



Ensuring a profitable and sustainable agriculture and food sector in Australia

Issues for consideration

Agriculture and Food Policy
Reference Group

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A. Introduction

1. Purpose of the paper

This paper has been prepared to assist and encourage those interested in the future development of Australia's agriculture and food industries to make submissions to the Agriculture and Food Policy Reference Group, established by the Minister for Agriculture, Fisheries and Forestry, the Hon Warren Truss MP.

The review is taking place at a time when the agriculture and food industries are being squeezed in many regions by continuing drought, a difficult international trading environment, increasing constraints on access to natural resources, and differences in economic performance (such as strongly rising non-agricultural commodity prices and several years of sharply rising housing asset prices).

Making submissions

To assist those wishing to make a submission to the Reference Group, this paper identifies various issues that might be addressed. At the end of each section there is also a box with questions to which the Group would welcome any responses.

Providers of submissions should consider themselves free to submit other information that they consider relevant to the development of future policy directions for Australian agriculture and food. This information could include instances of actual or potential obstacles to the maintenance of profitable and sustainable agriculture and food businesses.

The Reference Group encourages data, examples, case studies or other illustrative information that support the arguments being made.

When making a submission, participants are asked to complete a Submission Cover Sheet (included in the guidelines provided with this paper and also obtainable from our website at: www.agfoodgroup.gov.au/submissions.html). The cover sheet seeks your contact details and your agreement, unless otherwise specified, for the Reference Group to make your submission public.

The deadline for submissions to the Reference Group is Monday 18 July.

About the Reference Group

The Reference Group was appointed following Mr Truss's release of *Australian Agriculture and Food Sector Stocktake* at ABARE's annual Outlook conference in March. The group is chaired by National Farmers' Federation President, Mr Peter Corish. Members of the Reference Group and a brief biographical note on each are on our website at: www.agfoodgroup.gov.au

The *Stocktake* report details the sector's performance and identifies challenges for Australian agriculture and food. Copies are available from the Reference Group's website or by calling 1800 427 978 (freecall).

The Reference Group's task is to make recommendations that will enhance a sustainable and profitable agriculture and food sector. The Group will consult widely in undertaking its work and will present a report to Minister Truss by mid December.

The Reference Group's approach

In addressing the terms of reference (see our website) a framework has been established for considering the various issues. Although the report is being prepared specifically for the Minister, it will be crucial to policymakers generally, the farming community, service providers, and food manufacturers and distributors. The Reference Group would like its report to be a constructive 'agent for change'.

The report will be divided into four key areas:

- markets for agriculture and food;
- competitiveness of Australian agriculture and food businesses;
- using and managing natural resources; and
- rural and regional communities.

Each of these areas will be discussed briefly here.

2. Future operating environment

If the past is any guide, in 10 to 15 years time, the agriculture and food sector will be significantly different from what it is today. Many of the changes are likely to be unforeseen, often with unexpected consequences. Even so, there are some trends and developments about which we can be reasonably confident, including the following.

- Winning better access to world markets and maintaining domestic biosecurity will remain critically important to the Australian agriculture and food sector.
- Farmers' terms of trade (prices received for outputs relative to prices paid for inputs to production) will continue to decline over the longer term. This is principally because, with technological change contributing to improved productivity, global production is growing faster than global demand, causing commodity prices to fall in real terms.
- Most output will continue to come from a relatively small number of farm and food manufacturing businesses.
 - Significant changes to operating structures can be expected as businesses seek better returns on capital invested.
 - At the same time, there will be continued growth in 'lifestyle' farming relatively close to major urban and regional population centres.
- The development and adoption of new technologies will be paramount to maintaining profitability.
 - As part of the process of remaining economically viable, new products will emerge in response to changing consumer demands and market opportunities.

