



Australian Government
Department of Agriculture,
Fisheries and Forestry

AUSTRALIAN AGRICULTURE AND FOOD SECTOR Stocktake





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Stocktake



Prepared by
DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY
2005

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Foreword

The Australian agriculture and food sector has a proud history, with a record of contributing significantly to the performance of the economy since European settlement. Today, the sector remains a critical element of the Australian economy and especially its export performance. It is one of the mainstays of rural and regional economies and provides direct and indirect employment to hundreds of thousands of people around the country.

The agricultural and food industries have shown themselves to be resilient in the face of increasing competition in both domestic and export markets. They continue to find strategies to deal with the vagaries of an uncertain climate, volatile prices and export markets frequently distorted by support and protection measures in competing nations.

At the commodity production level the sector has been through significant adjustment marked by consolidation of farm enterprises. Producers have a demonstrated capacity to move resources to maximise benefits from emerging market opportunities while at the same time achieving impressive productivity growth that often more than offsets adverse movements in their terms of trade.

Food and beverage processing is Australia's largest manufacturing industry, and it also has adapted to rapid change in market conditions generated by evolving consumer preferences, food safety requirements and intense competitive pressure. The processing industry has grown rapidly in recent years and is a significant contributor to employment, especially in regional Australia.

Notwithstanding the sector's achievements, it is timely to take stock of how well it is placed to meet the challenges of sustainability and future competitiveness. I welcome the interest shown by the sector in working with government and other stakeholders to explore some of the key issues likely to confront us in coming years.

Against this background, this stocktake paper has been developed with supporting information as an input and resource for the Reference Group that I have asked to prepare a report on future directions for Australian agricultural policies and programs. Our aim is to make sure government policies provide the right supporting framework for our agriculture and food sector to continue to contribute to the prosperity and welfare of Australia.



*The Hon. Warren Truss
Minister for Agriculture, Fisheries
and Forestry*

A handwritten signature in black ink, appearing to read 'Warren Truss', written in a cursive style.

The Hon. Warren Truss MP
Minister for Agriculture, Fisheries and Forestry

March 2005

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Abbreviations

AAA	Agriculture — Advancing Australia
ABARE	Australian Bureau of Agricultural and Resource Economics
AECL	Australian Egg Corporation Limited
APIQ	Australian Pig Industry Quality Program
APL	Australian Pork Limited
AQIS	Australian Quarantine and Inspection Service
ASEAN	Association of Southeast Asian Nations
AWBC	Australian Wine and Brandy Corporation
AWI	Australian Wool Innovation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DA	Dairy Australia
DAFF	Department of Agriculture, Fisheries and Forestry
GABSI	Great Artesian Basin Sustainability Initiative
GCA	Grains Council of Australia
GDP	Gross domestic product
GM	Genetically modified
GRDC	Grains Research and Development Corporation
GVP	Gross value of production
GWRDC	Grape and Wine Research and Development Corporation
HAL	Horticulture Australia Limited
MLA	Meat and Livestock Australia
NAP	National Action Plan for Salinity and Water Quality
NHT	Natural Heritage Trust
OECD	Organisation for Economic Cooperation and Development
QSL	Queensland Sugar Limited
RCL	Ricegrowers' Co-operative Limited
RIRDC	Rural Industries Research and Development Corporation
SLA	Statistical Local Area
SPS	Sanitary and phyto-sanitary
SRDC	Sugar Research and Development Corporation
WFA	Winemakers Federation of Australia
WGGA	Wine Grape Growers Association
WTO	World Trade Organization

1. Introduction

This stocktake of food and agriculture in Australia examines the sector's performance and identifies some of the emerging challenges. The sector's future competitiveness, profitability and sustainability will be determined largely by the effectiveness with which it responds to these challenges.

This document is intended to provide a starting point for a wide-ranging discussion among stakeholders – farmers, food manufacturers, industry representative bodies, regional communities and government – about preparing for the future.

The material which follows is in two parts: first, a discussion of the nature of the sector and key issues likely to be important in the sector's future development and, second, a more comprehensive examination of each of the major industries.

The first part begins with a chapter describing the characteristics of the food and agriculture sector in Australia and looks at the sector's performance in the global context. This chapter also describes the sector's economic and business characteristics as well as the physical landscape within which it operates.

The next chapter is focused on 'drivers of change' and considers a number of trends that are influencing the Australian food and agriculture sector. It identifies some important issues for attention at the enterprise, industry, community or government levels, and poses some questions – shown in the shaded area at the end of each section – which might help focus discussion among stakeholders about the future.

The final chapter in this part provides a brief review of the portfolio policy framework as a backdrop to dialogue about future policy directions.

The second part of the report consists of a set of more detailed industry profiles providing separate 'snapshots' of the major industries in the food and agriculture sector. This makes evident the huge diversity that has to be taken into account in dealing with the challenges ahead.



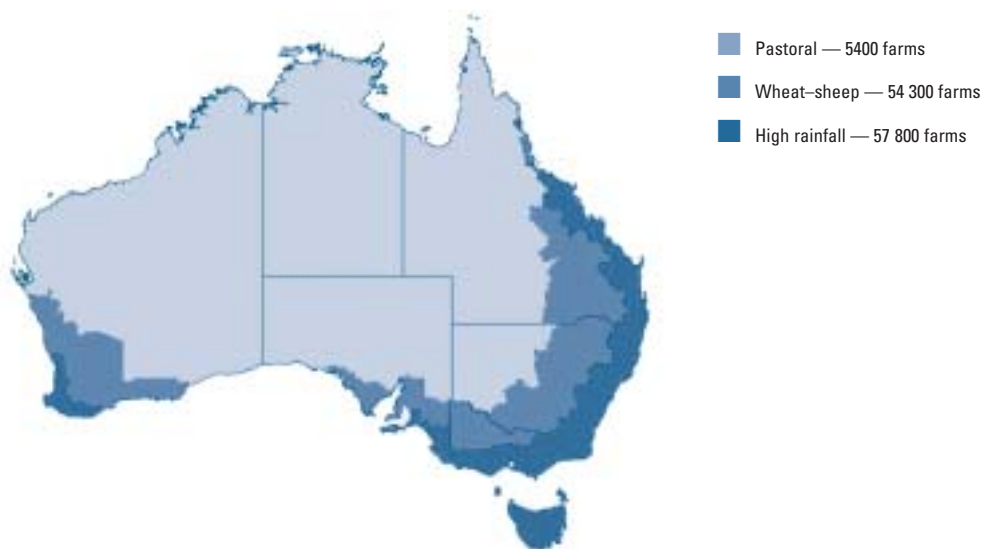
2. The agriculture and food sector

Sector is geographically diverse

Agriculture represents a vital part of the Australian economy and Australia is a significant player in world trade for several commodities. In 2001–02 there were 386 000 people employed in Australian agriculture. There were around 120 000 commercial farms spread across the continent, some 31 per cent fewer than in 1983–84.

Around 60 per cent of the Australian land mass is devoted to agriculture in one form or another, with the types of agricultural pursuit being dictated largely by climate, soil types and water availability. As indicated in Figure 2.1, there are three broad zones in which agricultural activity occurs. These are commonly referred to as the pastoral, wheat–sheep and high rainfall zones. Within these areas there is also some irrigation based farming, drawing on stored surface water (much of it from dams on major rivers and streams) and underground sources.

Figure 2.1 Australian agricultural zones, 2003



Much of the pastoral zone is characterised by low rainfall, less fertile soils, and large area farming activities involving the grazing of cattle for beef and sheep for wool and mutton. As the name implies, the principal farming activities in the wheat–sheep zone are cropping (principally winter crops), and the grazing of sheep (for wool, lamb and mutton) and beef cattle. Prime lamb, beef and wool production are undertaken in the high rainfall zone. The coastal part of the high rainfall zone is also where much of Australia’s dairy industry is based (along with some dairying in inland irrigation areas).

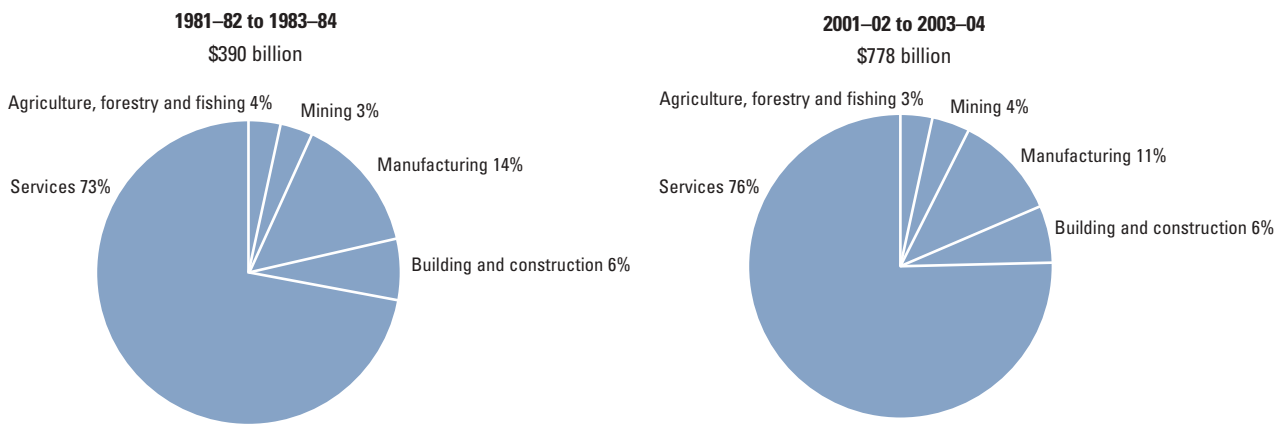
There has been a steady rise in the average size of farming operations and the amount of capital invested in those operations over time. For example, in the cropping industry the number of farm businesses fell by 29 per cent over the period 1983–84 to 2003–04, from around 19 000 to 13 500. Over the same period, average area cropped per farm rose by 30 per cent from 700 hectares to 910 hectares, while capital invested (in 2003–04 dollar terms) rose by 32 per cent from an average of \$1.9 million to \$2.5 million. As can be seen in the industry profiles in this document, similar trends are evident for most major agricultural industries.

Food and beverage processing covers a number of activities, including meat, dairy, seafood, fruit and vegetable processing, sugar, confectionery and beverage manufacturing, and flour milling and baking. This part of the agriculture and food sector comprises approximately 3400 firms and employs more than 187 000 people. Around half of the food processing firms and 40 per cent of employees are located in rural and regional areas. Employment has declined by an average of 1.2 per cent a year since 1997–98.

