

PRIMARY
INDUSTRIES
& REGIONS SA
PIRSA

AGRICULTURAL COMPETITIVENESS ISSUES PAPER SUBMISSION

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PREMIUM
FOOD AND WINE FROM OUR
CLEAN
ENVIRONMENT



Agricultural Competitiveness Issues Paper Submission

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Executive Summary

Enhancing agricultural competitiveness – in terms of sustainable improvement in the standard of living for all Australians and growth in profit for our businesses through the efficient use of our nation's land, water, human and other resources – is a worthwhile ambition.

Agriculture is strategically important for South Australians. Agricultural production to farm gate together with associated manufacturing, food service and retail in total contributes up to 12% of South Australia's economy and around one in five South Australian jobs. Agriculture comprises around 20% of the economic output in our regions.

South Australia's food and wine industries alone generated more than \$16.3 billion in revenue in 2012-13 and accounted for 41% (or \$4.4 billion) of South Australia's total merchandise exports.

The expected growth in global food demand provides an opportunity for agriculture to build on our competitive advantages, including a clean environment, our productive farmers, a historically strong innovation system and a robust food safety and biosecurity regulatory environment.

South Australia is progressing three themes to agricultural competitiveness in local and global markets: build our brand; grow our capability; and secure production.

Under these three themes, this submission seeks to reinforce that there are significant opportunities for enhanced partnership approaches between the State and Australian Governments, and between governments and industry to enhance agricultural competitiveness. Anticipated outcomes include:

- Farmers and their industry partners applying a 'through the value chain' approach building our brand and creating value for farmers, other industry partners and consumers.
- Farmers developing tourism products that complement our world class food and wine – including luxury accommodation, education, interaction, interpretation, as well as art and culture in picturesque surroundings.
- Agriculture industry partners more aware of, and directly contributing to, our market access arrangements.
- Our capability significantly enhanced through increased private investment in productivity focused research and development.
- An agreed national approach to investment, including foreign investment, providing a platform for enhanced infrastructure and other development capital.
- Regionally based initiatives to close skills/capability gaps and facilitate farmers learning from top performers, thus enhancing farmer capability and improving farm gate returns.
- More secure agricultural production and market access as a consequence of collaborative management of biosecurity and food safety risks.

The South Australian Government notes that business risks to agriculture from poor natural resources management practices, environmental change, inadequate or inappropriate government intervention, and community expectations are given little attention in the Issues Paper, but are real, and warrant further attention.

Case studies of government programs, industry initiatives and industry experiences are presented for consideration by the Australian Government in developing and expanding strategies for enhanced agricultural competitiveness. Examples include:

- dairy farmer and supermarket collaboration in developing new local milk lines;
- enhancing global food security through 'safe and saved' food technology export opportunities;
- research expertise and collaboration at the Waite Institute;
- opportunities for increased productivity and farmer returns through enhanced soil management techniques; and
- a cutting-edge research and development facility in the Upper Spencer Gulf to combat fruit fly.

The South Australian Government seeks to be an active partner in developing these opportunities.

Introduction

The South Australian Government welcomes the opportunity to respond to the Australian Government's Agricultural Competitiveness Issues Paper.

To maintain and enhance Australia's agricultural competitiveness, we must collectively address the observed slow-down in agricultural productivity growth over the past decade.

The Issues Paper is an ideal opportunity to develop the policy platform for industry to discover valued and enhanced roles in the growing global food value chains and markets over the next 40 years.

There are important issues covered in the paper that will require governments to work with all stakeholders to address. The need to address the business risks to agriculture from poor natural resources management practices, environmental change, inadequate or inappropriate government intervention and community expectations should also be considered.

This submission highlights – by way of case studies and other examples – industry and government efforts to enhance the global competitiveness of the agriculture sector in South Australia. They also make clear our belief that a vibrant agricultural sector must be not only competitive, but also sustainable in its use of the nation's natural resource base.

The South Australian Government seeks to be an active partner in further developing the Agricultural Competitiveness White Paper and the future opportunities created when it is implemented.

Submission structure

This submission has four sections.

The first provides some context to our input by highlighting the role and importance of agriculture to South Australia, and of South Australia's agricultural output to the health of the national economy.

Importantly, it also provides background to the *Premium Food and Wine from our Clean Environment* program that is the focus for joint Government and industry efforts to harness the true potential of South Australia's agriculture sector.

This program incorporates three themes – *Build Our Brand, Grow Our Capability and Secure Production* – which have been used to structure this response with the specific issues raised in the Issues Paper arranged under these themes.

It is our intent to reinforce that there are significant opportunities for partnership approaches between the Australian and State Governments and between governments and industry to enhance agricultural competitiveness.

Context: Agriculture in South Australia

Economic contribution

The primary industries sector (agriculture, forestry, fisheries and aquaculture) has outperformed other sectors of South Australia's economy over the past 10 years, growing 83% in real terms compared with 27% real growth in the entire State economy¹.

South Australia's food and wine industries alone generated more than \$16.3 billion in revenue in 2012 – 13 and accounted for 41% (or \$4.4 billion) of South Australia's total merchandise exports. This contributed about 5% to the South Australian economy, the highest of any mainland State, with the next highest relative contribution being 2.7% in Queensland².

The agrifood and wine sectors, together with forestry, fisheries, aquaculture and related activities through the value chain, employed around one in five workers and accounted for around just under half of the State's total merchandise exports in 2012-2013³.

South Australia has an outstanding reputation for protecting our primary industries and environment from pests and diseases through our strong food safety and biosecurity systems. It is worth noting that South Australia is the only mainland State that is fruit fly free and one of the few places in the world free of the vine-destroying pest phylloxera. Maintaining and enhancing robust biosecurity and food safety systems is strongly emphasised, as these systems underpin market access and community confidence in the sector and are therefore fundamental to ensuring its profitability and future growth.

Being able to differentiate our products by their reliability and qualities provides a great opportunity for suppliers and producers. Consumers and markets are becoming increasingly interested in how and where food is produced. With strong standards and systems in place, South Australia's producers can capitalise on such 'credence' attributes in discerning markets which value knowing that their food was produced in an ethical and sustainable manner, is safe, was produced in a clean environment, and that the information and claims about the products are authentic. Delivering and promoting these qualities are key to growing South Australia's, and Australia's, reputation for premium food and wine products.

Supporting the regions

FOR CONSIDERATION

Regional South Australia is a significant contributor to the State and National economy and agriculture is a major component of this. 'Place based approaches' to development are required which include tailored programs for workforce development, industry leadership and better regional profiling.

Mechanisms that accelerate agricultural investment in regions that can also support broader economic diversification and development should also be given priority.

While our regional centres are small compared with other parts of Australia, regional South Australia accounts for 29% of the State's population⁴, produces more than half of our exports and contributes around \$23 billion which is 25% of Gross State Product.