- Pressure to import raw materials for food manufacturing is likely to rise as businesses seek to reduce constraints such as seasonality and, in some cases, costs in domestic supply.
 - Increased imports of both fresh and processed foods will have significant implications for sectors such as horticulture and regions reliant on significant amounts of seasonal or part time work in food processing and harvesting — including for off-farm supplementary income.
 - Increased raw material imports will also place greater pressure on Australia’s food safety and security surveillance systems.
- Food production will involve more direct linkages between suppliers and major retailers as the latter increasingly require a ‘supply chain’ approach. This may mean less farm output going through ‘public’ markets such as fruit and vegetable markets and livestock selling centres, and more use of direct contracting and strategic alliances with wholesalers, distributors and retailers.
 - There are likely to be fewer players in mainstream commodity supply and processing, but more niche market operators in food and fibre products.
- Although there is currently considerable debate about genetically modified crops in Australia, it is possible that they will become more widely accepted as producers strive to be profitable and globally competitive.
 - Consumer acceptance of genetically modified foods may rise with greater availability of foods with particular nutritional or health benefits.
- Agriculture and food businesses will need to adapt to the various challenges arising from climate trends, such as increasing average temperatures and changing rainfall patterns.
 - Risk management strategies will need to evolve to meet the potential challenges arising from climate change.
 - Research may be needed to develop new crops and varieties specifically suited to different climatic patterns.
- The importance of sound (ecological and economic) natural resource management will continue to grow.
 - Farmers are well placed to provide new environmental services such as improved water quality in catchments and biodiversity preservation that will complement their traditional enterprises.

It is worth noting that the agriculture and food sector will also continue to be affected by wider developments in the Australian economy. These can be expected to include:

- interest rates and inflation;
- the microeconomic reform agenda;
- the regulatory environment;
- the taxation regime;
- industrial relations settings; and
- interactions between the Australian and state/territory governments.

Where these developments raise concerns specific to the agriculture and food sector, they will be discussed in the Reference Group’s report.

B. Markets for agriculture and food

3. International markets

Australian agriculture remains strongly export oriented. Agricultural exports (including grains, livestock, meat, wool and dairy products) accounted for around a quarter of Australia's merchandise exports in 2003-04 (\$26.1 billion). Around two-thirds of commodities produced on farms (in value terms) are exported each year.

Future growth is likely to depend more on export markets than on the comparatively small domestic market. Important trade related factors include world market conditions, trade barriers such as tariffs and import quotas, quarantine and technical requirements such as labelling, and biosecurity decisions affecting imports and the disease status of exports.

Growing competition from countries such as Brazil and China means Australian agriculture and food exporters will be under pressure to improve competitiveness. Many developing countries — particularly China and Latin America — and an expanded European Union are achieving significant increases in productivity in agricultural production and exports.

It is vital that work continues to build market access opportunities — both bilateral and multilateral. Agriculture should not be sidelined, or downgraded, in such agreements because of domestic political sensitivities overseas. The two-way nature of trade agreements means there is also potential for greater import competition in the Australian market.

Multilateral trade negotiations

However imperfect it is, the World Trade Organization (WTO) is the most effective global mechanism for achieving a less distorted and more market oriented trading environment. The previous round of WTO negotiations (the Uruguay Round) resulted in legally binding commitments on agricultural export subsidies, imposed restrictions on domestic support, eliminated non-tariff barriers and bound all agricultural tariffs.

The WTO also provides a dispute settlement system for ensuring countries comply with WTO agreements. This legal mechanism has already proved valuable to Australian farmers in the case of export of lamb to the United States. Recent decisions against the European Union over subsidies for sugar and the United States over its cotton support program are further examples of the value of this mechanism.

It is vital that the current (Doha) Round of negotiations is concluded with substantial tangible benefits and without loopholes. To date, domestic political considerations in the United States, the European Union and elsewhere, the expanding membership of the WTO, the requirement for consensus decision making, and the growing range and complexity of issues being addressed in the negotiations, have meant that the pace of reform has been very slow.

Bilateral trading agreements

Bilateral and regional trade agreements can be valuable tools for liberalising market access restrictions on agricultural and processed food products in ways that complement WTO outcomes. Comprehensive bilateral trade negotiations that seek unimpeded access for agriculture should remain an important part of Australia's international trading strategies. Their relatively narrow scope compared with negotiated WTO agreements means bilateral and regional trade agreements are usually quicker to bring to finality, but the benefits that flow from them are generally smaller.

Australia has secured improved market access through trade agreements with Thailand, Singapore, the United States and New Zealand. Bilateral negotiations are underway with China, Malaysia, the United Arab Emirates and the Association of Southeast Asian Nations (ASEAN).

- *What more should Australia (industry and government) be doing to identify emerging trade trends and future challenges for the sector?*
- *Are there particular impediments to improving the agriculture and food sector's trade performance and opportunities?*
- *How should Australia make best use of multilateral and bilateral negotiations to achieve expanded market access for the agriculture and food sector as well as the eventual elimination of domestic support and the removal of export subsidies?*
- *How can Australia play a more effective role in encouraging multilateral trade reform?*

4. Domestic markets

In the domestic market consumer preferences for product range, quality and food safety are influencing food production. For instance, there is an increasing trend toward eating easily prepared food, while a greater awareness of the value of more fruit and vegetables in diets is being reflected in increasing demand for fresh produce.