Economic contribution is significant

In terms of economic contribution, Australian agriculture represents a small but important part of the national economy (Figure 2.2). The contribution of agriculture to gross domestic product (GDP) and the relative shares of the other sectors of the economy are fairly typical of a mature economy, with the services sector now accounting for around three-quarters of output.

Figure 2.2 Sectoral contribution to Australian GDP In 2003–04 dollars



Although the Australian economy has almost doubled in size in real terms (net of inflation) since the early 1980s, the value of farm output has risen by only a little more than 60 per cent. Not surprisingly, agriculture’s share of GDP has declined — from around 4 per cent in the early 1980s to 3 per cent in the three years to 2003–04. This decline in relative importance reflects the growth in the services, mining and manufacturing sectors.

The interdependence of agriculture and other parts of the economy was highlighted in the 2002–03 drought. Although accounting for a comparatively small proportion of national GDP, the drought demonstrated the importance of agriculture to overall economic performance. A fall in the gross value of agricultural production of 19 per cent (to around \$32 billion) as a result of the drought led to a decline in Australian GDP of around 1 per cent in 2002–03 (Lu and Hedley 2004).

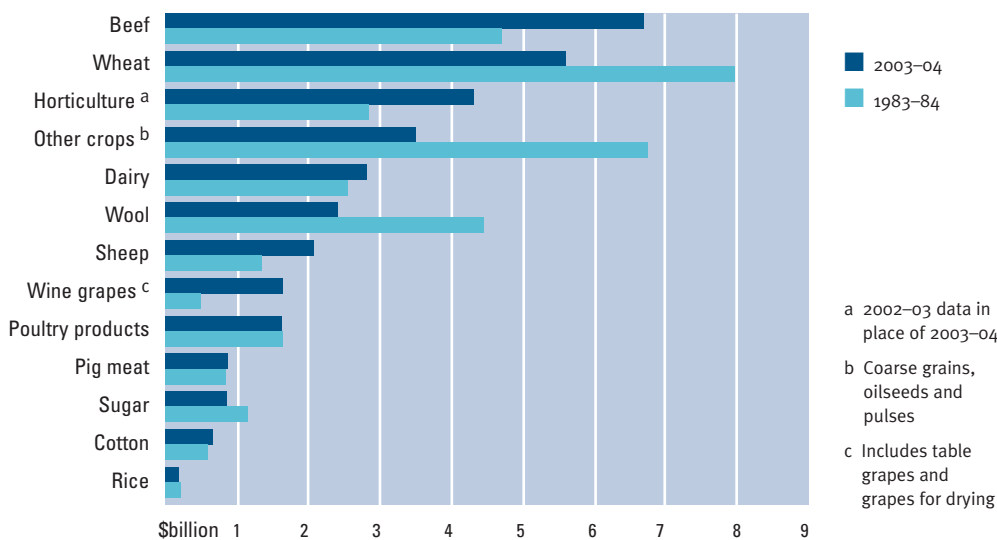
The processed food and beverage industry is Australia’s largest manufacturing industry, with a turnover of \$65.9 billion (excluding spirits) in 2002–03. It contributes around \$16.6 billion or 2.3 per cent to Australia’s GDP. Aggregate operating profit before tax for food and beverage manufacturers (including tobacco) for 2000–01 was \$3.78 billion, having grown by an average of nearly 11 per cent over the preceding three years. The largest 50 food and beverage companies in Australia comprise around 75 per cent of Australia’s turnover. There is also increasing multinational investment in the Australian food and beverage industry, with multinationals producing around one-third of Australia’s food and beverages.



Industries vary in size

Within Australian farming there is a wide diversity of both industries and their relative sizes. A ranking of the major industries according to their gross values of production in real terms is shown in Figure 2.3. The figure also illustrates how the relative magnitude of each industry has changed in the two decades since 1983–84.

Figure 2.3 Major Australian farm industries: gross value of production In 2003–04 dollars



Particularly noteworthy increases in the gross value of farm output include a 48 per cent rise for beef and veal (partly because of more cattle being finished in feedlots) since 1983–84; a more than doubling in the value of horticulture products produced (in part representing industry responses to growth in consumer demand for more and different fresh fruit and vegetables); and a 53 per cent rise in the value of sheep and lambs slaughtered and live sheep exports.

In contrast to the growth in the beef, horticulture and sheep meat industries, the value of wheat and other crops produced fell by 30 per cent from 1983–84 to 2003–04 (reflecting declining grain prices), and there was a 40 per cent fall in the value of wool produced (because of lower wool prices and markedly lower sheep numbers).

Natural resources are critical to agriculture

Land is the main basic resource used in agriculture, but water and its availability for agriculture are becoming critically important for the maintenance and further development of agriculture in many areas. Australian land tenure is mostly under freehold title or some form of long term lease from the crown, with freehold predominating in the more productive and closely settled regions.

Access to irrigation water from bores or river systems is licensed by the states, which also own major storages on rivers. Distribution of irrigation water from state owned facilities is mainly by private irrigation companies to which users pay fees for delivery. Increased trading of water (usually on a temporary basis and mainly within the same river valleys at this stage) is contributing to a more economically efficient allocation of the resource between competing users. Such trade proved to be particularly useful in ensuring that scarce water was available for higher value end uses in the 2002–03 drought.

Around 75 per cent of the water used in Australia is in irrigated agriculture, with the output from irrigated and accounting for a substantial proportion of the gross value of agricultural production. Commodity production that is wholly or partly dependent on irrigation includes rice, cotton, grapes, fruit and vegetables, sugar and dairying.

The value of output per unit of water used in agriculture varies considerably across the different agricultural commodities. For example, in 1996–97 (the latest year for which data are available) it was estimated that there was \$200 000 (gross value) of rice produced per gigalitre of water used, while at the other end of the scale there was around \$1.8 million of vegetables produced per gigalitre of water used (National Land and Water Resources Audit 2001, p. 67).

In common with other types of agricultural pursuits, irrigated agriculture has incurred significant environmental cost in some areas. Land and water degradation in Australia, excluding weeds and pests, is estimated to cost up to \$3.5 billion a year (COAG 2000, p. 5). One-third of Australian rivers are in degraded condition as a result of high water extraction rates and high nutrient runoff from surrounding land. At least 2.5 million hectares, or 5 per cent of cultivated land, is affected by dryland salinity.

The situation can be expected to improve, however, as users of land and water resources become more conscious of the adverse effects of environmental degradation on agricultural sustainability. For example, increased efficiencies in water use achieved through the adoption of newer technologies and better on-farm water management, as the allocation of water becomes increasingly market determined, will help reduce some of the degradation stemming from previous irrigation practices.

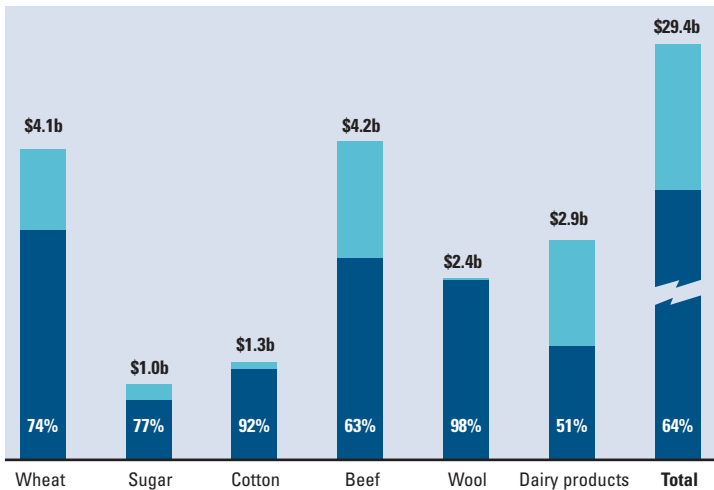
Trade is fundamental

Australian agriculture is strongly export oriented. In contrast to its relatively small contribution to the broader economy, agriculture accounted for around a quarter of Australia's merchandise exports in 2003–04 (\$26.1 billion). Imports of food and food products in 2003–04 were valued at around \$5.6 billion, roughly a fifth of the value exported.

The dependence of Australian farming on exports varies between industries. It is estimated that for the period 1997–98 to 1999–2000 around 64 per cent of the commodities produced on farms each year were exported (Figure 2.4). Among the larger industries the average proportion of production exported ranged from 98 per cent for wool to 51 per cent for milk (principally in the form of manufactured products such as cheese, milk powders and butter). Data for a number of other industries, such as wine grapes and intensive livestock, are in the industry profiles in this document.



Figure 2.4 **Share of farm production exported** Average 1997–98 to 1999–2000

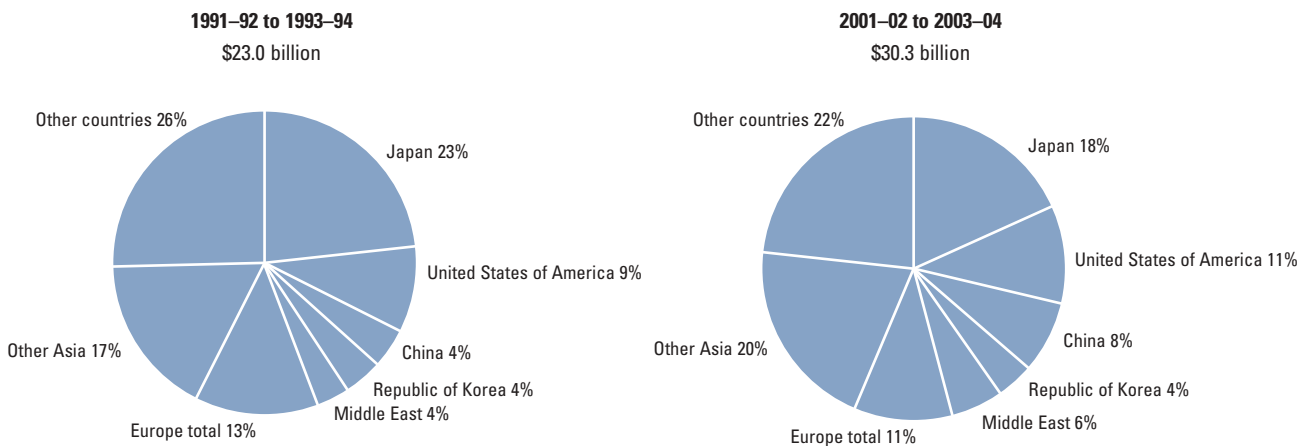


In addition to the direct contribution of exports to farm earnings, changes in world prices and currency movements also have a bearing on producer returns. For commodities that are exported or that face competition from imports or domestically produced substitutes that are traded globally, domestic prices are generally relatively closely correlated with those in international markets.