¹ ABS catalogue 5220.0, Australian National Accounts, State Accounts, Time series spreadsheet, 28 November 2013

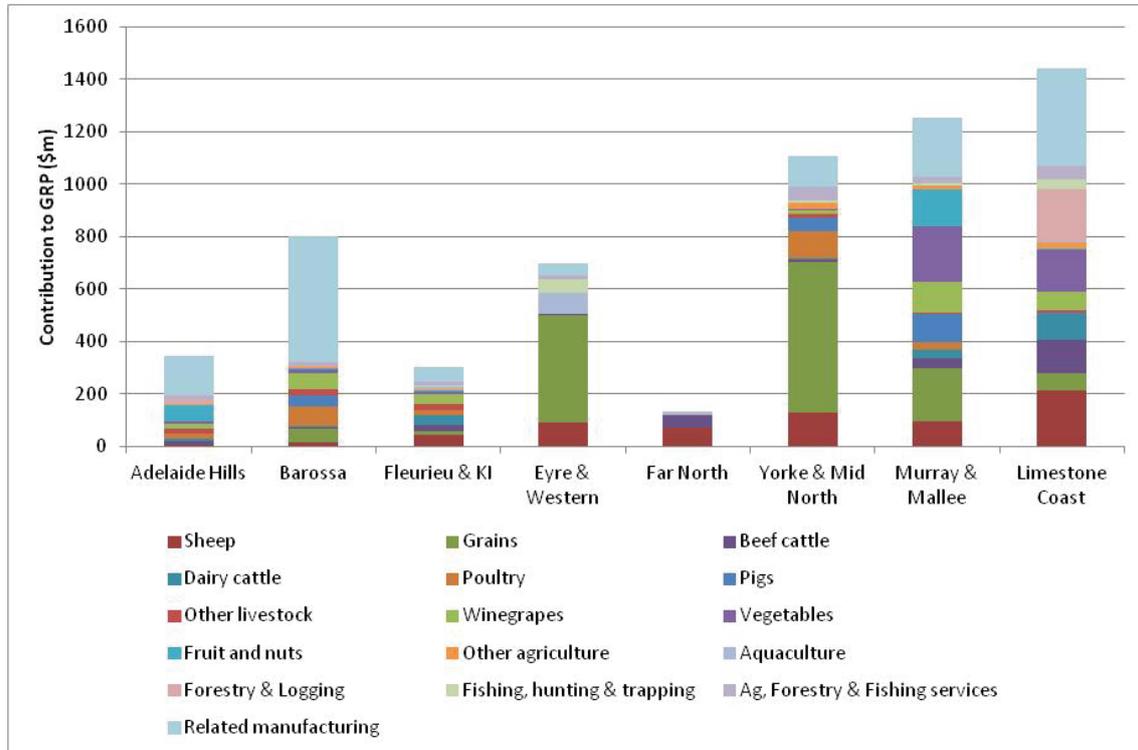
² ABS catalogue 5220.0, Australian National Accounts, State Accounts, 28 November 2013

³ PIRSA estimates

⁴ PIRSA 2013, Regional Statement for South Australia, p7

The contribution of the agriculture, forestry and fisheries industries to regional economies is very significant. In 2011-12, they directly contributed around 20% to the economies of South Australia's regions⁵. Figure 1 demonstrates the diversity of the agriculture sector across South Australia.

FIGURE 1: Contribution of agriculture, forestry and fishing industries to Gross Regional Product across regional South Australian \$m (2011-12)



Source: Econsearch 2013

South Australia is similar to the rest of Australia: resources are gravitating to the larger regional centres, with a subsequent loss of population in small towns across rural South Australia.

In response, the South Australian Government has adopted an integrated partnership approach that breaks down barriers to industry and regional development – one that moves away from incremental improvement within silos, to a holistic, cross disciplinary system that focuses on real improvement within industry and manages risk through a collaborative approach to business case development.

We also recognise that regional communities need to grow and that to attract a new generation of farmers growth needs to be underpinned by diversity of educational and employment opportunities, certainty of career paths, affordable living, lifestyle and amenity, and access to public and private services such as health. Examples already exist of family farms collaborating, restructuring their business models, and finding a balance between corporate and family farming philosophies.

⁵ EconSearch 2013, Input-Output Tables for South Australia and its Regions 2011/12 Update: Various RISE Models, report prepared for the Department of Premier and Cabinet, November.

CLUSTER PROGRAM

A component of the South Australian Government's integrated cross-sector, cross-government and regionally focussed approach to enhancing agriculture's contribution to regional communities is a four year Cluster Program that recognises that the productivity and competitiveness of industries can improve significantly through collaboration and the development of innovation clusters. Clusters have active facilitation, are innovation-focused and supported by research and educational institutions and are often based geographically. The collaboration that occurs through clustering can lead to a greater return on investment for enterprises, regions and the State as a whole.

The aim of the Cluster Program is the establishment of regional agribusiness innovation clusters, particularly in the development stage. PIRSA is implementing this pilot program in the Limestone Coast and Murraylands & Riverland regions. In the first year, collaborative projects supporting potential or existing cluster groups in the above regions are being piloted. These projects are intended to assist in delivering the benefits of improved collaboration in sectors and regions.

For agriculture enterprises to grow and for collaboration to improve in regional Australia, consideration should be given to:

- Improved regional economic and social infrastructure.
- Multi-purpose and multi-disciplinary regional hubs, with links to universities, government, industry and commercial services.
- Regional workforce development across all sectors and access to skilled labour.
- Regional industry leadership.
- Regional profiles including sector and market information that better reflect and capture the contribution of agriculture industries.
- A continued focus on trade agreements that open access to new markets, while still addressing biosecurity risks to Australian agriculture and ecosystems.
- A suite of programs that prepare businesses to trade in new markets.
- Investment prospectuses that target opportunities for foreign funding and identify entry level proposals for new entrants.
- Support for innovation through business acceleration and business incubation programs.
- An evaluation process for research and development organisations that places greater emphasis on creating outcomes for industry.
- A review of unused intellectual property rights owned by publicly funded research and development organisations, and how they might be shared with industry, in order to derive commercial benefit.
- Access to funding for regional development organisations, industry bodies and individual enterprises to complete business cases and feasibility studies.
- Research and development, and adaptation planning for climate change-exposed agriculture industries.

Supporting the sector

South Australia's approach to supporting agricultural and agribusiness investment has been to support investment decisions by providing information, improving connections between businesses and investors and facilitating investments by streamlining business interactions with Government. Further work is required to provide a business environment more conducive to investment, working with existing industry to become more investment ready and more targeted promotion of investment opportunities.

The South Australian Government has established a dedicated team at Invest in SA to help investors discover and pursue opportunities in South Australia⁶. Experienced finance and corporate professionals have well-established networks in the State's business community, and work with local project leaders, to introduce investors with significant investment-ready opportunities and provide information on the broader industry and highlight opportunities and benefits of investing in South Australia. Investment is facilitated across a range of sectors, minerals, energy and agribusiness being a strong focus.

The Government has senior level case managers to support businesses undertaking significant and complex projects in the State. This service recognises that development of private sector projects can be complex and involved, particularly in working through a range of statutory requirements for local, state and Australian governments.

Case managers work across Government as the single point of contact for each project providing leadership, coordination and innovative solutions to address project issues, approvals and other development requirements. This provides a significant benefit for project proponents and suppliers and an improvement over past ad hoc arrangements.

Individual facilitation of key agribusiness projects is through an account management framework. Any existing businesses, new businesses or clusters of companies looking to invest in major agribusiness projects may have access to a dedicated account manager with specialist expertise in their industry sector, who can take them through any relevant Government processes or provide links to private sector assistance as required. Each Account Manager serves as a single point of contact within Government and, with a strong network of business, investment, research and development contacts, provides a depth of understanding of the challenges and opportunities of the agribusiness sector.

A collaborative approach

Both government and industry associations play key roles in the development of South Australia's agribusiness, food and wine sectors. Activities to support these sectors can occur at an economy wide, industry (individual or multiple), regional or enterprise level. Their roles differ but are most effective when complementary.

- Government contributes relevant policy settings, regulation and infrastructure to support the broad economy. At an industry level government sets policies and programs, provides targeted funding, technical resources, research and development and has a role in being a trusted intermediary to bring different parties together. There is also a role for government in communicating with all relevant industry sectors and the community to ensure all perspectives are considered and messages from government delivered effectively. Government's role as a broad service provider at the enterprise level is decreasing, but this continues to occur in particular areas, including case management and in technical areas. At a regional level, the investment and governance framework established by government, for use and allocation of natural resources, is critical to underpin sustainable agriculture.