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

Consumers are also taking more interest in the origins of their food and the processes underpinning its production, including the use of pesticides, animal welfare and environmental management. The provision of accurate, easy-to-understand information on labels will be a challenge, as will be decisions on whether mandatory labelling is justified or whether it can be left to the market to resolve.

There needs to be good communication along the supply chain between food producers and consumers so that suppliers can better meet the requirements of customers in a least cost sustainable way.

- *Is there a need for the Australian agriculture and food sector to have more timely and better quality information on consumer expectations about retail food presentation, packaging, cooking and shopping preferences? If so, how might this be achieved/provided?*
- *What significant changes in domestic and export markets, with respect to labelling and product traceability, are likely? Are the systems currently in place or under development likely to be sufficiently responsive to future consumer requirements for quality assurance, audit and product information? Should industry responses to such demands be left to businesses (individually or collectively) or is there a role for government here?*
- *How can food safety, labelling and other consumer requirements best 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 the appropriate role for government in resolving the above issues and in relation to the efficient operation of the manufacturing, distribution and retail parts of the food supply chain?*

C. Competitiveness of Australian agriculture and food businesses

5. Supply chains

Most food and fibre produced on Australian farms undergoes transformation before being consumed. 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 forms (cuts, boneless, packaged or manufactured meat) is an essential part of the farm to consumer supply chain.

Efficient supply chains are important for competitiveness

Supply chains encompass all the processes, infrastructure and relationships that support the transformation and value adding of food and fibre products from farms through to the final consumer. They typically comprise individuals or organisations linked by a common business relationship that work together to improve performance or competitiveness.

Supply chain cooperation may involve reducing costs, improving processes, increasing marketing performance and/or introducing sustainable development practices. Integrated supply chains often have a competitive advantage through an enhanced ability to anticipate and respond quickly to changing market conditions.

The emergence of global supply chains has highlighted the need for Australian food and fibre producers to adopt new skills and practices. Strategies focusing on improving the skills and capabilities of chain managers, identifying suitable partners, and building relationships and trust between those partners are priorities for successful chain performance. Competition is becoming more chain versus chain rather than company versus company.

Balancing market power

There are large differences in the size and market power of businesses in the food supply chain. Most food and beverage industries are dominated by large, often global manufacturers and retailers. These companies are growing in size and reach, through mergers, acquisitions and natural growth.

Within the food supply chain in Australia (and other developed economies), increased concentration in the processing and retailing sector has led to community debate about competition. Having fewer and larger processors and retailers means suppliers have reduced marketing options. Conversely, successful negotiation with a major retailer gives processors/manufacturers extensive market coverage.

In a 2002 report, the Australian Competition and Consumer Commission (ACCC) found there was no evidence of systematic price discrimination by suppliers in favour of the major retailers (ACCC 2002). Nevertheless, in an ever changing market environment, competition regulation and enforcement agencies such as the ACCC will need to remain capable of ensuring that market power is not abused.

Food businesses in manufacturing, retail and service provision are increasingly looking for new strategies to deal with their suppliers. Initially these strategies focused on reducing costs and prices to the consumer. Creative businesses are now looking to explore new ways of collaboration with their supply chain partners to drive innovation and gain a competitive edge through developments such as expanded private label marketing.

In the case of global operators with businesses in Australia, there is potential to benefit local producers through the market opportunities provided by linkages with major international customers. Furthermore, with large retail chains moving away from wholesale market based purchasing to direct contracts with farm suppliers, they are likely to have a direct influence in the adoption of 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 strong competition in the supply chain? Is enough being done to minimise barriers to entry and to ensure that market power, especially of retailers, is not abused?*
- *What actions, if any, should government and industry be taking to encourage improved supply chain linkages and management — including greater transparency in pricing and better information flows that benefit all participants from the farmer to the consumer?*

Competitive advantages through product differentiation and innovation

In order to maintain profitability, some of Australia's agriculture and food businesses may need to focus more on marketing differentiated products rather than on selling substantially homogenous commodities. This change of emphasis is likely to be most important for those food and beverage manufacturers with production processes that need substantial inputs of labour and, hence, are likely to find it increasingly difficult to be cost competitive with manufacturers in countries with lower labour costs.

That said, greater product differentiation is unlikely to be practicable for most farmers. This is because the costs of differentiation may well be higher than the price benefits. For many producers — general grain growers, producers of medium micron wools, irrigated grape growers and the like — the best options for remaining financially viable is likely to be to continue lowering costs, increasing productivity, adopting new technology, and increasing the scale of operation.