The relative importance of different export markets for Australian agricultural products has been changing over time. As can be seen in Figure 2.5 there has been a shift in emphasis from European to Asian markets from the early 1990s to the present. The figures do not include exports of wheat, barley oats and rice, as these data are confidential. Growth in the share of exports to South Asian and Middle Eastern destinations in particular is therefore likely to be underestimated.



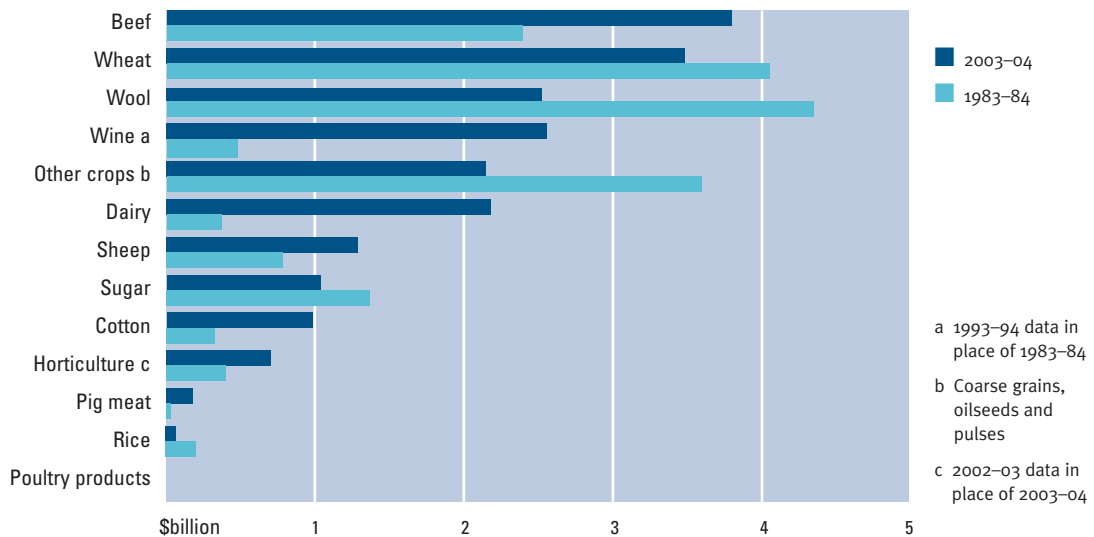
Figure 2.5 **Markets for Australian agricultural exports** In 2003–04 dollars



Australia’s main agricultural exports ranked according to value are shown in Figure 2.6 for both 1983–84 and 2003–04. Stand out export performers have been beef, wine and dairy, as these industries have responded to growing overseas demand for higher value products in these categories.

One notable feature of the export situation has been the major decline in the importance of wool as growers have cut output in response to reduced profitability. The decline in value of wheat and other grains exported is a reflection of lower prices and much greater amounts of these grains being fed to livestock (especially beef and dairy cattle).

Figure 2.6 Major Australian agricultural exports In 2003–04 dollars

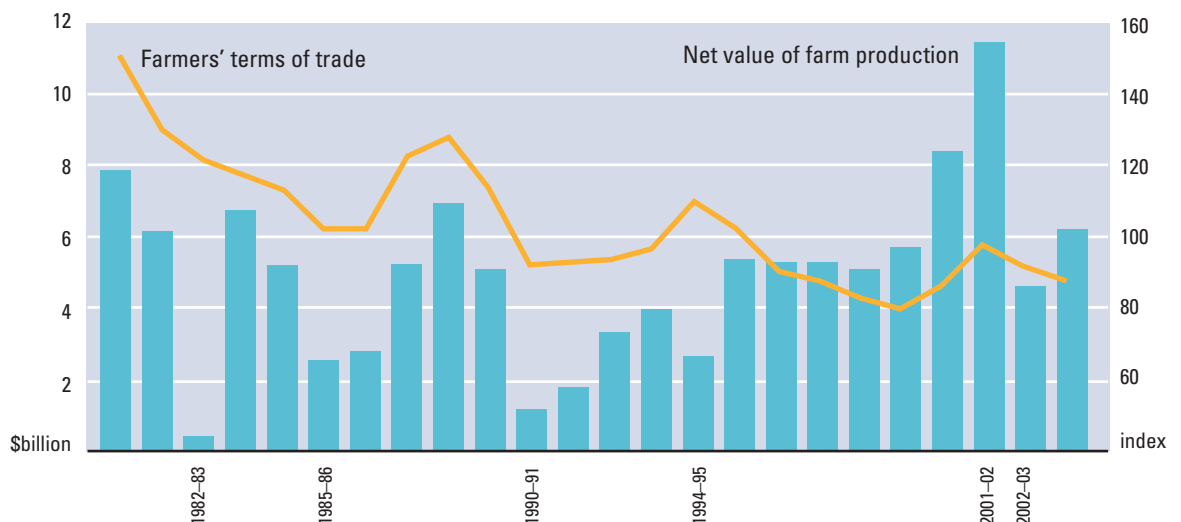


As has been the case to date, with income per person in Australia being high by world standards and the country having a comparatively small population that is growing only slowly, most of the future growth in Australian agriculture will depend on exports.

Farm business performance varies

Features of Australian farming are the volatility of income from year to year and the long term downward trend in farmers' terms of trade (the ratio of prices received to prices paid). These features are illustrated in Figure 2.7.

Figure 2.7 Australian farm sector income In 2003–04 dollars



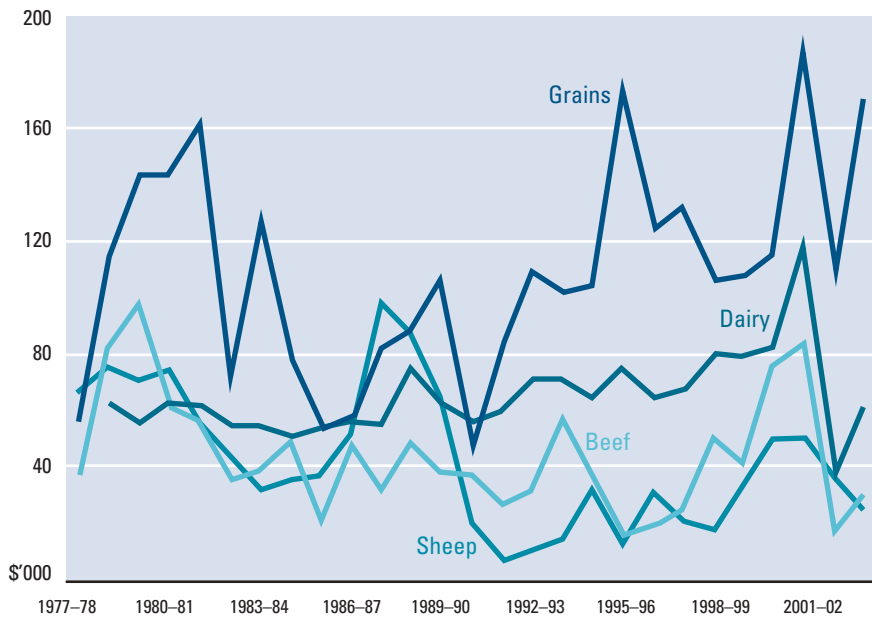
Declining terms of trade are a reflection of the fact that for agriculture (both domestically and globally) the prices of inputs used in the production of the various farm commodities have generally been rising faster than the prices received for those commodities. This is happening because global production is growing faster than global demand, causing commodity prices to fall in real terms.

In addition to the influence of weather and climate, policy and market changes can have a substantial effect on farm sector earnings. Of the years noted along the bottom axis of Figure 2.7, 1982-83, 1994-95 and 2002-03 were years of substantial drought and low farm sector incomes (represented here by the net value of farm production). In 1985-86, the introduction of the US Export Enhancement Program of subsidies for grain and dairy products — in competition with those of the European Union — resulted in lower export prices and hence lower farm returns.

At the individual farm level, economic performance has been highly variable across the major industries for which data are available over an extended period (Figure 2.8). Australian Bureau of Agricultural and Resource

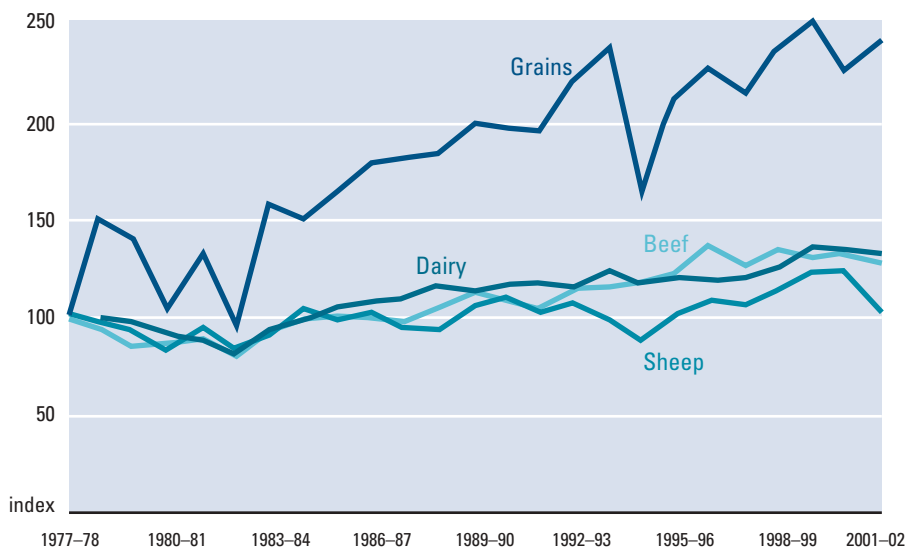
Economics (ABARE) surveys of broadacre farms (producing grains, sheep and beef) and dairy farms highlight the disparity in performance between grains and livestock (sheep and beef) farm businesses since the collapse of the wool reserve price scheme in 1990–91. Consistently higher returns from cropping during the past decade have encouraged the movement of resources invested from sheep to grains production.