⁶ www.dmitre.sa.gov.au/invest_in_south_australia

RESEARCH AND DEVELOPMENT FOR INDUSTRY

The South Australian Research and Development Institute (SARDI) is home to South Australia's applied research and development capacity in the agriculture sector and in natural resource management and marine ecosystems. The State Government's \$29 million investment in SARDI is leveraged nationally and internationally to deliver a suite of research worth about \$75 million per annum⁷ that ensures South Australian agriculture, food and wine products are products of choice both in our domestic and international markets.

SARDI's significant capability and strong industry partnerships are providing South Australian businesses with the opportunity to deliver on the growing demand from Asian middle class consumers for our safe food and award winning wines.

SARDI plays a critical role in delivering on the South Australian Government's commitments under the Primary Industries National Research, Development and Extension Framework by leading, maintaining critical capability and delivering major outcomes to the agriculture sector, as well as the animal welfare, climate adaptation, and food and nutrition cross-sector strategies.

- Industry associations have an important role in providing industry intelligence and business knowledge to inform broad economic policy. Industry associations understanding of industry issues enable them to inform and develop industry wide programs, and enable them to attract and leverage funding to support those activities. Industry associations have strong networks with businesses allowing them to deliver efficient and effective projects and programs and deliver important communications to support both industry and individual enterprises.
- The Government's key strategic relationships are with Primary Producers SA, Food SA and the South Australian Wine Industry Association (SAWIA).
- Primary Producers SA was established in 2013 as the peak body representing primary producers in South Australia. The Government, through PIRSA, has provided funding to support the development of a web-based portal to improve communication with primary producers across South Australia.
- Food SA is an industry-led, membership-based association dedicated to helping the food industry improve its capability and connect with markets and experts. PIRSA is a Food SA partner and has provided funding support. A recent partnership is the Commonwealth-funded Competitive Foods Initiative designed to develop smart food clusters, encourage innovation and apply new technologies in the food manufacturing sector.
- SAWIA provides wide ranging support to its members and is an important conduit for government engagement with the wine industry. Partnerships include a four-year industry development program with the objective of creating greater demand for South Australian wines and to develop new and existing markets.

⁷ Department of Treasury and Finance 2013, '2013-14 Budget Paper 4, Agency Statement Volume 4' P129

Strategic priorities

FOR CONSIDERATION

The South Australian Government has strategic relationships and works in partnership with industries, regions and communities to build their productivity and economic growth potential.

The successes of this collaborative approach should be built on as well as continuing and renewing collaboration between Federal, State and Local Governments.

The South Australian Government has determined that food, wine and agriculture development is a strategic priority for the State.

After consultation with stakeholders we developed the ***Premium Food and Wine from our Clean Environment*** program to provide the foundation for action taken by government and industry, both individually and collaboratively, within an integrated framework. The program has three themes.

Build Our Brand seeks to improve recognition and sales of South Australian products in targeted markets locally, nationally and internationally. An important opportunity in building our brand is promoting South Australian quality and credentials to target markets where those features are valued and further developing our reputation for food, wine and tourism experiences. A particular opportunity is to meet the needs of the growing Asian middle class, to supply these markets with high-value products that meet emerging preferences for safe, high quality goods.

Grow Our Capability drives efforts to support the overall growth and development of South Australia's agriculture sector. It recognises that to achieve improved competitiveness it is important to increase the capability of businesses and the workforce, and to increase their access to research, technology and services. Business confidence should be further improved by streamlined government processes and support for public and private investment and infrastructure development. There is a focus on helping the agriculture sector transition from competing primarily on cost to a model that competes on value and an emotional attachment with the marketplace, as well as capturing new or increased revenue through higher value-adding activities.

Secure Production reaffirms the commitment to respond effectively to the major risks to future food and wine production. This includes environmental factors such as climate change and maintaining appropriate biosecurity and food safety standards. Initiatives encourage the productive and efficient use of natural resources through the implementation of industry programs designed to increase productivity and efficiency. It also recognises that it is vital that standards set are appropriate, and are being complied with, in order to improve market confidence, maintain and grow market access and provide a competitive point of difference.

A snapshot of activities for each of these themes is presented below

THEMES to deliver on the strategy	Build our Brand	Grow our Capability	Secure Production
ACTIVITIES	<ul style="list-style-type: none"> a. Promote our premium quality and clean credentials b. Further develop targeted local, national and international markets for food and wine c. Continue to build our reputation for food and wine tourism experiences 	<ul style="list-style-type: none"> d. Drive innovation to improve productivity and differentiate our product e. Enhance business capability through the value chain f. Support workforce growth and development g. Ensure a competitive business environment 	<ul style="list-style-type: none"> h. Maintain leadership in biosecurity, product integrity and food safety standards i. Improve confidence through the sustainable use of natural resources j. Encourage clean production through efficient practices

CASE STUDIES: SUPPORTING OUR REGIONS

Diversifying the economy of the Limestone Coast

To help the Limestone Coast region identify opportunities for growth, South Australia's Premier convened the Limestone Coast Economic Diversification Forum in September 2012. Following the release of the Forum's outcomes in November, a local reference group was formed to progress issues in consultation with community and industry leaders, and to inform the work of the Government's strategic priorities *Premium Food and Wine from our Clean Environment* and *Growing Advanced Manufacturing*.

Eighteen months on and the reference group is focussed on four key projects: 'collaboration' (through supporting innovation clusters), 'establishing a regional innovation hub' (for applied research and development and education/skills development that meets regional needs), 'mobilising regional leadership' (through facilitating network development and opportunities to lead), and 'investor and export ready' (supporting regional businesses to realise their potential).

The group is also working with the Economic Development Board of South Australia on a strategic priorities document focussing on the role of the industry/business sector and governments in realising the potential of this diverse and highly productive region.

Eyre Peninsula Land Use Support Program

In June 2013, the South Australian Government funded the two-year Eyre Peninsula Land Use Support (EPLUS) Program to enhance agriculture's contribution on the Peninsula and help local communities come to terms with the potential impacts of growth in energy and mineral exploration.

EPLUS was designed to demonstrate the proposed National Multiple Land Use Framework model (www.scer.gov.au/workstreams/land-access/mluf) that involves a whole-of-government, collaborative approach to addressing land use conflict issues, consolidating engagement and promotional activities of multiple agencies into more targeted service provision.

In defining this methodology, Rural Solutions SA, PIRSA's extension and consulting arm, explored the challenges and approaches faced in the national and international context. Although there was evidence of similar challenges in a national context, there were very limited examples of how these challenges have been addressed, indicating that South Australia is leading best-practice in this area.

Theme 1: Build Our Brand

Contributing to food security in Australia and globally

FOR CONSIDERATION

South Australia is well placed to become an increasingly important contributor to global food security through expanded food production, and provision of innovative technology, food safety/biosecurity frameworks and education/training services.

The forecast increase in global food demand, particularly in Asia, has been well-documented (see for example, Linehan et al, 2012) and Deloitte's *Positioning for Prosperity? Catching the next wave* report (October 2013) suggests jurisdictions such as South Australia are well positioned to capitalise on this growing demand.

Australia's agriculture sector can contribute to global food security through expanded food production. While there is limited opportunity for increased access to land or water in South Australia, agriculture can expand within the existing natural resource availability.

The expansion of the wine industry in South Australia over the past 25 years highlights the significant agricultural growth potential through more intensive land use, with a significant regional economic contribution. The wine industry expansion over the 1990s saw a sector that earned about 2% of the State's income contributing around 11% of economic growth over that period (Wittwer, 2000)⁸.

This example highlights that if the productivity challenges outlined elsewhere in this submission and in the Issues Paper are met, Australia can contribute to global food security through a significant increase in food exports. If agricultural productivity growth is returned to its longer-term historical growth rate, Australian agricultural output could more than double by 2050. Strong linkages to global food value chains can see this potential realised through strong export growth.