Australia's processed food and beverage industries are unlikely to be globally competitive without being able to attract new capital investment. In a world where capital is highly mobile, an inability to attract substantial new investment in plant and equipment means Australian food manufacturing will inevitably become less competitive.

The ability to attract new investment and retain existing investors will depend on a range of factors. These include, apart from the prospective return on the investment itself, perceptions about the management of the Australian economy and degree of sovereign risk, flexibility of workplace arrangements, reliability of high quality raw materials on a year-round basis, and efficiency of relevant transport and communications links.

- *How can 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?*

6. Education, skills and labour supply

Above average management skills and practices are a common feature of the better performing farm and food businesses in Australia. Operators of such businesses typically have more formal education, are better at identifying and responding to market opportunities and researching customer requirements, have more skills in areas such as information technology, business planning and financial management, and adopt better production techniques with superior agronomic and risk management practices.

Access to suitably skilled labour will remain important for the success of farming, food and beverage manufacturing, food retailing and agribusiness industries. The ability of agriculture and food businesses to attract and retain employees will depend, in part, on their ability to provide broadly comparable employment conditions to those prevailing in other sectors where there are similar skills requirements.

Labour supply issues will tend to be more acute in industries where significant mechanisation is difficult to achieve. 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 (such as shearing, cotton chipping and fruit picking), and industrial relations reforms are crucial in a growing economy where other sectors are strong competitors for workers.

- *How can immigration policy (including working visa arrangements), education and training and industrial relations systems be improved to address labour supply issues for the sector? What changes, if any, would assist export competitiveness?*
- *What management skills are most important to farm and food business performance? Once identified, how are they best integrated into education and training policies?*
- *Are there industry, community and government initiatives that would be particularly cost effective in attracting skilled labour into the agriculture and food sector in rural areas?*

7. Research, development, innovation and technology

Continuous innovation is integral to productivity growth in Australia's agriculture and food sector and in underpinning the sector's international competitiveness. Research is a major contributor to innovation. For this reason, the framework for research, development and extension activities will be important to the future competitiveness of Australia's agriculture and food industries.

The Australian, state and territory governments are working to improve the existing system through a review of gaps in research capabilities, support facilities and service delivery in Australian agricultural research, development and extension.

Funding research and development

Because research benefits are not always exclusive to those who pay for the research, market incentives for research are not always optimal. Often, ‘public good’ and ‘market failure’ arguments can be mounted in favour of government support. This is particularly the case for agriculture, which is why a large proportion of agricultural research is publicly funded.

There is also a good deal of work done by private sector groups — including farmers themselves and input suppliers — that contributes to better industry performance. Although they may not always be captured in official figures for research expenditure, such efforts are undoubtedly of substantial value.

Government research funding in agriculture takes a number of forms — direct grants to public research institutions, tax concessions for private research, and support of research and development corporations through collection of industry levies and the provision of matching funding.

The diversity of activities being undertaken at any one time in the large number of organisations around the country makes it difficult to obtain a comprehensive picture of research and development expenditures. However, expenditure through the rural research and development corporations and companies is estimated to have been more than \$460 million in 2003-04 (Department of Agriculture, Fisheries and Forestry 2005).

There are a number of different models of research and development corporations — those that are responsible for research and development only; those that also have a marketing role; and those that are involved in research and development, marketing and industry advocacy. All three models have evolved to meet particular industry requirements. The effectiveness of these models for taking rural research into the future may be worthy of policy attention.

Evaluation of the return on research and development funding is inherently difficult. However, assessment of the success of research and development activities is vital to government and businesses alike — government because it needs to account to taxpayers for the spending of public funds, and businesses because levies calculated as a (small) percentage of gross revenue can become a very high proportion of net profitability when, as now, margins are under pressure.

Other important aspects of research and development include the development of a consistent national strategic agenda; more active involvement of research investors and providers in developing programs of work; greater coordination across industries, and research organisations; and investment in human capital to ensure a skilled pool of research personnel in the future.

- *Is there a need for 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?*

- *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?*
- *Are the evaluation systems currently in place for assessing returns to research and development adequate and appropriate? How can these be improved to ensure better value for money invested?*
- *What is the optimal model for the structure of research and development corporations and companies? How can research and development provision be made more responsive and relevant to industry? What opportunities exist for rationalising Australia's research and development infrastructure?*

Technology adoption

For the full benefits of research and development expenditures to be realised, there generally needs to be wide scale adoption by industry.