Figure 2.8 Net farm cash incomes of Australian broadacre and dairy farm businesses Average per farm in 2003-04 dollars



In the face of declining terms of trade, Australian farmers have been able to remain internationally competitive and sustain their businesses and incomes largely through productivity growth. As shown in Figure 2.9, productivity on Australian farms (essentially the value of output relative to the value of inputs used) has risen strongly for the grains industry — averaging 3.3 per cent a year from 1977–78 to 2001–02 — but significantly less for sheep and beef.

Figure 2.9 Productivity growth on Australian broadacre farms and dairy farms



A significant part of the differences in relative performance between the grains and livestock industries reflects the gains to the cropping sector from increased mechanisation, improved herbicides and pesticides, better rotations, higher yielding varieties, and better farm management and marketing strategies. The lift in grains industry productivity is likely to have been significantly aided by substantial investment in research and development — both private sector and through organisations such as the Grains Research and Development Corporation (funded by grower levies and government grants), which invested \$124 million in research in 2003–04.

A feature of the farms surveyed is that a relatively small percentage of farms produce the majority of industry output. For example, in the grains industry the top 30 per cent of farms (in terms of value of output) accounted for around two-thirds of industry production in 2003–04 and achieved a return on capital invested that was almost double that for the industry as a whole. For beef, the top 30 per cent of farms produced an estimated 81 per cent of industry output; for sheep, they produced around 70 per cent of industry output; and for dairy they produced 59 per cent. In broad terms, the top performing farms have on average more capital invested and operate on larger land areas. Selected features of higher and lower performing farms as well as industry averages can be found in the industry profiles.

Food manufacturing — linking farms to consumers

Most food and fibre produced on Australian farms undergoes various levels of transformation before being consumed. This transformation involves a range of activities post farm gate that convert commodities originating from farms into a form readily usable by consumers. For example, milk is converted into a number of products (including pasteurised fresh milk, butter, cheese, milk powder, ice cream and yoghurts); while the processing of livestock into consumable form (carcass, cuts, boneless or packaged meat) is an essential part of the farm to consumer supply chain.

For most commodities produced on Australian farms, post farm gate processing or value adding is becoming more important as producers, wholesalers and retailers endeavour to satisfy consumer demands for more convenience foods and for differently presented and packaged products. For commodities such as fresh horticulture, product may be packaged or branded, especially into high value markets such as Japan. Beef is being marketed increasingly to domestic and export customers as a branded product with quality assurances.

Around 23 per cent of food and beverage manufacturing sales are to export markets. In 2003–04 Australian exports of substantially transformed food products (including meat, seafood, dairy products and wine) were valued at \$15.2 billion. Principal export markets include Japan, the United States, the United Kingdom and China. Imports were valued at \$5.6 billion, with major sources including New Zealand, the United States, Thailand and the United Kingdom. Principal categories of food imports include seafood, fruit and vegetables, and beverages (syrup, spirits and wine). More details of Australia's food trade are in the industry profiles part of this document.

Large multinational food and beverage companies, seeking to optimise their global competitive advantage and tap new growth opportunities, have been steadily increasing their presence in Australia. The growing competition has increased pressure on the larger Australian companies to rationalise and restructure to improve economies of size, reduce costs and innovate in order to compete more effectively in both the domestic and international markets.

Supermarkets account for 62 per cent of sales in the retail sector; however, their share of retail sales is declining at the expense of restaurants and takeaway outlets as more consumers are eating away from home. The large supermarket chains are increasingly contracting some of their requirements for fresh horticulture directly from larger growers and meat from feedlots with integrated processing facilities. However, packaged products such as cereal foods and frozen foods and pre-prepared meals are typically sourced from processor intermediaries.

Grocery retailing in Australia is highly competitive and is dominated by two major retailers. These major retailers are focusing on developing premium 'house' brands to grow margins and maintain competitive advantage. This development is expected to have a significant impact on food and beverage manufacturing operations and product lines, especially as the control of product development shifts from the manufacturer to the retailer. Costs are being eliminated by removal of waste and inefficiency in the supply chain and improved delivery systems. This is possible through the implementation of improved logistics and distribution capabilities supported by technology improvements.

With respect to the farm to retail supply chain, the value of raw commodities has tended to represent a declining proportion of the final sale price of food products, despite competition at all levels of the supply chain (Whitehall Associates 2004). The growing gap between farm-gate and retail prices is mainly a reflection of the rising cost of services (including transport, storage, handling, distribution and retailing) and the incorporation of additional attributes (packaging, presentation and qualities) in the final product in response to consumer demands.

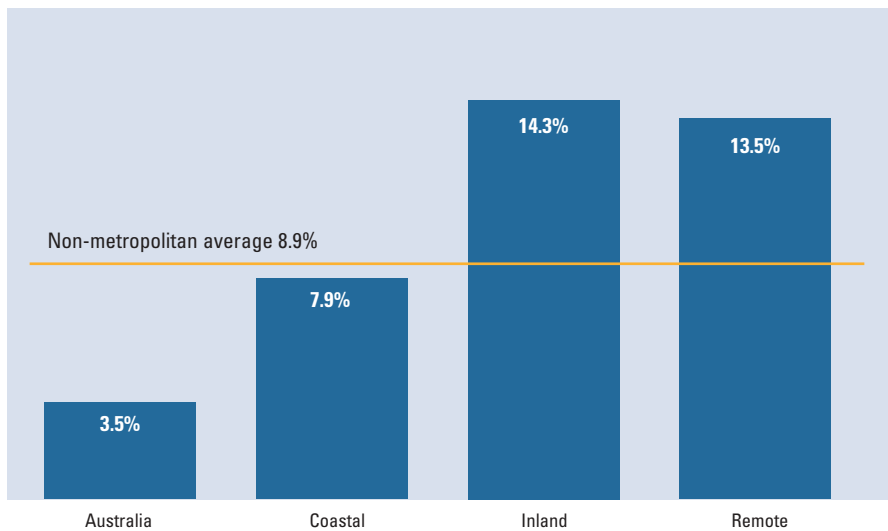
Agriculture and food in regional Australia

The agriculture and the food industries' economic importance in rural and regional Australia is particularly significant because of the income it brings into communities in the form of direct spending on goods and services and on employment (both direct and in service industries).

Across the economy as a whole, the agricultural sector provides only around 3.5 per cent of employment, but as is shown in Figure 2.10, the dependence on agriculture for jobs is significantly higher in inland and remote Australia than for the nation as a whole. At the time of the 2001 census, around 13 per cent of those employed in remote areas were engaged in agriculture, and about 14 per cent of those employed in the rest of inland Australia were in agriculture. Within these broad regions there is also considerable variation.



Figure 2.10 Share of employment in agriculture, by region



Regional definitions are based on Statistical Local Areas. Remoteness is as defined in Department of Health and Aged Care (1999) and is related to minimum road distances between population locations. Coastal areas are not remote and are within 80 km of the coastline. Inland areas are the remaining non-metropolitan Statistical Local Areas.



The food processing sector is also a substantial employer of labour in regional Australia. The sector accounted for only 1.7 per cent of total Australian employment at the time of the 2001 census, but 25 per cent of those jobs were in inland Australia and a further 14 per cent were in coastal Australia (Smith and Jahan 2003). (Some 12 per cent and 10 per cent respectively of total Australian employment in all occupations was in those regions.)

Meat processing, wine manufacturing, dairy product processing and fruit and vegetable processing employ significant numbers of people in inland areas. Out of a total of 39 100 people employed in food processing in inland (non-remote) regions in 2001, around 20 per cent were in meat processing, 19 per cent in wine production, 12 per cent in dairy product manufacturing and 10 per cent in fruit and vegetable processing.

In non-metropolitan coastal areas, sugar, meat and dairy products predominate. Of the 22 000 people employed in these areas at the time of the 2001 census, 23 per cent were in sugar manufacturing (milling and refining), 19 per cent in meat processing and 15 per cent in manufacturing dairy products.

3. Drivers of change



The agriculture and food sector operates in a dynamic and complex environment. In this chapter some of the major issues that are likely to influence the future direction of the sector are addressed with a view to identifying the principal factors at play in determining future competitiveness and sustainability. These issues include both domestic and international influences.

Prices received for agricultural and food outputs and the amounts of product entering markets are determined by global demand and supply as well as by multilateral and bilateral trade arrangements. Prices and access are also affected by national specifications concerning pest and disease risks and other matters such as food safety and labelling.

Within Australia, commercial interactions along the supply chain are central to competitiveness, as are the innovative capacity of technology, impact of skills and expertise and management of the natural resource base. In addition, Australian farmers and the food sector are operating in a dynamic environment of community expectations about animal production practices, production inputs and protection of the nation's flora and fauna.

Marketing challenges and consumer tastes

Globally, consumers are becoming more affluent, sophisticated and discerning. Tastes are changing and converging across national and cultural borders. Consumer preferences for product range, quality and food safety are driving change throughout the food production chain and can be expected to do so in the future.

In those developing countries where incomes are rising rapidly, consumers' preferences typically trend towards higher quality in foods, more value adding services in what they purchase, and more livestock products (such as meat and dairy) in their diets. In developed countries, changing consumer preferences and aging populations are presenting the suppliers of food with another set of challenges. The proportion of the population no longer in paid employment is growing quickly as the 'baby boomer' generation moves into retirement, leading to a decline in the expenditure on food by this segment of the population. At the same time, as the proportion of household members in employment and household disposable incomes in the broader community rise, there is a trend towards eating ready prepared food, either at home or elsewhere. Greater awareness in some sections of the community of the value of more fruit and vegetables in diets is being reflected in increasing demand for fresh produce.

Manufacturers and retailers are changing processes and developing new products to meet mainstream consumers' needs for taste, convenience, choice and price. As well, the number of brands in each category in supermarkets is narrowing as retailers endeavour to maximise the turnover of product per unit of shelf space. Major retailers are also developing premium 'house' brands that offer consumers an alternative to the major proprietary brands.

The growth in niche markets catering to tastes and preferences outside the mainstream will continue to provide important opportunities for some farmers and manufacturers. For example, 'organically certified' food grown and prepared under specified conditions represents a still relatively small but significant segment of the market that has developed and grown in response to expanding consumer demand for 'natural' foods.

With consumers globally taking more interest in the origins of their food and the processes underpinning its production, participants in the supply chain, from farmers to retailers, are positioning themselves to provide greater assurances about the health and safety of the products they offer. One manifestation of the response to consumer demands in this area is the action of food processors and packagers to provide more information on product labels. In this context, the provision of accurate and easy to understand information on labels, that better informs consumer choice, is likely to be an ongoing challenge for governments and industry alike.

