182	1 997	33
Viet Nam	1 544	36	194	1 386	1 328	17
<b>Europe</b>	19 180	19 035	15 915	19 966	14 367	20
Austria	3	196	10	189	114	14
Belgium-Luxembourg	31	670	222	479	216	20
Czech Republic	21	178	13	187	118	11
Denmark	1 866	1 169	2 131	936	130	25
France	830	1 889	549	2 170	1 696	29
Germany	319	2 846	1 861	1 305	1 198	15
Greece	214	322	73	463	283	27
Italy	562	1 413	223	1 753	1 352	24
Malta	3	26	2	27	16	41
Netherlands	550	1 059	1 083	571	252	16
Norway	3 223	788	2 483	1 587	223	50
Poland	391	331	250	482	544	14
Portugal	229	584	130	688	581	58
Russian Federation	4 714	1 194	1 538	4 457	3 246	22
Slovenia	3	32	3	32	13	7
Spain	1 341	1 790	827	2 305	1 630	41
Sweden	364	318	338	354	244	28
Turkey	499	276	61	716	453	7
United Kingdom	1 026	2 407	826	2 609	1 315	22
<b>Middle East</b>						
Iran	380	325	6	699	310	5
Iraq	35	5	0	40	35	2
Kuwait	8	13	1	20	20	11
Saudi Arabia	54	118	1	170	137	7
United Arab Emirates	114	18	8	130	69	28

*Continued*

## 9.10 Supply and consumption of seafood, by selected country <sup>a</sup> (continued)

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	1 794	263	475	1 438	1 154	9
<b>North America</b>	7 978	3 914	2 728	9 197	7 374	19
Canada	1 027	922	880	1 079	664	22
Mexico	1 526	140	307	1 360	1 025	11
United States	5 425	2 852	1 541	6 759	5 685	20
<b>South America</b>	17 716	1 032	15 325	4 240	3 278	10
Argentina	1 352	50	1 056	350	350	10
Brazil	820	449	40	1 229	1 126	7
Chile	6 035	42	4 849	1 235	258	17
Uruguay	137	23	113	47	26	8
<b>Oceania</b>	1 056	473	733	780	584	20
Australia	214	402	131	486	357	19
New Zealand	669	8	535	149	91	25
Papua New Guinea	44	27	2	69	64	14
<b>World</b>	120 604	45 289	42 634	115 758	94 136	16

<sup>a</sup> Annual average, 1997–99. Includes freshwater fish, demersal fish, pelagic fish, other marine fish, crustaceans, cephalopods and other molluscs. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.  
Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.11 *Supply and consumption of milk, by selected country <sup>a</sup>*

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	25 468	5 159	402	30 128	27 424	36
Egypt	3 508	371	20	3 684	2 924	45
Nigeria	368	1 048	1	1 415	1 322	12
South Africa	2 829	140	241	2 735	2 616	62
<b>Asia <sup>c</sup></b>	160 819	13 049	1 075	172 791	143 229	40
China	10 552	1 972	497	12 026	10 500	8
India	74 259	19	55	74 223	62 058	64
Indonesia	716	822	28	1 511	1 436	7
Japan	8 559	2 149	11	10 697	8 480	67
Korea, Rep. of	2 090	210	5	2 296	1 103	24
Malaysia	47	1 256	124	1 178	1 089	51
Pakistan	25 976	114	1	26 090	21 002	157
Philippines	28	1 398	1	1 424	1 389	19
Thailand	409	1 095	81	1 424	1 400	23
Viet Nam	70	146	0	216	214	3
<b>Europe</b>	217 718	37 814	51 175	204 259	152 031	209
Austria	3 255	561	949	2 904	2 238	277
Belgium–Luxembourg	3 603	3 378	3 696	3 112	2 392	225
Czech Republic	2 764	107	499	2 372	1 987	193
Denmark	4 610	394	2 813	2 171	1 142	216
France	25 616	3 181	8 090	20 630	15 233	259
Germany	28 493	6 202	12 163	22 532	19 662	240
Greece	1 914	1 209	89	3 033	2 798	265
Italy	12 900	6 950	1 283	18 555	15 042	262
Malta	53	54	0	106	76	198
Netherlands	11 287	5 160	7 362	9 013	5 685	362
Norway	1 863	29	224	1 668	1 201	271
Poland	12 332	523	1 808	11 097	7 384	191
Portugal	1 971	358	278	2 035	1 970	197
Russian Federation	33 221	2 005	1 067	34 158	21 782	148
Slovenia	607	24	80	551	471	236
Spain	6 771	1 889	644	8 041	6 519	164
Sweden	3 284	399	281	3 403	3 041	343
Turkey	9 975	95	23	10 047	8 127	126
United Kingdom	14 829	3 119	2 282	15 773	13 777	232
<b>Middle East</b>						
Iran	5 181	57	2	5 237	3 469	51
Iraq	546	26	0	572	522	24
Kuwait	36	316	7	328	328	185
Saudi Arabia	797	1 021	144	1 674	1 634	86
United Arab Emirates	73	313	10	386	372	148