Differences in technology adoption are likely to be a factor in the different rates of productivity growth between (and within) the agricultural industries. For example, higher rates of technological advancement and adoption appear to be the main reason for productivity growth in cropping being greater than in livestock in recent years.

The reasons for differences in productivity growth between the industries need to be understood, with a view to identifying the areas where the returns to future research and its adoption are likely to be greatest.

Adoption and adaptation by agricultural industries of publicly funded research results is more likely under an 'open access' approach than where restrictions are applied through intellectual property rights and a heavy emphasis on commercialisation. Finding an appropriate balance between the two will be increasingly important to the future of the agriculture and food sector.

- *Is there sufficient understanding of the drivers of adoption and how can this be improved? How important is technology adoption to the variation in productivity growth between and within agricultural industries?*
- *What are the tradeoffs in determining an optimal balance between the privatisation of the benefits from research and maximising its uptake by making results freely available?*

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. Australian biotechnology companies are also likely to move offshore if domestic opportunities are limited.

The threshold issue is community acceptance of GM technology. New technologies often face community resistance and in the GM case this has been exacerbated by emotion that has played on scepticism among some consumers. Proponents of the technology — among researchers, users and commercial firms — have arguably been complacent in dealing with the community concerns. Normally, when concerns are addressed and the benefits become widely understood, acceptance tends to follow.

At present, policies in most Australian states do not allow the commercial release of genetically modified crops, other than cotton and carnations. Issues such as cross-pollination with non-GM crops, segregation of supply chains and legal liability need to be addressed before GM crops gain wider acceptance among Australian farmers.

- *What actions need to be taken to address both producer and community concerns about GM products? Can Australia expect to keep GM foods out of the supply chain if other countries are accepting of these products? Would it be feasible to have GM and non-GM supply chains concurrently?*

8. Infrastructure in the agriculture and food sector

The ability of the agriculture and food sector to service existing markets, let alone exploit new market opportunities, depends on Australia's infrastructure, particularly transport (road, rail, and ports), telecommunications, energy and water. Agriculture and food industries would benefit from better coordination of infrastructure development consistent with national interest objectives.

Given competing demands for taxpayer funds, and pressure for tax cuts rather than additional public expenditure, the private sector will most likely play a more significant role in future infrastructure investment. It will therefore be critical that appropriate opportunities for private infrastructure are facilitated and that market information conveys clear signals for investment opportunities.

- *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?*

Transport

Transport infrastructure is the physical element linking the various components of the supply chain in the agriculture and food sector. Inefficiencies in the transport sector hinders competitiveness and reduces returns to agricultural and food producers.

Consistency of approach to standards and maintenance of roads and rail across jurisdictions is a key priority for the agriculture and food sector. The interdependence of the two modes of transport needs to be better reflected in decisions affecting the building or maintaining of road and rail networks in regional areas.

Funding of transport infrastructure needs to be allocated so as to maximise the economic benefits to the community. For example, in regard to the vexed issue of possible branch rail line closures, account needs to be taken of the increased costs that

may be imposed on the road system as a result, rather than just the prospective cost of branch line maintenance.

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 (ACCC 2004). The establishment of the Prime Minister's infrastructure taskforce serves to highlight the problems in this area.

- *What land transport initiatives are likely to prove the most cost effective in contributing to the improved competitiveness of Australia's agriculture and food industries?*
- *Are their particular regulatory impediments to the efficient operation of the nation's transport system that should be addressed?*

Communications

Reliable and affordable communication infrastructure is crucial for Australian farming and food processing enterprises remaining competitive in the global market. Rapid development in communications technologies implies substantial investments in related infrastructure will be needed over an extended period.

Service levels in regional areas are widely regarded as lagging behind those of urban areas (Estens, Bennett and Braithwaite 2002). However, the provision of new services in areas of low population density can be expensive and produce a poor return on investment. The possible full privatisation of Telstra has been a catalyst for discussion about the potential implications for service quality and costs in regional areas of fully privatised telecommunications.

Much of the discussion about the delivery of telecommunications services in rural and regional Australia has been focused on the potential for ADSL (broadband internet) services to be provided through upgraded copper and new fibre-optic cabling. With the sector undergoing rapid technological change, the provision of upgraded services through wireless and satellite technology may be more cost effective for the longer term.

- *What is an efficient and effective level of communications technology provision in rural and regional Australia? What should be the role of government in providing such technology?*
- *Should there be 'future proofing' of telecommunications in country areas through appropriate and transparent Community Service Obligations?*

Water

Much of the irrigation infrastructure in Australia is ageing 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 and to deliver improved services to irrigation farms, towns and cities. The planning and financing of these investments will be challenging for water supply authorities and water users alike.