Leading retailers are also developing proprietary safety certification standards that exceed government requirements for food safety. An example is the EUREPGAP standard, which is becoming a requirement for entry to some important, high value markets in Europe.

An important element of the relationship between food producer and consumer is the need for good communication up and down the supply chain. Although better labelling can help with such things as product differentiation, there is still potential for consumers to be confused about the particular attributes of various foods and alternative approaches to food preparation. The long running debate about the relative health merits of red versus white meats is one example of how consumers can be given conflicting messages by different elements of the agriculture and food industries. In addition to promoting the claimed attributes of their

respective products, industries will continue to engage in marketing campaigns aimed at maintaining consumer confidence, brand loyalty and market share for their products.

- Does the Australian agriculture and food sector have access to timely and accurate information regarding consumer expectations about retail food presentation, packaging, cooking and shopping preferences?
- What significant changes in domestic and export markets, with respect to labelling and product traceability, are likely as a result of consumer demands?
- Does the Australian agriculture and food sector have systems in place or under development to respond to consumer requirements for quality assurance, audit and product information?
- How best can food safety, labelling and other consumer driven requirements be achieved in ways that minimise the need for regulation, encourage investment in the sector, and allow maximum flexibility and innovation in product manufacture and marketing?
- What is an appropriate role for governments in contributing to the resolution of the above issues and in relation to the manufacturing, distribution and retail parts of the food supply chain?

International trading environment

Future growth in Australian agriculture is likely to depend more on export markets than on the comparatively small domestic market. Important trade related factors likely to affect the agriculture and food sector include world market conditions, barriers to trade such as tariffs and import quotas, quarantine and technical requirements such as labelling, maintenance of global competitiveness and market image, and biosecurity related decisions in Australia and elsewhere affecting imports and the disease status of exports.

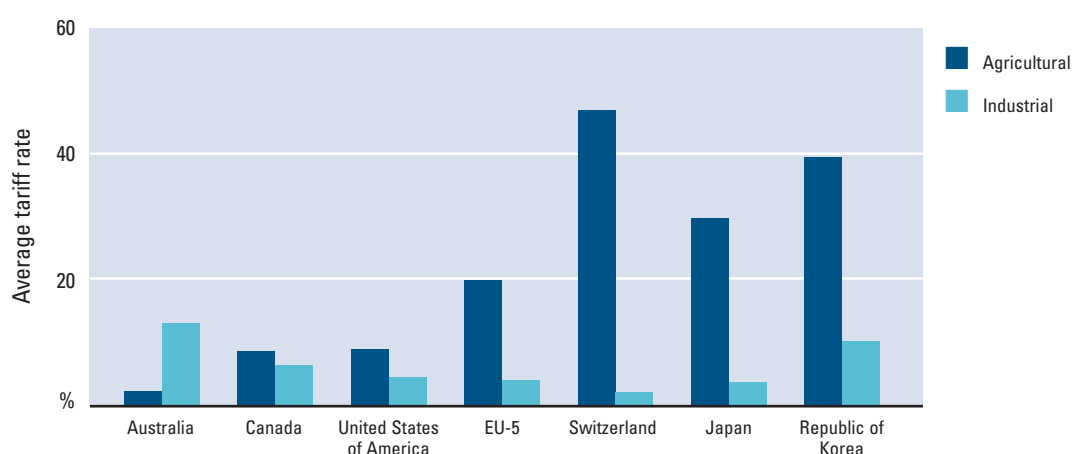
Nature of world markets

Australian farmers, like other exporters of agricultural products, operate in an environment of steadily declining terms of trade for their output. In real terms, the prices for farm goods are falling or steady while input costs continue to rise. This trend is expected to continue and represents a major challenge to Australian farmers.

The other major factor affecting export prospects is progress in efforts to remove policy induced distortions of world agricultural production and trade that adversely affect prices for producers, consumers and traders. Such distortions result in inappropriate investment and consumption decisions and reduced global economic welfare.

Despite major Australian Government efforts over many years and considerable success in some areas, agricultural tariffs are still much higher than tariffs on other merchandise trade (Figure 3.1). Also, agriculture is the only sector for which export subsidies are still permitted under global trade rules.

Figure 3.1 Average bound tariffs after the Uruguay Round



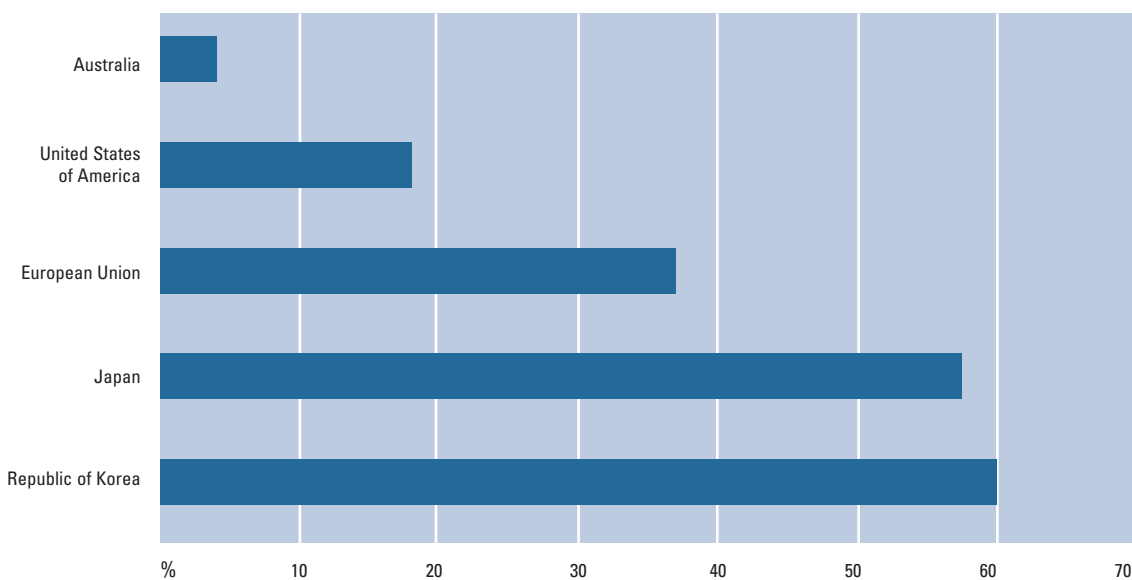
Direct government payments to agriculture (including market price support) account for a large proportion of farm incomes in many industrialised countries. The industrialised countries account for most of the direct government payments to farmers. The European Union, the United States, Japan and the Republic of Korea accounted for over 83 per cent of all domestic support notified to the World Trade Organization from 1995 to 1999.

The Organisation for Economic Cooperation and Development (OECD) estimated that, in 2003, the monetary value of transfers from consumers and taxpayers to support EU farmers as a result of policy measures was equivalent to 37 per cent of farmers' gross incomes (OECD 2004). For US producers the figure was 18 per cent, for Japanese producers it was 58 per cent, and for Korean producers it was 60 per cent. Australian producers received assistance equivalent to an estimated 4 per cent of their gross incomes in 2003 (Figure 3.2).

The Uruguay Round of the World Trade Organization (WTO) General Agreement on Tariffs and Trade (GATT) achieved an important result by bringing agriculture comprehensively into the multilateral trading system for the first time. It placed legally binding ceilings (commitments) on agricultural export subsidies (which were previously uncapped), imposed disciplines on domestic support, eliminated non-tariff barriers and bound all agricultural tariffs. This important first real step in reforming world agricultural trade needs to be consolidated and deepened through the WTO Doha Round negotiations. The Doha Round mandate and July 2004 framework agreement include reform commitments in all areas of agricultural support and protection, including the longstanding Australian objective of elimination of all export subsidies.

It is increasingly the case that complex, non-transparent technical barriers, particularly sanitary and phytosanitary (SPS) measures (including food standards), are affecting market access for agricultural products. Although the WTO SPS Agreement has placed greater disciplines on the use of such measures, they are generally time consuming, resource intensive and difficult to address.

Figure 3.2 **Share of farm gross incomes from government support, 2003**



Reforming agricultural markets

The main avenues for negotiating improvements in agricultural market access are multilateral rounds of discussions under the WTO and bilateral or regional trade agreements. Australia can be expected to continue to pursue an agenda of mutually reinforcing multilateral and bilateral trade reform over the longer term.

The WTO, consisting of 148 member states, is the only trade negotiating forum that addresses domestic support and export competition as well as direct market access issues. WTO negotiations are therefore an essential element of any effective trade reform strategy.

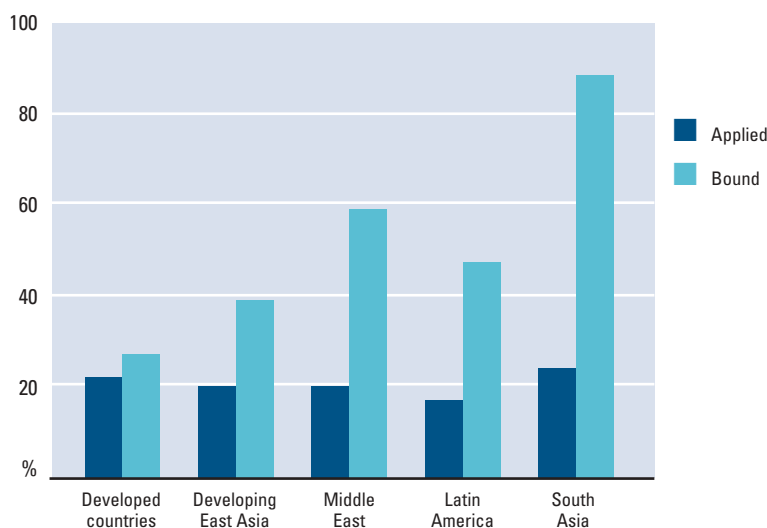
Agriculture is at the centre of the Doha Round and is the subject of the most difficult negotiations. The major subsidisers — the European Union, the United States and Japan — are all constrained by protectionist interests in their farm sectors and are reluctant to open their markets for the products of most interest to Australia or to make deep cuts to their subsidy programs. An added complication for the Doha Round is the reluctance of some developing countries to contribute to the reform process themselves, notwithstanding the increasing importance of agricultural trade between developing countries or the benefits they would derive from their own trade reform.