*Continued*

## 9.11 Supply and consumption of milk, by selected country <sup>a</sup> (continued)

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	10 993	2 863	201	13 656	12 194	94
<b>North America</b>	88 899	7 497	2 840	93 076	86 255	218
Canada	8 155	361	844	7 675	6 144	203
Mexico	8 738	2 326	95	10 969	9 577	100
United States	72 006	4 810	1 901	74 432	70 534	254
<b>South America</b>	44 383	3 650	2 042	46 001	40 531	121
Argentina	9 945	133	1 350	8 728	8 225	228
Brazil	20 214	1 931	17	22 127	19 782	119
Chile	2 070	180	95	2 155	1 744	118
Uruguay	1 429	10	518	915	633	192
<b>Oceania</b>	21 014	512	13 709	8 163	4 967	172
Australia	9 842	365	5 528	4 759	4 325	231
New Zealand	11 106	41	8 180	3 231	520	140
Papua New Guinea	0	28	0	28	28	6
<b>World</b>	561 732	69 337	71 365	559 402	459 212	78

<sup>a</sup> Annual average, 1997–99. Excluding butter. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.  
Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.12 *Supply and consumption of vegetable oils, by selected country <sup>a</sup>*

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	5 140	3 567	702	8 101	6 393	8
Egypt	107	833	16	866	396	6
Nigeria	1 884	102	37	1 948	1 701	16
South Africa	414	418	48	787	517	12
<b>Asia <sup>c</sup></b>	41 148	15 098	16 883	38 145	28 800	8
China	8 933	3 932	1 001	12 369	9 420	7
India	6 580	3 249	224	8 643	7 600	8
Indonesia	7 238	82	4 162	3 332	1 846	9
Japan	1 860	672	24	2 508	1 658	13
Korea, Rep. of	271	479	29	746	522	11
Malaysia	10 727	390	9 560	1 100	302	14
Pakistan	523	1 321	10	1 807	1 392	10
Philippines	1 335	92	957	470	360	5
Thailand	820	66	117	620	349	6
Viet Nam	172	159	32	275	172	2
<b>Europe</b>	14 954	12 651	10 182	17 065	10 912	15
Austria	107	170	89	195	136	17
Belgium-Luxembourg	719	1 033	1 151	590	240	23
Czech Republic	211	110	85	236	174	17
Denmark	166	367	204	329	36	7
France	1 219	1 197	829	1 526	970	17
Germany	2 782	1 838	2 122	2 480	1 496	18
Greece	601	130	217	493	297	28
Italy	1 271	1 162	508	1 787	1 490	26
Malta	0	7	0	7	3	8
Netherlands	1 290	2 031	2 464	940	247	16
Norway	64	52	13	102	64	14
Poland	372	346	90	621	481	12
Portugal	250	165	111	283	168	17
Russian Federation	838	956	40	1 755	1 201	8
Slovenia	1	66	21	47	23	11
Spain	2 110	621	877	1 557	1 096	27
Sweden	106	219	154	171	149	17
Turkey	968	714	323	1 377	1 333	21
United Kingdom	947	1 203	390	1 763	1 053	18
<b>Middle East</b>						
Iran	114	881	177	706	667	10
Iraq	24	391	0	454	437	20
Kuwait	0	50	3	43	20	11
Saudi Arabia	9	293	17	284	272	14
United Arab Emirates	0	252	86	182	25	10