Major advances have been made in recent years in improving the efficiency of water transmission and use. Laser levelling, microspray irrigation and the use of centre pivot and lateral move irrigators have all enabled water users to increase water use

efficiency. There remains considerable scope to improve water efficiency further in most areas.

Water savings and waste-water recycling have been identified as sources of additional water, particularly in areas where existing water resources are fully allocated.

Through the National Water Initiative, the Australian and most state governments have established a framework for investment in new or refurbished water infrastructure. As well as providing \$1.6 billion for the Water Smart Australia program that aims to accelerate the development and uptake of smart technologies and practices in water use across Australia, the initiative also requires governments to assess new water infrastructure proposals against criteria of economic viability and ecological sustainability. This process is being managed by the National Water Commission.

- *How can the need to replace or refurbish major water infrastructure best be managed? Is there a role for governments?*
- *Will existing water resources be sufficient to meet future water needs? Or will further water sources need to be identified?*
- *Will the development of more efficient and effective market instruments for water allocation overcome most of the supply problems likely to emerge?*

Energy

With modern production and manufacturing processes and transport systems being heavily energy dependent, the supply of energy in its various forms is another factor influencing Australia's agriculture and food industries. Australian demand for energy is projected to increase by 50 per cent by 2020, with an estimated investment of some \$37 billion required to meet the nation's energy needs (Department of the Prime Minister and Cabinet 2004).

The economy will continue to rely on fossil fuels for most of its energy and chemical requirements. Oil in particular will remain the key feedstock for transport fuels, agricultural chemicals, and synthetic fibres. Although ethanol makes only a small contribution to transport fuel requirements, government assistance arrangements mean there is potential for increased production and use.

Technology will play a key role in how the sector adapts to changing energy prices. At both farm and food processing levels, improved technologies aimed at achieving greater economies in fuel and energy consumption should help businesses to remain globally competitive.

- *Can energy market reforms (electricity and gas) be expected to have much effect on the agriculture and food sector?*

9. Biosecurity and quarantine

With the Australian agriculture and food sector becoming more globalised, there is heightened risk to this country's favourable pest and disease status due to growing

volumes of two-way trade, a rise in international travel, demographic and environmental changes, intensification of agricultural production, and even the threat of bioterrorism.

Australia's relative freedom from many of the debilitating pests and diseases of animals and plants that afflict other countries is a major competitive advantage. This disease and pest status has been maintained in large part through investment in quarantine vigilance to protect against incursions of exotic pests and diseases.

Australia's biosecurity risk management systems must ensure that the measures employed are proportionate to the risks involved. It is vital that industry does not view Australia's quarantine regime as a trade barrier to be used at whim against competitive import threats. Import policies and procedures need to be underpinned by rigorous scientific assessments as part of consultative and transparent import risk analyses.

In the changed global security situation since September 2001, more attention will need to be given to counterterrorism concerns. The potential vulnerability to significant disruption to trade and domestic food supply means Australia will need to maintain leading edge capacity and capability in both food safety and food security.

Food traceability requirements and systems are likely to be mandated, or developed by the market, in response to demands from consumers and governments. The expansion of such systems will mean that if food safety incidents occur, products will be able to be traced back to source, remedial action taken, and regulations changed to minimise the likelihood of future occurrences.

Trace back processes will be important for responding to disease incidents, as well as concerns about potential bioterrorism. Mechanisms such as the National Livestock Identification System will become more widespread and bring with them particular management requirements from the farm business onwards.

- *Are there opportunities for Australia to improve its risk management approach to quarantine? What further investments are needed and how should these be funded?*
- *What actions are required to improve food safety and security for Australian agriculture and food industries — including improvements and extensions to current systems such as trace back?*

D. Using and managing natural resources

10. Natural resource management

Australia's natural resources are among its greatest assets. The use and management of these resources has changed dramatically over the past 50 years and are likely to be pre-eminent among the domestic policy challenges facing governments and agriculture in future.

The aim of public policy in the management of natural resources is to balance the often competing objectives of generating national income from the resources while maintaining and protecting the integrity of the resource base.

The appropriate trade-off between competing objectives requires the placing of a value on alternative, non-financial, land uses. These values are generally viewed quite differently from public and private perspectives.

The community is becoming more aware of environmental issues and has been demanding higher standards of environmental management than in the past. The establishment of the Natural Heritage Trust and the National Landcare Program were, in part, a response to such demands.