Australia is committed to the principles and effectiveness of the WTO and continues to promote the need for further reform. Australia is one of the original contracting parties of the GATT, and has a strong interest in the maintenance of an effective rules based trading system as well as in the liberalisation of trade in agriculture, goods and services. For the past 19 years, Australia has chaired the Cairns Group coalition of WTO members, which advocates outcomes for agriculture that would substantially improve market access, reduce trade-distorting domestic supports, and eliminate export subsidies.

While multilateral agricultural trade reform is critically important, it requires detailed negotiation. The expanding membership of the WTO, the requirement for consensus decision making, and the growing range and complexity of issues being addressed in the WTO mean that the pace of reform is slower than many members would wish.

Negotiations in the WTO are based on measures such as ‘bound’ tariffs and permitted levels of domestic support and export subsidies that are often well above actual levels of support. Bound tariffs are the tariff ceilings that WTO members have committed to respect, and are often well above the tariff rates that members actually impose (known as ‘applied’ tariffs). As a result, negotiated reductions in bound tariff rates do not necessarily translate into reductions in applied rates of tariffs. This is especially the case for developing countries, where there is often a substantial gap between bound and applied tariffs for agriculture (Figure 3.3).

Figure 3.3 Agricultural applied and bound tariffs, 2002



Bilateral and regional trade agreements are valuable tools for liberalising market access restrictions on agricultural and processed food products in ways that complement WTO outcomes.

Access improvements secured through free trade agreements with Thailand and the United States are providing greater export opportunities for Australian farmers. Potential free trade agreements that are currently being discussed with China, Malaysia and the United Arab Emirates, and have commenced with the Association of Southeast Asian Nations (ASEAN), can be expected to provide Australian farmers with expanded export opportunities and help reinforce the relevance and importance of trade reform globally.

- What processes and systems does Australia (industry and government) need to have in place to better identify emerging trends and future challenges, impediments to and opportunities for improving the agriculture and food sector’s trade performance?
- How best does Australia make use of multilateral and bilateral negotiations to achieve trade enhancing outcomes for the agriculture and food sector?
- How can Australia play a greater role in encouraging multilateral trade reform, and what actions can government take to further develop bilateral trading relationships?

Biosecurity

With the Australian agriculture and food sector becoming more globalised, there is heightened risk to this country’s favourable pest and disease status. Factors contributing to this increased risk include growing volumes of trade, a significant rise in international travel, demographic and environmental changes, intensification of agricultural production, and the threat of bioterrorism.

Australia’s relative freedom from many of the debilitating pests and diseases of animals and plants that affect other countries is of considerable benefit to its competitive position in areas such as agricultural production and trade. This disease and pest status has been maintained over the years through the country’s relative isolation as an island continent and through significant investment in quarantine activities to protect against incursions of exotic pests and diseases.

Risks to Australia’s biosecurity status in plants and animals are increasing with the emergence and re-emergence of a number of serious diseases and increased potential for the spread of a range of these

and plant and animal pests. For example, major problems continue to occur overseas with BSE (bovine spongiform encephalopathy, or mad cow disease), avian influenza and foot-and-mouth disease. Within Australia, diseases such as Japanese encephalitis, citrus canker and Australian bat lyssavirus have emerged.

There will be a continuing need to ensure that Australia's biosecurity risk management systems are well adapted to meet the various challenges that emerge, while at the same time ensuring that the measures employed are proportionate to the risks involved. As part of this process, import policies and procedures will need to be underpinned by rigorous scientific assessments as part of a range of consultative and transparent import risk analyses. Biosecurity risks will continue to require management based on sound science and the development of appropriate import protocols.

It will remain critical that Australia continues to work with other countries to reduce and manage biosecurity risks to human, plant and animal health. Efforts are likely to stay focused on the management of major pests and diseases, on the improvement of international SPS standards that apply to international trade, and on maintaining intelligence and surveillance to help identify new and emerging diseases.

Increased public awareness and emphasis on managing biosecurity risks will be important to the maintenance of Australia's capacity to detect and respond to pest and disease incidents. Within this context, response plans and management arrangements that include sharing decision making and funding with industry are likely to be increasingly desirable for managing major animal and plant pests and diseases.

Food traceability requirements and systems are likely to be increasingly mandated in response to demands from consumers and governments in Australia and overseas. The expansion of such systems will mean that when food safety incidents occur, products can be traced back to source, remedial action taken, and regulations changed to minimise the likelihood of future occurrences. These processes will be important for addressing disease incidents, as well as concerns about potential bioterrorism. Product traceability mechanisms such as the National Livestock Identification System will become more widespread and impose particular management requirements through the supply chain from the retail level to farm business.

- Are there opportunities for Australia to improve its risk management approach to quarantine? What further investments are needed and how are these to be funded?
- What other actions are required to improve food safety outcomes, including improvements and extensions to current systems such as traceback?

Supply chain dynamics

Globalisation and deregulation over the past 20 years have meant that structural change in industries around the world will increasingly affect Australia. In addition, the trend towards consumers demanding increasingly differentiated products is likely to continue and will provide a challenge for all participants in the supply chain to be innovative in meeting consumer needs.

There is a wide differential in the relative size and market power of participants in the food supply chain. The nature of farming is that the majority of businesses tend to be small to medium sized family businesses. This is in contrast to predominant business structures higher up the supply chain, where there is a global trend for food and beverage industries to be dominated by large multinational manufacturers and retailers. Such companies have steadily increased their size and reach, through mergers, acquisitions and aggressive growth strategies. In some situations takeover targets have been identified strategically for their share of key local markets.

Establishing efficient and well linked supply chains has become integral to lowering production costs for food and beverage manufacturers and securing contracts with leading food retailers. Multinational food manufacturers have been rationalising core business segments and brands and restructuring to achieve greater economies of scale, particularly in marketing and distribution. As part of this process, manufacturing facilities have sometimes been relocated in close proximity to high growth consumer markets, and the purchase of raw materials and inputs is being increasingly centralised.

Retailers are implementing new supply chain initiatives to reduce costs and to improve responsiveness to changing consumer demands. Strategies being introduced by the major retailers focus on reduced inventories in stores, store-level inventory replenishment software, streamlined handling of goods between supplier and supermarket shelf, and sourcing from regional distribution centres.

Australian food and beverage manufacturers will need to exploit a range of factors in order to be successful in the global marketplace. These include several features that currently make Australia attractive as a location for food and beverage manufacturing. Such features include a plentiful supply of food raw materials at world market traded prices; agricultural production systems that are widely perceived as environmentally clean and largely free of many of the diseases prevalent in competitor countries; and a strong food regulatory framework that helps underpin the safety of Australian food products. Australia also rates favourably in terms of its transport infrastructure, research and development, education and skill levels, management competencies, relatively low sovereign risk, and proximity to major Asian growth markets.



However, Australia's processed food and beverage industries are unlikely to be globally competitive without being able to attract new capital investment on an ongoing basis. In a world where capital is highly mobile, the ability to attract investors will depend on the factors mentioned above, as well as on perceptions that the economy is soundly managed, and labour reforms aimed at achieving more flexible workplace arrangements. An important potential impediment to the expansion of food manufacturing that is relatively labour intensive, however, is that Australian labour costs are relatively high compared with those in many other countries, particularly in the Asian region.

Within the food supply chain in Australia (and other developed economies), increased concentration in the processing and retailing sector has given rise to community debate about the implications for market competition. Having fewer and larger processors and retailers means that suppliers are faced with decreasing marketing options. The greater bargaining powers of the retailers, for example, mean they are able to transfer more of the costs of retailing (such as spoilage risks) and margin pressures on to suppliers who are competing for available shelf space (Whitehall Associates 2004). Competition regulation and enforcement systems will therefore need to ensure that market power is not abused. In this context, attention will also need to be paid to minimising barriers to entry, so as to ensure that the threat of competition places a discipline on companies, particularly where there are only a small number of large participants in the market.

While the focus can often be on the potential negative effects on agricultural producers of large companies in the supply chain, it is important to remember that there can be significant benefits. Large companies can often achieve greater economies of scale, apply better technologies and develop better supply chain linkages. Frequently these companies are operating in international markets where size can be important in ensuring that they are cost competitive. Multinationals operating in Australia can also bring benefits through linkages to major international customers. Furthermore, by moving away from wholesale market based purchasing to direct contracts with farm suppliers, large retail chains are likely to have a direct influence in the adoption of better farm level production processes aimed at producing higher quality output on a more economically sustainable basis.

- Are additional policy or regulatory actions needed to encourage continued strong competition in the supply chain? Is enough being done to minimise barriers to entry and to ensure that market power is not abused?
- What actions, if any, should government and industry be taking to encourage improved supply chain linkages — including greater transparency in pricing and better information flows that benefit all participants from the farmer to the consumer?
- How do Australian food manufacturers improve their competitiveness in order to take advantage of growing consumer demand for more value added products and services, especially in export markets?



Infrastructure in the agriculture and food sector

The future ability of the agriculture and food sector to service existing markets and exploit new market opportunities will depend critically on the capacity of Australia's infrastructure to handle future volume growth. Infrastructure of key importance includes transport, ports, telecommunications, energy and irrigation facilities.

It will be important that roads, railways and ports have efficient facilities that are well linked and that investments occur where the potential economic benefits to the community are greatest. Given competing demands for public funds, the private sector can potentially play a more significant role in infrastructure investment. It will therefore be critical that opportunities for private infrastructure investment are maximised and that market information conveys clear signals for investment opportunities.

Transport infrastructure has always been important in linking the elements of the supply chain in the agriculture and food sector. The AusLink White Paper indicates that the total freight task is forecast to almost double in the next 20 years (Department of Transport and Regional Services 2004). Such growth, together with increases in other traffic, will add considerably to the pressure on the national network. Local roads provide basic access from farms to food processing facilities and retailers. They are vital feeder roads to the more significant arterials and highways and are important to Australia's overall transport efficiency, particularly in rural and regional Australia. For ports, the Australian Competition and Consumer Commission has noted that after several years of strong growth, capacity constraints are emerging in stevedoring, leading to cost pressures.

Reliable and affordable communication infrastructure is important to Australian farming and food processing remaining competitive in the global market. Rapid development in communications technologies means that there will be a requirement for ongoing high levels of investment in related infrastructure. Technologies such as the internet allow farmers to shop around more easily when buying inputs and selling outputs and to seek out greater levels of information. Mobile phone technology can allow speedier communication with suppliers and can also offer health and safety advantages.