Australia can also make a significant contribution to global food security through provision of technical cooperation assistance to food-deficient countries⁹. In this context, South Australia is exceptionally well placed to export:

- Technology (such as innovative production, packaging and waste transformation techniques)
- Food safety / biosecurity regulatory frameworks
- Education / training services.

For example, Rural Solutions SA and SARDI have been providing such expertise globally for over 20 years, and prior to this SAGRIC International P/L (now Coffey International) played a similar role.

PIRSA possesses world-class expertise in dry land agriculture, irrigated production and enterprise planning and development. Our agricultural skills have been applied effectively in the Middle East, Russia, south-west Asia and North and Central Africa, and our consulting services have the potential to expand and diversify to tap into other growing agriculture, food security and resource optimisation markets internationally.

⁸ Wittwer G 2000, 'Growth in the Australian wine industry between 1987 and 2003 and its impact on the South Australian economy' Centre for International Economic Studies, September

⁹ ABARES *Science and Economic Insights, Issue 1 - 2011*

Enhancing agricultural exports

FOR CONSIDERATION

Review current mechanisms for communicating between State and Federal Governments and involving key industry partners on market access issues such as biosecurity risks and Free Trade Agreements (FTAs).

Opportunities for accelerated outcomes from multilateral fora should be pursued.

With much of Australia's agricultural production exported, international market access is a key factor in the sector's prosperity. While expanding access to new markets is important, maintaining and improving existing market access is often the most critical market access issue.

Tariff and tariff quotas internationally restrict the competitiveness of Australian exports to a number of key, or potentially important, markets. This can be particularly challenging when competitor countries receive preferential trading conditions into critical markets. Continued developments in bilateral and multilateral agreements are required.

Technical market access is also critical for maintaining and expanding Australian exports of plant and livestock products. Maintaining high biosecurity and food safety standards is critical for preserving existing market access, builds the case for expansion to new markets, in many instances supports the competitiveness of the sector and supports market confidence in Australian products.

Pests and diseases can significantly impact agricultural production. For example, they can increase production costs, reduce product quality and restrict market access. Outbreaks of exotic pests and diseases or food safety incidents can reduce the confidence of customers in international and domestic markets.

Although PIRSA has been working with the Australian Government to communicate market access issues, it needs to be acknowledged that the current feedback mechanism has shortcomings, and both levels of government need to review the current system to ensure key industry partners are provided the opportunity to contribute to the process.

The Australian Government can work more closely with state governments to promote the benefits of FTAs, particularly during the implementation phase of the agreements to highlight the impact of FTAs on businesses. This is especially important in concluding FTAs with Japan and with China, as these two markets make up just over one third of the value of total agricultural exports for South Australia. Enhanced feedback mechanisms will also enable us to identify and address potential challenges early.

There are also opportunities for the Australian Government to more actively encourage State Government and industry participation in multilateral fora such as the World Trade Organisation and Australia Pacific Economic Community. Some of the topics that are discussed are of particular interest to South Australia and are also areas where we hold expertise. Participation can assist capacity building and accelerate trade and export outcomes.

The Australian Government's *Gene Technology Act 2000* allows State Governments to regulate Genetically Modified (GM) crops where there are risks to markets and trade. South Australia's *Genetically Modified Crops Management Regulations 2008* declare the whole of the State as an area in which no GM crops may be cultivated. These regulations are not due to expire until 1 September 2019

This commitment to the prohibition of GM crops was reaffirmed in December 2012 after an Australian Government review of the *Gene Technology Act 2000* recommended that those states with GM moratoria that have not been reviewed in the last three years commit to reviewing them by the end of 2014. The South Australian Government informed the Australian Government that South Australia's prohibition would not be lifted.

Our non-GM status gives the State's primary producers and food and wine manufacturers a competitive edge in the global marketplace, enabling them to achieve prices commensurate with the State's burgeoning reputation as a supplier of premium food and wine from our clean environment.

CASE STUDY: KANGAROO ISLAND PURE GRAIN

Kangaroo Island, long recognised as one of the most pristine environments in the world, is now exporting premium non-genetically modified canola to some of the largest export markets in the world. In a highly competitive and safety conscious market, particularly in Japan, it is quickly becoming the canola of choice.

Kangaroo Island Pure Grain (KIPG), which represents most of the island's growers, enjoyed significant success in 2003 when

Hirata Industries began searching for new supplies of non genetically modified canola. Through leveraging relationships with Austrade, PIRSA and leading farmers, a new business model was established, whereby canola was purchased directly from the producer and exported to Japan.

In July 2012 Kanematsu, one of Japan's largest trading houses, took a 10% share in KIPG.

Market development activities

FOR CONSIDERATION

Greater coordination of State and Federal Government trade activities.

A 'Team Australia' approach to industry and government market development activities.

An increase to Commonwealth funding of targeted trade programs.

Timely and effective decision making can be enhanced by a review of the phytosanitary certificate process.

South Australia has limited resources to support trade activities and there would be further benefit in coordinating State and Australian Government resources in this area. A 'Team Australia' integration of industry and government market development activities may be appropriate in some offshore markets.

With regard to the current set of trade programs funded by the Australian Government – such as Export Market Development Grants and TradeStart – South Australia believes these to be beneficial and worthwhile since they generate additional exports. However, an increase in funding for targeted trade programs would be beneficial.

South Australia's Department for Manufacturing, Innovation, Trade, Resources and Energy is a TradeStart partner. Many South Australian TradeStart clients have raised concerns regarding the current process of gaining access to phytosanitary issuance for products not currently listed in the Manual of Importing Country Requirements system administered by the Australian Government's Department of Agriculture.

The Department of Agriculture currently requires written confirmation from governments of customers (buyers) confirming the requirement of phytosanitary certificates. Obtaining such a letter from some of the countries which South Australian companies do business with is very challenging, resulting in shipping delays and, in some cases, has seen opportunities lost in new markets. It is the South Australian Government's view that the process should actively support Australian companies seeking new business opportunities in the international market place and that a review is needed.

FIGHTING FOOD WASTE

PIRSA is developing a proposal for a Safe & Saved Food Cooperative Research Centre (CRC) and will seek funding from AusIndustry in the CRC Program's 17th selection round. This CRC would see South Australia become the national leader for food safety and food waste reduction and transformation. This will also entail international food science linkages and help attract international buyers to Australian food businesses.

The combination of increased food industry profitability through reducing supply chain wastage, transforming waste into new products, as well as increased export market opportunities based on our food safety and quality credentials is an important way to increase the value of the Australian food industry and contribute to food security in Australia and globally.

Options to increase exports that industry could consider include:

- Greater collaboration, economies of scale and increased capacity through clusters, cooperatives and joint ventures. Industry could more effectively express its views on matters if presented as a united group.
- Adding value to what currently is sold as commodities, with particular attention to tailoring value-added products to Asian consumer trends.

CASE STUDY: CHINA AGRIBUSINESS INITIATIVE

While trade promotion is primarily a responsibility of the Australian Government, South Australia funds some programs, most often in partnership with state-based industry associations. The current approach is to build on particular region-to-region agreements and on particular market opportunities.

For example, the South Australian Government's China Agribusiness Initiative is a particular suite of activities supporting the State's China Engagement Strategy. The initiative aims to realise opportunities for premium South Australian food and wine in particular provinces in China. It is leveraging government-to-government partnerships and agreements to establish value chain relationships with Chinese companies wanting to promote the qualities, the authenticity and the product integrity of our food and wine to Chinese consumers. The program includes the establishment of a "China readiness education program", targeted in-going and out-going missions, as well as the creation of working groups with PIRSA's counterparts in Shandong and Fujian provinces.

The importance of complementing food and wine with tourism efforts

FOR CONSIDERATION

Develop programs that capitalise on the synergies that can be realised from integrating food and wine and tourism experiences.