*Continued*



## 9.12 *Supply and consumption of vegetable oils, by selected country* <sup>a</sup> (continued)

	Domestic supply				Food consumption	
	Production	Imports	Exports	Total <sup>b</sup>	Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	1 404	946	246	2 104	1 415	11
<b>North America</b>	13 247	2 811	3 642	12 692	8 313	21
Canada	1 684	308	825	1 151	531	18
Mexico	1 064	688	78	1 674	1 136	12
United States	10 499	1 815	2 740	9 867	6 647	24
<b>South America</b>	10 878	1 310	6 195	5 619	4 196	13
Argentina	4 965	34	4 336	502	515	14
Brazil	4 429	391	1 471	3 282	2 239	13
Chile	31	192	11	207	173	12
Uruguay	13	22	6	34	20	6
<b>Oceania</b>	757	313	488	555	428	15
Australia	351	213	111	449	358	19
New Zealand	2	67	15	53	33	9
Papua New Guinea	352	13	321	23	18	4
<b>World</b>	86 533	36 352	38 274	83 013	59 652	10

<sup>a</sup> Annual average, 1997–99. From soyabeans, groundnuts, sunflowerseed, rapeseed, mustardseed, cottonseed, palm kernels, palm, copra, sesameseed, olives, maize germ and other oil crops. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

## 9.13 *Supply and consumption of animal fats, by selected country <sup>a</sup>*

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Africa</b>	458	471	47	886	568	1
Egypt	110	98	0	207	151	2
Nigeria	26	60	0	87	30	0
South Africa	53	66	12	107	47	1
<b>Asia <sup>c</sup></b>	6 852	1 591	186	8 264	6 290	2
China	2 814	596	134	3 284	2 525	2
India	1 838	6	3	1 840	1 666	2
Indonesia	100	16	4	112	112	1
Japan	446	204	8	641	252	2
Korea, Rep. of	121	95	6	210	128	3
Malaysia	23	17	1	39	36	2
Pakistan	533	78	0	611	533	4
Philippines	135	60	0	195	138	2
Thailand	32	19	1	50	45	1
Viet Nam	70	28	0	97	97	1
<b>Europe</b>	11 915	3 638	3 298	12 280	8 286	11
Austria	253	26	57	222	154	19
Belgium–Luxembourg	497	516	397	612	288	27
Czech Republic	224	17	33	211	96	9
Denmark	411	160	240	303	147	28
France	1 254	486	435	1 305	1 136	19
Germany	2 157	360	483	2 127	1 793	22
Greece	107	35	5	138	39	4
Italy	624	285	132	742	619	11
Malta	4	2	0	5	4	11
Netherlands	540	443	455	506	138	9
Norway	164	213	64	314	73	17
Poland	753	17	57	710	526	14
Portugal	131	22	22	127	115	12
Russian Federation	1 267	308	7	1 568	988	7
Slovenia	40	2	3	39	31	16
Spain	622	204	66	759	154	4
Sweden	223	17	62	178	162	18
Turkey	147	185	7	324	126	2
United Kingdom	458	345	230	589	470	8
<b>Middle East</b>						
Iran	183	42	2	222	146	2
Iraq	12	6	0	18	15	1
Kuwait	3	5	5	6	5	3
Saudi Arabia	14	26	9	31	33	2
United Arab Emirates	3	16	1	11	9	4

*Continued*

## 9.13 *Supply and consumption of animal fats, by selected country* <sup>a</sup> (continued)

	Domestic supply			Total <sup>b</sup>	Food consumption	
	Production	Imports	Exports		Volume	Per person
	kt	kt	kt	kt	kt	kg
<b>Central America</b>	356	707	19	1 045	434	3
<b>North America</b>	7 952	805	1 999	6 758	2 537	6
Canada	915	129	337	707	446	15
Mexico	282	539	4	817	350	4
United States	6 755	137	1 658	5 235	1 741	6
<b>South America</b>	2 035	317	448	1 930	924	3
Argentina	287	42	99	247	165	5
Brazil	857	45	15	887	408	2
Chile	239	30	38	232	34	2
Uruguay	69	5	56	27	15	4
<b>Oceania</b>	1 260	55	1 041	263	177	6
Australia	725	20	585	160	117	6
New Zealand	529	14	457	75	40	11
Papua New Guinea	3	9	0	12	10	2
<b>World</b>	30 594	7 156	7 036	30 770	18 927	3

<sup>a</sup> Annual average, 1997–99. Includes butter, ghee, cream, raw animal fats, fish body oil and fish liver oil. <sup>b</sup> Takes account of stock changes. <sup>c</sup> Not including Middle East countries.

Source: Food and Agriculture Organisation, FAOSTAT nutrition data.