Investment in irrigation infrastructure is of particular importance to agriculture. There has been considerable such investment by governments over the past century, and the continued maintenance of such irrigation

infrastructure and economically efficient use of irrigated water is vital to maintaining the contribution of irrigated agriculture to the Australian economy. Reforms over the past decade have meant that local irrigation infrastructure is often controlled by private water supply authorities. Much of the irrigation infrastructure in Australia is aging and will need to be replaced over the coming decades. There are also significant efficiencies to be gained from upgrading some infrastructure to prevent water loss. The planning and financing of these investments will present an ongoing challenge for water supply authorities and water users. Very few new water storages have been constructed over the past decade, as increasing public opposition driven by environmental concerns and costs has prevented many projects. New irrigation opportunities are likely to be restricted largely to water derived from water saving and recycling projects.

- What criteria should government use in identifying priorities for investment in infrastructure critical to the future of the agriculture and food sector?
- What infrastructure investments should be funded by the private and public sectors respectively?
- What is an efficient and effective level of communications technology provision in rural and regional Australia? What should be the role of government providing in such technology?

Management skills and labour supply

With increasing requirements for business planning, enhanced market awareness, the use of modern technology such as computers and global positioning systems and better agronomic management, modern farm managers will need to become increasingly skilled. Higher levels of formal education will increasingly be a feature of farm manager credentials, particularly for new entrants, as will increased use of information technology on farms.

Access to supplies of suitably skilled labour will be important for the success of farming, food and beverage manufacturing, food retailing and associated industries such as banking and farm input supply. Immigration and education and training policy will play a role in ensuring the supply of labour as the overall population ages in rural and regional Australia. Continued efforts to increase the level of workforce participation, particularly among those groups not currently fully participating in the labour market, is also likely to be a key element of industry and government strategies to address labour supply and skills shortages in the agriculture and food sector in the future.

Labour supply issues are likely to be in industries where significant levels of mechanisation are difficult to achieve. Common examples are sheep shearing and fruit picking, where there has been evidence of difficulties in securing sufficient labour in recent years. Immigration policy (including working visa arrangements), the training of skilled workers, the development of labour hire systems that provide continuity of work in industries with strong seasonal peaks, and industrial relations reforms are likely to be important in a growing economy where other sectors are strong competitors for workers.

Superior management skills and practices are a common feature of the better performing farm businesses in Australia. To a significant degree, better performing farmers appear to make greater use of modern communication tools and are more adept than the average at investigating market opportunities, at researching customer requirements, at business planning and financial management, and at adopting the latest farming techniques.

Risk management skills in particular are an important element of modern farm management. Farmers manage a number of different risks, including those relating to climate, finance, price and workplace safety. A number of risk management practices have become popular, including use of climate and farm management software packages such as RAINMAN, futures trading, use of consultants and diversification. Nevertheless, adoption of risk management practices by Australian farmers is highly variable. Although the cost of services may be a factor in restricting the use of consultants and other professional advisers, attitudes to risk taking activities (including uncertainty about the results of employing new practices) are also likely to be important.

- How do immigration policy (including working visa arrangements), education and training and industrial relations systems affect labour supply to the sector? What changes, if any, would assist export competitiveness?
- What farm management skills are most important to farm performance? Once identified, how are they best integrated into education and training policies?
- Is enough emphasis being given to building the skills, expertise and knowledge of farmers accessing industry assistance programs?



Innovation and research and development

A key driver in improving farm performance is the provision and adoption of new technologies. For this reason, the systems in place to develop innovative technologies and encourage research and development are important.

Coordination and funding

Because of the diversity of activities being undertaken at any one time in a large number of organisations around the country, it is difficult to obtain a comprehensive picture of agricultural research and development expenditures. Nevertheless, it is estimated that in 2000–01 total funding by the Australian Government, states and territories amounted to almost \$966 million. Through the rural research and development corporations and companies, over \$460 million was contributed to agricultural research and development expenditure in 2003–04, utilising a combination of industry levies and matching funding by the Australian Government (up to a maximum of 0.5 per cent of the industry's gross value of production) for eligible research and development activities.

In the research and development context, there are likely to be a range of important issues that can be addressed in the interests of increasing the competitiveness and sustainability of the Australian agriculture and food sector. These include a more consistent national strategic agenda for agricultural research and development; more active involvement of research investors in collaboration with research providers developing programs of work; greater coordination of research activities across industries, research organisations and issues; and investment in human capital to ensure a skilled pool of research personnel in the future.

Technology adoption

Technology development and adoption is vital to the success of the agricultural and food processing industries. It is estimated that agricultural research and development has driven 85 per cent of the 2–4 per cent a year productivity growth evident in many agricultural sectors over a sustained period. However, as noted in Chapter 2, performance is not consistent between industries, with the cropping industries achieving higher productivity growth than livestock industries.

Effective dissemination of research and development outcomes to facilitate adoption of innovations by industry is important in maintaining productivity. Government and industry will have a vital role in promoting the adoption of the new research findings with greatest potential benefits at regional and local levels. It will be important to the future development of agriculture that the reasons for differences in productivity growth between the agricultural industries be investigated, with a view to identifying the areas where the returns to future research — including factors in technology adoption — are likely to be the greatest.

The cost of adoption is likely to be a factor influencing research take up. Adoption and adaptation by the agricultural industries of publicly funded research outcomes is more likely under an 'open access' approach, rather than where restrictions are applied through intellectual property rights and an overemphasis on commercialisation. Finding an appropriate balance between the two will be increasingly important to the future progress of the sector.

Take up of biotechnology

Biotechnology offers potentially significant benefits for agricultural productivity and natural resource management. Some of Australia's major competitors, such as the United States, Canada, Argentina and Brazil, already make substantial use of genetically modified (GM) crops, and China is making large investments in the technology. Around eight million farmers in 17 countries are growing GM crops. Australia could be placed at a competitive disadvantage if it does not manage the adoption of GM crops appropriately.

A major issue, for both consumers and industry, is community acceptance of GM technology. In the past, new technology has often faced community resistance but when the benefits become widely known and concerns surrounding new technology are addressed acceptance generally follows. The development of GM products with direct benefits to consumers is likely to assist in this regard. However, partly as a result of community pressures, policies in most Australian states currently do not allow the commercial release of GM crops other than cotton and carnations. Issues such as crosspollination with non-GM crops, segregation of supply chains and legal liability will also need to be addressed in order to gain wider acceptance of GM crops among Australian farmers.

- Does Australia need to widen the scope for agricultural research and development to place greater emphasis on issues such as food safety, value chains, natural resource management, biosecurity and capacity building?
- Is there a need to further develop a consistent national research and development agenda? How should this agenda be integrated with industry specific research programs, with clear definitions of roles and responsibilities?
- What opportunities exist for rationalising Australia's research and development infrastructure? How can research and development provision be made more responsive to users' demand requirements?
- What actions need to be taken to allay community concern about GM products?



Community perceptions of farming

Perceptions of farming in the broader community can be expected to affect the industry through what is viewed as acceptable or preferred in the marketplace and through (sometimes associated) policy approaches to governments. In recent years, for example, communities have raised their expectations of farmers' management of the environment and placed pressure on governments for policy responses.

A difficulty for the farm sector in its relationship with the broader community is that of communication. As Australia becomes more highly urbanised and its economy more diversified, the community at large is steadily becoming less connected with agriculture and losing some understanding of the thinking behind how farmers run their businesses. Community attitudes towards the rural sector are illustrated by the results of a 2003 survey commissioned by the National Farmers' Federation. In that survey, 54 per cent of respondents rated environmental degradation as an extremely important issue facing rural and regional communities and Australian farmers. Notably, this issue rated above security of farm incomes in terms of perceived community importance.

A further example of the importance of changing community attitudes, both in Australia and overseas, and the potential for these to influence farming practices is the growing debate about animal welfare. Concern about animal welfare can jeopardise markets and impose pressure for tighter government regulation. Animal welfare activists are increasingly targeting consumers and retailers with campaigns to try to bring about changes in husbandry systems perceived to be harmful to the welfare of the animal. Recent examples include protests against the export of live animals, the practice of mulesing sheep to protect them from blowfly strike, and intensive livestock production systems for poultry and pigs. Such trends in consumer activism are likely to continue and will be an ongoing challenge for the farming sector to manage.

It will be very much in the interest of industry to manage future debate by anticipating issues and demonstrating commitment to good animal welfare through significant investment in animal welfare practices. Ensuring effective high standards that meet general community expectations are achieved and maintained will be a key element in allaying public concerns.

A greater awareness in the farming and food processing sector of the need to be more responsive to customer wishes is reflected in efforts by some producers, processors and retailers (often working jointly) to differentiate their products from those marketed by the sector more generally. For example, the growth of 'organic' production systems and the identifiable marketing of the resulting produce represents one type of response to the perceptions of some in the community about farm practices (such as the use of artificial fertilisers and weed and pest control using chemicals) and how they may affect food quality. In the case of animal welfare, part of the egg industry has responded to concerns about battery hen based production by establishing 'free range' egg production systems and labelling their products accordingly.

- What further actions need to be taken to provide reassurance to the wider community about the sector's environmental and social responsibility (including on animal welfare)?
- To what extent should the government and industry set measurable environmental and social targets that the community can use to judge performance?
- Does the Australian Government need to be more involved in regulating animal welfare?

Sustainable management of resources

Over the past 20 years, public policy discussion of natural resource management has focused largely on emerging physical land and water degradation problems and constraints affecting the productivity of agricultural and food industries. Resource management issues are likely to be pre-eminent among the various domestic policy challenges facing Australian government and agriculture over the next couple of decades.

In recent times, public policy concerns have extended beyond these matters to embrace future management arrangements for land, water and the diversity of native flora and fauna. The underlying issues are complex and relate to matters of resource access, sovereign risk affecting investment prospects and costs of capital, resource pricing, trade in water and other resources, alternative means to manage public and private interests, and the respective roles of regulation and community based catchment planning in achieving local, regional and broader social goals.

Taking water reform forward

In 2004, the Council of Australian Governments (COAG) agreed on the National Water Initiative (NWI) to take forward a comprehensive range of water reforms on matters including defining access rights, fostering water trade, providing water for environmental outcomes, assigning risk transparently in response to reallocation of water from consumptive to environmental use, accounting for the sourcing and disposition of water more clearly, and establishing the National Water Commission to assess progress with the initiative and to administer programs to assist its implementation.