South Australia recognises and continues to build connections and collaborations between the food, wine and agriculture sectors and tourism offerings. From paddock to plate, the State offers authentic wine and food experiences direct from the source – contrasting the latest technology with rich, cultural heritage in many of the wine regions. By incorporating these experiences into innovative tourism packages, regional events and festivals, South Australia showcases its premium food and wine to local, interstate and international visitors. These high-calibre experiences and offerings also helped build Australia's reputation as a food and wine destination.

Tourists around the globe are increasingly driven to visit countries based on their reputation for quality food and wine offerings. Developing and enhancing tourism opportunities and activities and integrating food and wine into the overall suite of marketing and branding activities undertaken by the South Australian Tourism Commission is helping to attract more visitors, increase tourist expenditure and enrich visitors' experiences in regional South Australia.

South Australia strongly supports new tourism initiatives that focus on promoting Australia's food and wine, such as the upcoming Restaurant Australia campaign. Both the National and State-based marketing activities build our brands and can provide additional income and economic benefit to regional agricultural and related tourism businesses that comes from increased visitors and sales. However, there are also other flow-on benefits including building our trade reputation as a key supplier of premium agriculture, food and wine products across Australia and the world and also the renewed focus and trust that can come from collaboration across the food, wine and tourism sectors that may not have traditionally existed, especially across individual regions.

Theme 2: Grow Our Capability

Industry innovation and competitiveness

FOR CONSIDERATION

Adopt a 'through the value chain' approach to production and marketing by farmers together with their value chain partners.

Supporting the overall growth and development of the agriculture sector has been a key focus for the South Australian Government. Efforts include assisting the sector to transition from competing primarily on cost to a model that competes on value and an understanding of consumer trends / demands, the global marketplace, collaboration and innovation, and capturing new or increased revenue through value-adding activities.

With growing global demand for food, greater consumer awareness and access to information, and greater connections between consumers, food and food production, there is an important challenge for businesses to understand and build on their strengths in the market. While there are great opportunities for the South Australian agriculture sector domestically, nationally and internationally several factors are impacting the competitiveness of these sectors. Examples include:

- **Relatively high costs:** The agriculture sector is facing pressure from the strong Australian dollar and rising costs of inputs and resources, and this presents challenges for the sector to remain competitive in the global market.
- **Challenging retail environment:** Despite a strong focus on value at the retail level, consumers are also increasingly interested in the provenance of their food, with strong growth in the number and turnover of farmers' markets. Even though the two major supermarkets have around an 80% share of the retail grocery market, independent and specialist retailers maintain important market shares in South Australia. The ongoing success of independent supermarkets in South Australia, and alternative market formats nationally, demonstrates there are opportunities for food producers for greater diversification in the retail market.
- **Competition from imports:** Whilst international trade has many benefits, the agriculture sector's cost-competitiveness is challenged when products grown in other countries do not have the same regulatory, animal welfare and health controls as those in Australia.

In addition, there is a need for the Australian Government to respond expeditiously to suspected cases of dumping of agricultural products by other countries.

- **Primary production and natural resource management:** Across South Australia, primary producers manage 60% of the State's land and account for around 64% of all water extracted for consumptive use¹⁰. Better integrating and aligning conservation, ecologically sustainable use of natural resources and growth in the agricultural sector is an ongoing process.

In order to overcome the challenges outlined above, producers, processors and manufacturers need to focus on different business models or approaches. In addition to the more traditional approaches of increasing production and processing productivity, collaboration and innovation are important considerations.

Value-adding and developing products and brands suited to target markets and consumers are key ways businesses can realise greater returns. Identifying opportunities to differentiate, cutting 'waste' (time, activities, resources) and adding value based on consumer preferences all help to build effective working relationships of value chain partners.

¹⁰ ABS Catalogue 4610.0, Water Account Australia 2011-12, 13 November 2013

CASE STUDY: SADA FRESH MILK

A positive development for South Australia's dairy industry was the 2013 launch of a new line of South Australian milk, driven by the South Australian Dairyfarmers' Association (SADA).

Branded as 'SADA Fresh', it is processed at the Parmalat dairy plant in suburban Clarence Gardens and is available through all South Australian Coles supermarkets in two-litre containers of either full cream or low fat product, both retailing at \$2.99.

A licensing agreement between Parmalat and SADA sees 20 cents from every litre sold paid into SADA's newly created Dairy Fund, which will be used for research, development, extension and marketing to the benefit of

South Australian dairy farmers. Retail rights are exclusively with Coles for the first 12 months, after which other supermarkets may stock the product. Since the launch sales have been very strong, with Coles reporting three times the demand expected for a newly launched product.

With the milk initially selling out in many stores, Coles expanded the shelf space allocation for SADA Fresh, translating into greater output from Parmalat and more deposits into the Dairy Fund.

SADA hopes that SADA Fresh will secure 1% of SA's drinking milk market (2.2 million litres) and sales are on target.

Learning from top performing farms

FOR CONSIDERATION

Policies and programs that support improved natural resource management and holistic farm business decision making.

A continued commitment to building farm business and risk management skills to prepare for drought and other risks.

Effective learning programs to build the business and risk management competence of farmers are the keys to raising productivity in an increasingly complex and risky operating environment – shifting the focus from 'producers' to 'business managers' by enhancing their production expertise with financial, human resource and natural resource management skills.

The challenge is for the further education sector to provide access to timely, flexible, practical learning opportunities for farmers, delivered by respected providers to gain new skills in business management.

It is noteworthy that the South Australian Government's perspective is reflected in the nationally agreed 'Skill Set' being pursued under the national drought program reform.

A critical component of decision making is the connection between production and the use and management of natural resources. Improving our natural resource base and thus holistic farm business decision making is essential for maintaining Australia's capacity to sustainably produce food and ensuring our farming and fishing industries have a bright future.

It is important for farmer decision-making to be supported by policy and programs that:

- work to ensure Australia's natural resource base has the capacity for ongoing production of food and delivery of other ecosystem services
- have collaboration between industry, communities and governments to help coordinate public and private investments in natural resource management

UNDERSTANDING THE KEYS TO SUCCESS

PIRSA commissioned a study¹¹ of top performing farms, particularly those that had maintained a strong financial position during the 2006-2010 drought, to understand the features of those businesses that gave them performance advantages.

These were distilled into five key characteristics: competent production management, benchmarks meeting industry standards, strategic profit allocation, positive attitude, and planning. These key characteristics ensured that businesses have remained profitable and sustainable. While they complement those described in the Issues Paper, they are focussed at the individual business level and may provide greater insights into areas for attention.

The PIRSA study supports the focus of the Intergovernmental Agreement on Drought Program Reform on building farm business and risk management skills in the farm sector as the key to preparedness and resilience to droughts and other risks.

- have governments partnering with rural research and development organisations and industry to encourage ongoing innovation in sustainable farming practices
- support the provision of better soil and land information to help land manager decision making
- progress water reforms to restore the health of river systems, support the sustainable water use and help irrigators and communities adjust to a future with less water
- assist land managers to reduce carbon pollution and increase the amount of carbon stored on the land.

This approach is strongly supported in South Australia by the State Natural Resources Management (NRM) Plan and the sustainable agriculture programs that arise from the seven Regional NRM Plans.

The NRM Regions conduct significant programs across the State, working with farmers and farmer organisations to provide tools and technologies that support farm business decision making through a sustainability lens.

Skills, training, education and human capital

FOR CONSIDERATION

Address the identified technical and chronic workforce shortages in the sector.

Support programs such as 'Skills for All' and 'Skills in the Workplace' that can overcome time and distance barriers experienced by farmers.

The agriculture sector has progressively increased labour efficiency, replaced labour with large and sophisticated machinery and improved management practices. However, there continues to be a shortage of qualified labour. In part, this is a result of the sector's ageing demographic. There is also a well-documented movement of people off the land to regional and metropolitan centres.