The key natural resource management challenges facing the agriculture and food sector over the next decade or so are likely to be management arrangements for Australia's land, water and biodiversity.

Role of farm businesses in environmental management

Agricultural enterprises control more than 62 per cent of Australia's land area, around 75 per cent of water extracted for use (DAFF 2003) and provide a large proportion of the labour force in regional areas where resource management attention needs to be targeted. As such important custodians of land and water resources, it is vital that farmers be consulted closely if the overall benefits to be derived from the use of natural resources are to be maximised. Farmers are more likely to support an outcome in which they are actively involved rather than one with which they are forced to comply.

The relative responsibilities of landholders, governments and others, and who should be accountable and pay for environmental benefits, remain largely unresolved. Regulations have traditionally been the avenue used by governments to secure environmental objectives. However, as the Productivity Commission (2004) found, some regulations have imposed significant costs on landholders while not necessarily achieving their intended environmental benefits. As the shortcomings of regulation in achieving desired outcomes have become recognised, market based mechanisms have come to the fore as a more effective way to address the needs of both farmers and the wider community.

In future, farmers may be paid for their output of environmental services such as biodiversity (for example, the management of wetlands for migratory bird habitats), improved air and water quality and other environmental and public health benefits. To be feasible, incomes from delivery of environmental services would need to at least

offset any reductions in earnings from traditional agricultural enterprises that result from changed management practices.

- *What are the relative merits of different policy approaches to managing natural resources? Is it desirable that the move to market based instruments to achieve desired environmental outcomes be pursued more widely?*

Resource access and property rights

There has been widespread discussion of the importance of security of access or property rights for natural resources, with the aim of maximising the long term benefits from the use and protection of those resources. Secure access to natural resources is vital for farming enterprises.

As noted earlier, water resource management is an area where there have been significant achievements. There is active debate over native vegetation and the relative rights and responsibilities of landholders and governments in pursuing their respective production and conservation outcomes.

- *Where do landholder and others (including the wider community) responsibilities lie in achieving environmental and resource management outcomes?*

Achieving natural resource management benefits

Achieving natural resource management benefits on the ground is a key issue for all governments. Many of the problems faced, such as water availability, salinity and biodiversity loss, are not specific to one state or even region. Initiating landscape scale change requires cooperation between governments at all levels, the community, and agriculture and other affected industries.

Since 1999, the Australian and state and territory governments have invested heavily in a regional approach to dealing with natural resource management issues. This approach has resulted in the development of 56 regional groups that coordinate natural resource management activities within specified catchment regions. There may be benefits from building on the regional approach as investments can be better targeted both within and across catchments.

On-ground activity is only just commencing in many of these regions as plans and investment strategies are developed. As regional groups develop, they are being given greater decision making autonomy within pre-determined budgets. However, in many areas, the funding of regional groups and their capacity to meet objectives set still need to be resolved.

Within the overall task, priorities should be set based on the severity of the problem, the implications of taking no or limited action, and the ability of government, local community and industry funding to provide appropriate solutions. Funding should not be spread evenly across or within catchments, but should reflect the nature of the problems to be addressed and the broader regional, state or national priorities that are attached to their management or remediation.

- *How should government investment in natural resource management be best targeted?*
- *What is the most effective and efficient way to establish spending priorities across and within regions?*

Climate variability and change

Australia's climate is a key influence on agriculture. There seems little doubt that the Australian climate is changing, as it has always done. However, whether this change is due to natural variations in the climatic cycle or 'global warming' is still uncertain. Regardless of the causes, climate change has the potential to have far reaching effects on Australian agricultural production and the ongoing viability of many agricultural businesses.

Shorter term climate extremes, such as the current drought across substantial parts of eastern Australia, present significant challenges for the existing drought assistance system. Although the Australian, state and territory governments have provided a variety of drought supports, differences in approach have created tensions between governments and also between producers.

Because of the perceived shortcomings with aspects of the current system, governments agreed in April to a range of initiatives including: further development of a National Monitoring System to streamline Exceptional Circumstance application and assessment processes; changing the Exceptional Circumstance declaration criteria from requiring a severe and prolonged downturn in regional income to a production-based criterion; further work on better harmonising state and territory government drought declarations and support measures; a transition from drought business support to drought preparedness activities; and revised objectives for the National Drought Policy, including the need for appropriate assistance to be provided to producers experiencing exceptional drought and for this assistance to be equitable, efficient and timely.