While the agriculture and food sector has much to gain from the NWI, there will be continuing challenges in its implementation and development. The most challenging areas for government, water users and the broad community are likely to be in further improving the operation of water markets, implementing a risk assignment regime associated with water property rights, and progressing transparent and effective processes for water resource planning with a view to determining allocations for consumptive and environmental purposes. Dealing with the effects of change arising out of the initiative will be a major issue for governments and industry, including in improving water use efficiency.

Resource access issues

There is also discussion concerning land management, particularly the management of native vegetation but also the protection and enhancement of biodiversity, flora and fauna.

The impact of different land management regimes on the sustainability of productive resources and biodiversity is an important consideration in this debate, and just where landholder responsibilities for publicly sought outcomes begin and end is also a key issue. Who should be accountable for those outcomes and what role farmers should play in funding their delivery are also likely to remain the subjects of debate.

A range of policy approaches such as regulation, community/catchment based solutions and other market based instruments (such as stewardship payments) have been proposed to tackle the policy challenges. Regulations have been used by governments to pursue land management and environmental objectives but can be costly in terms of forgone production and missed development opportunities.

The National Action Plan for Salinity and Water Quality and the Natural Heritage Trust rely on catchment management and regional authorities to play a part in achieving environmental outcomes. Today, there are some 56 natural resource management regions across Australia. This reflects the assumption that plans that are owned by regional communities have a greater chance of achieving good natural resource management outcomes than do 'top down' approaches that attempt to impose external solutions. The challenge in this approach will be to improve coordination between different levels of government and regions to ensure that appropriate mechanisms are in place to deal with production and conservation tradeoffs without resorting to regulation.

Adapting to climate change

A further issue of significance for the future of rural and regional Australia is that of climate change. The extent of likely climate change and its implications for the level and pattern of agricultural activity in Australia and other major agriculture producing nations are highly uncertain. There is now broad acceptance, however, of the need to have strategies available for managing the risks of climate change.

The interests of all sectors, including agriculture and food, will need to be considered as Australia contributes to and engages in the ongoing international policy dialogue. Robust solutions that provide durable and effective outcomes on a global basis are yet to emerge, and the agricultural and food industries will need to ensure that they contribute constructively to this debate to ensure that account is taken of their interests. The risk of climate changes potentially presents a major challenge to a sector as dependent on the climate as is agriculture and food.

Key issues that need to be worked through by government, industry and the wider community include decisions on what management support tools and training are required for farmers and rural communities to improve their use of climate information in planning decisions. Work will need to continue on developing appropriate strategies for the future. Dealing with such issues will most likely require a partnership of industry, government and research specialists to come up with good outcomes for the agriculture and food sector and for the community at large.

- What more can farmers do to better position themselves to maximise opportunities likely to emerge from the National Water Initiative? How much untapped potential is there for farmers to improve water use efficiency and what are the critical investments required to unlock that potential?
- Where do landholder and other stakeholder (including the wider community) responsibilities lie, in achieving environmental and resource management outcomes in respect of vegetation and biodiversity?
- What are the relative merits of different policy approaches to conserving biodiversity and native vegetation? What role should regionally driven programs play in finding and funding solutions?
- What planning, research and development and other policies need to be put in place to manage the threat of climate change over the medium to longer term?



4. Portfolio policy framework



The overall objectives of agriculture and food sector policy are to increase the profitability, competitiveness and sustainability of Australian agricultural and food industries and to enhance the natural resource base to achieve greater national wealth and stronger rural and regional communities.

The Australian Government has policies and programs in place that have assisted the sector's development to date, and these are presented in this chapter. A number of these policies have been developed jointly with state and territory governments to reflect respective responsibilities under the Constitution. The policy framework underpinning the objectives is depicted in Figure 4.1.

Figure 4.1 **Conceptual representation of Australian Government policy for the agriculture and food sector**



Improved market access and performance

International trade is vital to the sector, and improving market access and performance is addressed through a number of trade related policies. Both multilateral and bilateral negotiations aimed at expanding market opportunities are currently being actively pursued, and more are anticipated. Australia also plays a leading role in encouraging multilateral trade reform in a number of ways, including, for example, through the Cairns Group of exporting nations. Under the Agricultural Cooperation and Development Program, cooperative agreements have been established with key countries such as China, Indonesia and Thailand to initiate relevant projects to assist agricultural and trade development. A further agreement is currently being developed with Malaysia.

Skilled, financially, self-reliant producers

The Australian Government has committed to building the skills of farmers with a view to enhancing their self-reliance. The key focus currently is on the business and risk management skills of primary producers. The principal program to achieve this purpose is the Agriculture — Advancing Australia (AAA) package. By the end of the current funding, in June 2008, more than \$1 billion will have been spent on AAA since its inception in 1997.

Since 1997, about 150 000 primary producers have participated in training and education under the AAA FarmBis program, designed to encourage the development of a more innovative, business oriented attitude to farming. Australian Government funding for the program is contingent on matching funding from state and territory governments. Farm Management Deposits provide a tax effective incentive for farmers to put funds aside in good years, to be drawn on in less favourable years.

Welfare assistance is provided to farmers in financial difficulty, through the AAA Farm Help Program, while they decide whether to leave agriculture. Funding is provided for advice to assist them with the decision, and retraining and re-establishment grants are also available if they do decide to leave. The Rural Financial Counselling Service provides financial information and decision making support to around 10 000 farm families in financial difficulty each year. Financial assistance for situations outside the bounds of normal risk management, such as extreme drought, is provided through the Exceptional Circumstances program. Exceptional Circumstances assistance includes welfare support for farm households and assistance in managing the farm business through the exceptional event and into recovery.

Sustainable use and management of the natural resource base

The Australian Government's programs seek to encourage sustainable use and management of the natural resource base on which the agricultural and food industries rely. These programs include national initiatives to address issues of sustainable resources management. The major programs are the Natural Heritage Trust (NHT) (\$3 billion Australian Government funding over the period 1996–97 to 2007–08), the National Action Plan for Salinity and Water Quality (NAP) (a total of \$1.4 billion, half from the Australian Government and the balance from state and territory governments), and the National Landcare Program, which has been in place since the 1980s (receiving funding of \$660 million between 1996 and 2008). The NHT also receives funding from the states and territories. Landcare is delivered directly to landholder, community based groups, while the NHT and NAP are delivered through regional bodies. The NHT, NAP and Landcare programs also have national components for the delivery of nationally strategic programs such as environmental management systems and the Envirofund.

Water programs are a significant element of sustainable resource management. The National Water Initiative, agreed to by COAG in August 2003, aims to increase productivity and efficiency of water use, sustain rural and urban communities, and ensure the health of river and groundwater systems. In addition, relevant jurisdictions of the Murray–Darling Basin have agreed to provide new funding of \$500 million over five years to address water allocation issues in the Murray–Darling Basin. Another initiative is the Great Artesian Basin Sustainability Initiative (GABSI), aimed at the rehabilitation of the Great Artesian Basin. GABSI is a cooperative effort involving the Australian Government, relevant states and landholders, with total funding of \$74.7 million over the life of the program.

Benefiting from new technology and practice

There is a unique and successful partnership between the Australian Government and industry that delivers benefits from new technologies and practices to underpin prosperous and productive rural industries and healthy regional communities. This partnership is undertaken through a number of statutory research and development corporations and industry owned corporations law companies. The government collects industry levies and provides matching funding. During 2002–03 the corporations invested more than \$454 million in research and development.

The New Industries Development Program (with \$14 million over five years from 2006–07) helps people in the agricultural and processed food industries turn innovative business ideas into competitive, profitable and sustainable commercial ventures, through competitive grants, scholarships and learning tools.



Protecting the health and safety of our plant and animal industries

The protection of the health and safety of Australia's plant and animal industries is undertaken through partnerships between the Australian Government, industry and community groups. The aims are to manage animal health and welfare, plant health and protection, residues, food safety and agricultural production and inputs, including agricultural and veterinary chemicals, and to be in a position to respond on a national basis to significant pest, disease and food contaminant emergencies. A number of activities contribute to this, including programs to improve Australia's readiness to respond to animal and plant disease emergencies (allocated \$21.6 million in the 2004–05 Budget).

The Australian Quarantine and Inspection Service (AQIS) maintains quarantine integrity through border control arrangements for international passengers, cargo, mail, aircraft and other vessels entering Australia, and through post entry plant and animal quarantine arrangements. AQIS also facilitates Australian exports by providing export inspection, auditing and certification services to agricultural and food industries. In 2001–02, Budget funding for AQIS was \$596 million over four years. Building on the principles set out by the Australian Government in 1997 for effective quarantine systems, Biosecurity Australia conducts transparent and scientifically based biosecurity assessments, using a partnership approach with stakeholders, and develops and reviews biosecurity policies and procedures.

Responsive and efficient industry

A number of the Australian Government's programs are designed to encourage the development of responsive and efficient industries. For example, the National Food Industry Strategy (with funding of \$102 million over five years from July 2002) seeks to enhance the competitiveness of the food industry through significant funding for innovation in the food industry as well as facilitating better supply chain management and to enhance approaches to trade and market development. Leadership in agriculture is encouraged through the Women in Rural Industries and the Young People in Rural Industries programs. There are also industry specific adjustment programs such as the sugar industry reform package (\$444 million over five years) and the dairy industry adjustment package (\$1.94 billion, including \$1.63 billion in direct payments to farmers over eight years). The sugar package is funded in part by levies on retail sales of sugar and the dairy package is funded totally by levies on drinking milk sales.

Broader economic influences

General economic and social policy issues of importance to the entire economy, including the agricultural and food industries, are addressed by broader government policy outside the framework depicted in Figure 4.1. For example, the pursuit of labour market reform, education and training policy, infrastructure planning, microeconomic reform and macroeconomic management all affect the sector but are not specific to it.

Looking to the future

Responding to the pressures faced by the agriculture and food sector in the future will be a major challenge, and the policy framework is likely to be put under substantial pressure to meet its objectives. Policies will need to be continually reviewed to ensure they are appropriate to meet the demands of a changing operating environment and to ensure profitable, competitive and sustainable Australian agricultural and food industries in the future.

It is envisaged that the inventory of policy and program measures outlined above will be an aid to such an assessment of their appropriateness to the challenges that lie ahead. In developing and implementing future policies for the sector, the key challenge for the Australian Government's programs will remain that of ensuring that the agriculture and food sector remains viable and sustainable and that it has widespread acceptance and support within the Australian community.