Skilled workforce development in the agriculture sector requires infrastructure and supportive policy. This should include 'hard' infrastructure – such as vocational training facilities – and 'soft' infrastructure in the form of expanded science and vocational education pathways. Maximising participation in the South Australian Government's 'Skills for All' and 'Skills in the Workplace' programs offers great potential.

Recent work by ABARES on productivity and innovation also points to the need to increase the formal education and training of existing farmers. The uptake of improved technology and management systems

¹¹ Feibig J and Sheriff C 2011, 'Characteristics of Profitable South Australian Farming Businesses from 2006 to 2010', Report prepared by Rural Directions for PIRSA, October.

in the sector is directly linked to the level of farmer education. Given the barriers of time and distance, there is an opportunity to employ emerging communication technologies to provide suitable options.

In general, the average age of South Australians identified by the Australian Bureau of Statistics (ABS) as being in the Agrifood & Wine industry employment category is higher than that of the broader South Australian workforce, with higher proportions of people aged 45 years and older¹². The Agrifood & Wine industry workforce is generally less qualified than the South Australian workforce, with lower proportions of people with Certificate III or higher qualifications.

AgriFood National Regional Initiatives is a project of AgriFood Skills Australia, whose role is to drive skills and workforce development across the agrifood industry and regional Australia. The initiative is supported by the Australian and South Australian Governments.

CASE STUDY: EYRE PENINSULA REGIONAL INITIATIVE

This initiative allows the Eyre Peninsula region to work with industry, government and training providers to share intelligence and develop solutions to secure and sustain a skilled workforce.

The overarching objectives revolve around improving employers' capability, building business capacity, enhancing employee retention within the region through cross-industry training, enhancing workers' employability and job satisfaction through new training initiatives, and sustaining regional communities.

The project, which is supported by the South Australian and Australian Governments, began with a Workforce Summit attended by more than 100 business managers and business leaders in Wudinna in April 2013. It will allow the Eyre Peninsula to approach workforce development challenges as a region. Cooperation across industries, demonstration of viable career pathways and identification of skills gaps have shaped the program of activities.

WORKFORCE DEVELOPMENT

PIRSA works with the agriculture sector and in the State's regions to support workforce development by helping to: understand and define future workforce needs and demand; and identify and link mechanisms that respond to those demands.

Key technical shortages exist in discrete sectors, including intensive animal production, cheese making and food safety, while chronic shortages exist in dry land farming systems, baking, support trades such as diesel mechanics, electrical and plumbing, and agricultural education.

Skill / capability gaps exist across the small and medium enterprise component of the Agrifood & Wine industry in business management, particularly the management of strategy, business performance, people and risk.

¹² ABS, Census of Population and Housing 2011

Enhancing access to finance

FOR CONSIDERATION

Articulate a clear Australian Government position on foreign direct investment (FDI) to provide a consistent message to foreign investors.

Continued scrutiny by the Foreign Investment Review Board.

The success of models applied in South Australia to structure and fund the growth of agricultural opportunities.

While the scale and capital intensiveness of businesses in the agriculture sector vary considerably, the sector is capital intensive in aggregate. Having a productive and competitive capital base is thus fundamental to the future of Australian agriculture.

Significant capital investment will be required if Australia's agriculture sector is to capture the much vaunted opportunities presented by expected world demand growth to 2050 – Asian demand growth in particular. For example, the *ANZ Greener Pastures Report* (2012) suggests the sector will require an additional \$600 billion of growth-oriented capital between now and 2050.

This quantum of growth-oriented capital investment is unlikely to be met from existing farmer debt or equity sources. New investment models, including significant increases in FDI, will be necessary to capture the regional and farmer income benefits of this economic growth opportunity.

Foreign investment has many benefits. Moir (2011)¹³ reported previous research of Layton and Makin (1993)¹⁴ who estimated that per capita income in Australia in the five years from 1984-85 to 1988-89 was around 15% higher than it would have been in the absence of the foreign capital inflow. FDI introduces new technologies and approaches, therefore improving productivity, which tends to have a larger impact, per dollar invested, on economic growth than domestic investment. Investment in the supply chain by foreign commodity trading or food processing companies may, in some cases, lead to an enhanced export opportunity for the Australian agriculture sector. For example, Japanese investment in the beef industry in the 1980s opened channels for beef exports to Japan.

South Australia, together with other jurisdictions, explicitly recognised the benefits of FDI at a meeting of the Standing Council on Primary Industries in July 2013. A clear Government position on FDI can provide a useful, consistent message to potential foreign investors.

Continued scrutiny by the Foreign Investment Review Board in assessing the national interest of foreign investments, combined with a level of transparency that cost effectively informs potentially concerned stakeholders, can round out a comprehensive national policy. This would include measures such as reliable data sources detailing the current value and trends in foreign investments, market transparency requirements and policies to reduce the risks of distortionary transfer pricing.

Agricultural investment options include direct investment in agricultural assets, commodity market investment and investment in portfolio equities. Some direct investment options such as joint ventures and off-take agreements can have the added advantages of greater value chain integration and alignment.

Enhanced farmer access to finance may also be progressed through measures that provide for improved agricultural investment performance indices for informing global, sectoral and location-related investment decisions. Measures that lower the transaction costs associated with matching relatively large scale investors

¹³ Moir b 2011, Foreign investment and Australian agriculture, RIRDC, Canberra, November, P9.

¹⁴ Layton A P and Makin T 1993, 'Estimates of the macroeconomic impact of foreign investment in Australia', *International Economic Journal*, Korean international Economic Association, Vol. 7 (4), Pp. 35-42

with relatively small-scale individual agricultural assets and investment opportunities can also assist.

In facilitating enhanced access to finance, it is important that policy decisions do not mask the useful signals that capital markets provide.

Debt providers and equity partners can provide useful information to underperforming farmers. Shared information and financial market pressures can support both adjustment or restructuring for growth decisions that can result in increased farm productivity, competitiveness and profitability. Appropriate farm adjustment is a source of industry productivity growth, as noted by Gray et al recently.

Informed farmer decisions and their capable implementation is supported in South Australia by the Rural Financial Counselling Service; by a collaborative, voluntary debt mediation approach between the farm sector, the finance sector and government (formalised as South Australia's Farm Finance Strategy); and by South Australia's Farm Finance Forum – a government / industry forum that monitors farm finance issues in South Australia.

FUNDING GROWTH

A wide range of models has been applied to structure and fund the growth of agricultural opportunities in South Australia. A few are briefly outlined below for consideration for further investigation.

- *Bulla Burra: a collaborative farming venture that separates land ownership from farm operations. Key attributes for success include efficient and effective systems and management structures that fully utilise the knowledge, skills and passions of the 'collaborators'.*
- *Inghams: The State Government facilitated chicken meat production and processing investments through an investment pathway that included scoping of planning for water and power options and meat production location.*
- *Gemtree Vineyards: Chinese investment in this McLaren Vale company is enabling it to expand its winemaking operations while opening up access to the significant Chinese distribution networks already controlled by the Chinese investor. This has resulted in a significant increase in production and revenue for Gemtree, while maintaining control by the local owners.*
- *Sundrop Farms: This world-leading company grows high-quality, intensively grown horticulture products near Port Augusta. It is utilising foreign capital and technology to develop a revolutionary approach to growing horticultural crops using solar power and seawater in a desert setting, creating new jobs and opportunities for rural and regional South Australians.*
- *JBS Australia: The Brazilian-owned JBS Australia is Australia's largest player in meat processing, and the world's largest meat company. It operates a sheep processing plant in South Australia at Bordertown.*
- *Cargill: This American-based multinational is active in South Australia's meat industry through a partnership with an Australian company Teys Australia.*

Research and development

FOR CONSIDERATION

Support and develop strategic partnerships that bring together end user groups (eg farmers), industry and researchers, including hubs and clusters.