OTHER

# 10 *Selected economic and demographic information – key countries*

	2001					2000		
	Population a		Age structure (in years) a			Gross domestic product b		
	Growth rate		0–14	15–64	65+	Per person	Agriculture contribution	
	million	%	%	%	%	US\$b	US\$	%
<b>Africa</b>								
Egypt	69.5	1.7	35	62	4	247	3 600	17.0
Nigeria	126.6	2.6	44	54	3	117	950	40.0
South Africa	43.6	0.3	32	63	5	369	8 500	5.0
<b>Asia c</b>								
China	1 273.1	0.9	25	68	7	4 500	3 600	15.0
India	1 030.0	1.6	33	62	5	2 200	2 200	25.0
Indonesia	228.4	1.6	30	65	5	654	2 900	21.0
Japan	126.8	0.2	15	68	18	3 150	24 900	2.0
Korea, Rep. of	47.9	0.9	22	71	7	765	16 100	5.6
Malaysia	22.2	2.0	35	61	4	224	10 300	14.0
Pakistan	144.6	2.1	41	55	4	282	2 000	25.4
Philippines	82.8	2.0	37	60	4	310	3 800	20.0
Thailand	61.8	0.9	23	70	7	413	6 700	13.0
Viet Nam	79.9	1.5	32	62	5	154	1 950	25.0
<b>Europe</b>								
Austria	8.2	0.2	17	68	15	203	25 000	2.2
Belgium–Luxembourg	10.3	0.2	18	66	17	259	25 300	1.4
Czech Republic	10.3	-0.1	16	70	14	132	12 900	3.7
Denmark	5.4	0.3	19	67	15	136	25 500	3.0
France	59.6	0.4	19	65	16	1 448	24 400	3.3
Germany	83.0	0.3	16	68	17	1 936	23 400	1.2
Greece	10.6	0.2	15	67	18	182	17 200	8.3
Italy	57.7	0.1	14	68	18	1 273	22 100	2.5
Malta	0.4	0.7	20	68	13	6	14 300	2.8
Netherlands	16.0	0.6	18	68	14	388	24 400	3.3
Norway	4.5	0.5	20	65	15	124	27 700	2.0
Poland	38.6	0.0	18	69	12	328	8 500	3.8
Portugal	10.1	0.2	17	67	16	159	15 800	4.0
Russian Federation	145.5	-0.4	17	70	13	1 120	7 700	7.0
Slovenia	1.9	0.1	16	70	14	23	12 000	4.0
Spain	40.0	0.1	15	68	17	721	18 000	4.0
Sweden	8.9	0.0	18	65	17	197	22 200	2.2
Turkey	66.5	1.2	28	66	6	444	6 800	15.0
United Kingdom	59.6	0.2	19	65	16	1 360	22 800	1.7
<b>Middle East</b>								
Iran	66.1	0.7	33	62	5	413	6 300	24.0
Iraq	23.3	2.8	42	55	3	57	2 500	6.0
Kuwait	2.0	3.4	29	69	2	29	15 000	0.0
Saudi Arabia	22.8	3.3	43	55	3	232	10 500	6.0
United Arab Emirates	2.4	1.6	29	69	2	54	22 800	3.0

Continued

# 10 *Selected economic and demographic information – key countries*

(continued)

	2001					2000		
	Population a		Age structure (in years) a			Gross domestic product b		
	Growth rate		0-14	15-64	65+	Per person	Agriculture contribution	
	million	%	%	%	%	US\$b	US\$	%
<b>North America</b>								
Canada	31.6	1.0	19	68	13	775	24 800	3.0
Mexico	101.9	1.5	33	62	4	915	9 100	5.0
United States	278.1	0.9	21	66	13	9 963	36 200	2.0
<b>South America</b>								
Argentina	37.4	1.2	27	63	10	476	12 900	7.0
Brazil	174.5	0.9	29	66	6	1 130	6 500	9.0
Chile	15.3	1.1	27	65	7	153	10 100	8.0
Uruguay	3.4	0.8	24	63	13	31	9 300	10.0
<b>Oceania</b>								
Australia	19.4	1.0	21	67	13	446	23 200	3.0
New Zealand	3.9	1.1	22	66	12	68	17 700	8.0
Papua New Guinea	5.0	2.4	39	58	4	12	2 500	30.0
<b>World</b>	6 157.4	1.3	30	63	7	43 600	7 200	4.0

a 2001 estimate. b Purchasing power parity, 2000 estimate. c Not including Middle East countries.  
Source: Central Intelligence Agency, *World Factbook 2000*.