In dealing with shorter term climate variation (within and between years), increasing numbers of farmers can be expected to demand more accurate and individually tailored weather forecasting services in order to better manage their businesses. In this respect, there is likely to be scope for government, industry and the community to encourage and support the development and greater use of better management support tools and training to improve farmers' use of climate information in planning decisions.

- *Are current policies for dealing with extreme climate events, such as the present drought, appropriately pitched toward the provision of short term relief and improved preparedness?*
- *How might Exceptional Circumstances mechanisms be improved without distorting sector responsiveness and investment adjustment to underlying market and climate realities?*
- *What policy and industry measures would best equip the agriculture and food sector to adapt to longer term climate change?*

E. Rural and regional communities

11. Rural businesses and communities

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

As agriculture changes, whether in response to positive growth opportunities — such as the development of the wine industry over the past two decades — or negatively — most notably during the current drought where farm expenditure is being severely cut — rural communities are inevitably swept up in the changes.

Changing nature of farming

A consistent feature of agriculture is, as noted earlier, the progressive decline in farmers' terms of trade (prices received for outputs relative to prices paid for inputs to production). Those farm businesses that remain viable in such an environment do so mainly through continuous productivity improvement.

Productivity gains come from a range of factors. These include growth in average farm sizes as some operators leave the industry; the adoption of new and improved technology; superior management skills; and innovative approaches to production methods and marketing. Technology in the form of, for example, minimum tillage techniques and much larger and more efficient cropping machinery, and the extensive use of polythene pipe and remote surveillance to achieve wider distribution of reliable stock watering facilities, has contributed immensely to productivity gains in the grains and pastoral industries respectively.

The process of continual consolidation of farms (and similar trends affecting food manufacturing businesses – and indeed all parts of the economy), together with economies of size, means the major share of agricultural and food output will continue to come from a relatively small number of operations.

Implications of change for rural communities

Longer term declines in permanent on-farm employment have been partially offset by a growth in services to farming — including contract fencing, machinery servicing, farm management and agronomic advice, soil testing and farm record keeping — provided by residents of country towns and villages. However, despite the growth in contracted services, total populations in some rural areas are likely to continue to fall as farm sizes and mechanisation increase, and as better employment opportunities in urban areas and larger regional centres attract labour.

In contrast, the development of new industries means that the population drain may reverse in areas where there is new investment and improved employment opportunities. The growth in the wine industry is a notable recent example of how an inflow of new investment to rural areas and associated increase in demand for labour can lead to a resurgence in the rural population.

Declining populations mean that there is generally a steady erosion of the social infrastructure in many rural areas. In such areas there is likely to be a growing policy challenge in addressing the implications of change for infrastructure such as services, education, health and finance. Declines in social infrastructure can accelerate the population shift from smaller rural towns to larger regional and major urban areas. Contributing to the decline in social infrastructure may be broader policy settings (in the area of taxation, for example) that, perhaps unwittingly, accelerate these processes.

Non-agriculture/food influences and developments (such as regional tertiary and health service institutions, tourism and mining) will have an effect on some rural and regional economies, population trends and demographic composition. Some of these developments may be the result of government and local community initiatives, while others (such as mining) are likely to be entirely the result of industry efforts.

- *What are the broader implications of change? How can the effects of change on rural communities and businesses best be managed?*
- *In attempting to maintain services and businesses in rural and regional communities — is there a role for removing or counteracting disincentives to the conduct of enterprises in these areas?*
- *At what point does it become uneconomic to maintain infrastructure in a given region? Should, for example, government be involved in supporting the provision of health services (such as doctors) in small country towns where these would otherwise disappear?*

Governments and adjustment to change

An important role for governments is to assist farm and food businesses, families and rural communities adjust to change. A wide range of programs is offered by both the Australian and state governments to encourage structural change (such as in the sugar and dairy industries) or the amelioration of the financial effects of unusual natural events (such as Exceptional Circumstances assistance).

Some forms of assistance provide a safety net for farm businesses and families struggling to cope with events such as drought or floods. However, in situations where there is a market related economic downturn, by supporting businesses that would otherwise fail, adjustment packages can have the effect of ‘prolonging the inevitable’ and delaying the change required to build more viable and sustainable rural sector. Agriculture is one of the only industries in which businesses can receive ongoing support beyond the usual welfare services provided by governments.

- *What is an appropriate role for government in facilitating adjustment and assisting those affected? What nature, level and duration of support should be provided?*
- *How should the unintended effects of adjustment assistance (for example, the maintenance of non-viable businesses) be best addressed?*

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