Agricultural capability is significantly enhanced through increased private investment in productivity focused research and development.

Implementing accelerated or new sources of productivity growth through agricultural research and development are priorities, for example South Australia's proposed advances in soil management.

It is promising that the Issues Paper recognises that a lack of investment across Australia in research and development is a major barrier to improved productivity and profitability.

As highlighted on page 12, South Australia possesses significant physical and intellectual assets to drive innovation across the agricultural sector. These are strongly supported by the South Australian Government through direct funding for basic and applied research, funding for facilities and equipment, and encouraging and facilitating collaborative national and international partnerships.

These institutions, in collaboration with industry, have generated numerous examples of innovation and facilitated the application of research in daily business and farming practices. These examples include the development of drought resistant crops, low-rainfall farming practices and high-efficiency irrigation, through to innovative market research and value chain analysis.

Despite the potential productivity improvements and market opportunities to be realised from investing in research, there remain significant opportunities for business to further utilise the extensive capabilities of South Australia's universities and research institutions. Government has an important role to play in funding and helping to develop strategic partnerships, including through developing hubs and clusters of industry and research expertise.

South Australia's primary producers have benefited from significant Australian Government investment through Centres of Excellence and Cooperative Research Centres (CRCs) across subjects including pork, sheep and beef production, crop production, invasive animal species and biosecurity. CRCs and other Australian Government initiatives that bring together end user groups (such as farmers and other primary producers), industry and research are to be commended.

Funding for the construction and ongoing maintenance of shared research facilities is also an ongoing issue that needs to be examined in the context of supporting future innovation in agriculture. Facilities and funding programs that encourage cross-disciplinary research focussed on the agricultural sector needs consideration. For example, the National Collaborative Research Infrastructure Strategy (NCRIS) provided considerable funding to 12 new facilities in South Australia. These included the Australian Metabolomics Facility – Food and Beverage Node, the Large Animal Research and Imaging Facility and the National Plant Phenomics Facility. The State Government provided \$21.9 million over five years towards these projects, which attracted around \$28 million in Australian Government funding and contributions from universities and industry in the order of \$16 million.

The Waite Research Institute is an initiative of the University of Adelaide to support collaboration and drive research that benefits Australia's agriculture, food and wine industries.

The Waite Campus is the largest agricultural research and teaching precinct in the Southern Hemisphere hosting organisations that include the Australian Wine Research Institute, Australian Genome Research Facility and Australian Grain Technology. In 2011-12 the Waite reported that Waite developed cereal varieties comprise approximately 80% of southern Australian production.

These facilities have attracted world-leading researchers to South Australia and investment from business. Without ongoing support in this area, South Australia research, business and farming communities will fall behind.

Infrastructure to assist development

FOR CONSIDERATION

Improvements to efficiency of freight movement should be given a priority.

The use of new information networks is a key future competitive advantage for Australian agriculture.

The agriculture sector relies on a range of transport, storage and cold chain infrastructure to produce and market its products. This includes road systems that can accommodate the larger machinery and vehicles required for scale efficiencies, grain silos, abattoirs, irrigation infrastructure and port facilities. In addition, there is the supporting infrastructure that underpins business.

Cost competitive infrastructure (power, water, freight, ports) is essential in ensuring the long-term sustainability of our primary production and food manufacturing sectors. Specific issues include:

- Consideration of the opportunities for third-party funding and operation of water and waste services, as now enabled by South Australian legislation.
- Better long-term planning for water infrastructure, especially in peri-urban areas. (These areas typically have stormwater and waste-water available and have highly productive agricultural land.)
- Increased adoption of telemetry technology for water monitoring and metering. (This would provide growers with better information to improve irrigation efficiency and simplify water licence compliance thus reducing costs).
- Investigation of public private partnership opportunities for specific infrastructure developments.
- Maximising the State's engagement with and connection to the National Broadband Network.
- Using the scale of South Australian Government information and communications technology (ICT) investment to encourage establishment of ICT infrastructure and service provision that benefits other government and non-government users.
- Maintaining planned energy infrastructure development.

Reliable and efficient logistics (i.e. roads, ports and freight inter-change facilities) are essential for the agriculture sector's access to high value markets. Given the importance of the agriculture sector to the State's economy and the role that transport and logistics play in its development, appropriate consideration must be given to the needs of the sector and regions when determining infrastructure priorities.

South Australia's traditional manufacturing and agricultural base is maturing, and logistics and supply chains are becoming more complex and sensitive to time and cost. These developments mean that modern, well-managed freight networks are essential to our continued prosperity.

The agriculture sector considers road transport a priority area for infrastructure investment as the use of high productivity vehicles (B-doubles and road trains) by grain growers, in particular, increases. While arterial roads and silo access may allow access by high productivity vehicles, often the local road network is unassessed and unapproved for access by the vehicles – an issue referred to as the “last mile” restriction.

The recent \$43 million upgrade of the grain rail infrastructure on Eyre Peninsula has improved grain transport; however there are still limitations from load and speed limits which impact on the region's ability to deliver grain cost effectively to Port Lincoln for export. The railway between Tailem Bend and Loxton that services the grains industry is similarly constrained.

NEW HORIZONS

New Horizons is a PIRSA initiative designed to significantly increase South Australia's agricultural production through the application of advances in soil science and management. This collaborative program is building on many years of preliminary research work on subsoil constraints by PIRSA, the Department for Environment, Water and Natural Resources, Natural Resources Management Boards, the University of Adelaide and the University of South Australia.

The adoption of new practices would represent a new revolution in farm management, from cultivating only the top 10 centimetres of soil to managing the top 50 centimetres of soil. New Horizons aims to achieve an \$800 million increase in the value of food production per annum in South Australia, long-term storage of carbon, a significant reduction in soil erosion risk and the opportunity to initiate a new high-value manufacturing industry in agricultural machinery.

The program involves a mix of fundamental and applied research, regional site demonstrations and extension to develop an effective soil management package and guidelines to fast track adoption. The program is in its establishment phase, with a business case developed and presented to the Australian Government and to industry seeking support.

Other examples of regional infrastructure priorities include:

- Expansion of the inter-modal facility at Bowmans (between Balaklava and Port Wakefield), including working with the private sector to identify last mile issues for high productivity vehicles to access this site from the National Highway.
- Improving the efficiency of freight movement from the Riverland to key port and airport facilities in Adelaide and markets in Victoria and New South Wales.

The South Australian Government is supporting farmers in using new information networks. Rural Connect is a community management solution that takes the form of a web-based business toolkit and mobile phone application version for farmers – providing a direct communication channel between Primary Producers South Australia, PIRSA, commodity associations and individual producers.

Energy

FOR CONSIDERATION

Ensure the opportunities for agriculture are taken into account when developing energy-related policy reforms.

Many agricultural production sectors are feeling the pressure of increases in electricity charges.

The Australian Government is currently considering energy related policy reforms across a number of fronts – including the Emissions Reduction Fund, the Energy White Paper and the Renewable Energy Target Review – that may impact on the competitiveness of the Australian agriculture sector.

The opportunities for agriculture (e.g. off-farm income from wind farms or carbon abatement income over the longer term) should be considered in these reviews, as well as the cost competitiveness impacts on agriculture through the value chain.

CASE STUDY: CENTRAL IRRIGATION TRUST

Central Irrigation Trust (CIT), a private company located in Barmera, manages 12 irrigation districts in the Riverland and Lower Murray region. It services about 15 400 hectares of horticultural crops, providing irrigation and drainage services to 1 400 farms, as well as domestic water to 2 800 households and industries in the region.

CIT pumps water from the River Murray through a modern water delivery system that includes fully automated pumping stations,

closed pipeline delivery networks, and fully metered water supplies to every farm or factory business and household.

Electricity costs have accounted for approximately one-quarter of the company's operating expenditure since 2007–08. There was a 71% increase in electricity costs between 2010 and 2013. This was predominantly caused by increased distribution and transmission charges which are difficult for individual businesses to offset.

Effective regulation

FOR CONSIDERATION

South Australia has made significant advances in simplifying and reducing the cost of regulation and implemented agriculture specific reforms.

Advocacy groups asserting that governments should 'reduce the cost of doing business' is not new. However, in researching its latest publication, *Opportunities to improve the effectiveness of Australian farmers' advocacy groups – a comparative approach*, the Australian Farm Institute found that much of the legislation that producer groups focused on has been repealed. Further agriculture-specific reforms are unlikely to significantly reduce the agriculture sector's regulatory burden beyond reforms canvassed in the recent ABARES analysis¹⁶ and covered in the Issues Paper.

The South Australian Government is committed to reducing the impact of unnecessary or duplicative regulation on the economy, which is likely to have flow on benefits to the agriculture sector. An active demonstration of this commitment was the recent signing of a memorandum of understanding with the Australian Government to jointly undertake a project to develop assessment and approval bilateral agreements under the Commonwealth *Environment Protection and Biodiversity Conservation Act 2000*. These agreements will accredit State processes to undertake, either just environmental assessments, or both assessments and approvals of impacts to matters of National Environmental Significance on behalf of the Australian Government. This project aims to streamline environmental regulation while maintaining high environmental standards. At the time of writing, negotiations to update the current draft assessment bilateral are underway.

In terms of agriculture-legislation, regulatory reform in South Australia has seen, among other things:

- Reform citrus industry governance and structure arrangements. This reform process has relieved the citrus industry of a regulatory burden that had imposed compliance costs in the order \$3 million per annum on citrus growers, packers, processors and wholesalers.
- Deregulate export barley marketing arrangements.

¹⁶ Gibbs, C, Harris-Adams, K & Davidson, A 2013, *Review of Selected Regulatory Burdens on Agriculture and Forestry Businesses*, ABARES (Report to client prepared for the Department of Agriculture's Agricultural Productivity Division), Canberra, November.

TRANSPORT PLANNING

The South Australian Government has drafted an 'Integrated Transport and Land Use Plan'. A central objective of the Plan is to find specific solutions to support the three 'productive and competitive' industries at the heart of the State's economic future: mining and resources; advanced manufacturing; and premium wine and food.

The preparation of a 'Ports Strategy' and a 'Freight Strategy', and the completion of a Regional Mining and Infrastructure Planning Project, will help determine priorities for investment in transport and related infrastructure.

- Consolidate grain grower funded schemes for industry development and research under *South Australia's Primary Industry Funding Schemes Act 1998* and the subsequent repeal of the *Wheat Marketing Act 1989* – thus deregulating wheat marketing. In the process, administrative processes have been simplified and transparency and accountability provisions enhanced.

In the area of biosecurity, PIRSA has

- Consolidated species registrations from one form per species to one form per person regardless of number of species – reducing the number of registrations to be completed.
- Commenced a review of the Livestock Regulations 1998 to 'fine tune' certain existing provisions, remove obsolete or unnecessary provisions, and include new provisions that will reduce any unnecessary regulatory burden on the livestock industries.
- Simplified the National Livestock Identification Scheme (NLIS) tag ordering system for cattle, removing the requirement for additional paperwork.
- Negotiated reduced market access requirements for tomatoes to Western Australia, saving costs to South Australian growers.
- Declared South Australia free of Onion Smut, reducing market access requirements for growers.
- An online registration system for property identification codes (PIC) to be implemented in April 2014, which will streamline the process for livestock producers.

There is potential for long-held concerns the agriculture sector has about the compliance costs of road transport regulations to be mitigated. The new Heavy Vehicle National Law and Regulations provides for the National Heavy Vehicle Regulator to assume responsibility for heavy vehicle road transport services previously delivered by state and territory road transport authorities

Theme 3: Secure Production

Ensuring agriculture is sustainable

FOR CONSIDERATION

Recognise sustainable use of natural resources as a key component of competitive and productive agriculture.

When setting policy for the agriculture sector give due consideration to the business risks to agriculture from poor natural resources management, environmental change, inadequate or inappropriate government intervention and community expectations.

Include a person with national credentials in national resource management and agriculture on the proposed Industry Advisory Council.

The Issues Paper addresses many, but not all, of the issues that impact on the Australian agricultural sector. It addresses in detail the financial, regulatory, workforce, trade, industry development, and infrastructure issues. However, it does little to address the real business risks to agriculture from poor natural resources management practices, environmental change, inadequate or inappropriate government intervention, and community expectations.

Sustainable use of natural resources must be recognised as a key component of competitive and productive agriculture. The history of Australian agriculture shows that unsustainable practices can only enhance competitiveness in the short term, if at all. Long-term industry prosperity requires financial and environmental sustainability, at an enterprise and industry level. For example, the National Farmers Federation recognised this in its 2013 *Blueprint for Australian Agriculture*, by identifying that in some circumstances the highest-value use of land may be the provision of eco-system services, for which farmers could receive farm-gate income.

In general, Australian agriculture has improved its resources management practices considerably over decades, driven by new challenges and new technologies. For example, in South Australia the Millennium drought drove increased uptake of better agronomic and soil management practices across our cropping zone¹⁷. Across Australia, government leadership in water policy development over two decades has enabled many improvements in productivity.

However, there remain many challenges and the Australian Government can provide leadership for more integrated policy development that links agricultural policy with natural resources policy.

A clear example identified in the Issues Paper is the development of new water infrastructure. In part, the paper implies that only development of new agricultural areas and/or increased water availability can lead to expanded agricultural production. In terms of actual produce, large increases in production may still be made by improved management and technology, using existing areas. In dollar terms, in the period 2003-2011, the gross value of irrigated agriculture across Australia doubled, while water use by the sector declined by around 35%¹⁸. A transparent analysis of the public and private benefits of new infrastructure both in terms of construction and management costs can appropriately inform investment decisions. The potential positive and negative environmental impacts of new water infrastructure should also be investigated and incorporated into major investment decisions.

¹⁷ DEWNR land management staff

¹⁸ Australian Bureau of Statistics, Value of Agricultural Commodities Produced, Australia(cat. no. 7503.0) 2002 to 2011 issue

AGRICULTURE AND NRM: WORKING TOGETHER

The South Australian Parliament has recognised the importance of our natural resources and passed the 'Natural Resources Management Act 2004' to help the community achieve sustainable use. The NRM system is evolving and improving, however South Australia has recognised there is an urgent need to respond to the farming community's concerns about relevance, cost and effectiveness. Dialogue and a shared commitment will lead to greater improvements.

The agriculture sector and the Government have agreed to undertake to improve the way the NRM system works with the agriculture sector in South Australia through a series of actions addressing the following five themes:

- *A common purpose and understanding of NRM.*
- *Improved relationships and communication between the parties.*
- *Improved function and design of the NRM system.*
- *Improved processes for deciding what work gets done in the regions and how it is done.*
- *Improved ways to resolve conflict over the allocation and use of natural resources and to minimise the cost of any regulation or compliance.*

Environmental change in the form of an increasingly variable climate is a major challenge to agricultural systems and the social and economic infrastructure that support these systems. This is not addressed in the Issues Paper. South Australia is implementing its *Prospering in a Changing Climate - A Climate Change Adaptation Framework for South Australia*. This framework identifies a range of issues relevant to the sustainability and hence long-term prosperity of South Australian agriculture. These include:

- Changes to crop yields and quality
- Impacts on flowering, pollination and fruiting
- Loss or damage from extreme events (production and transport/physical assets)
- Changes in abundance and distribution of weeds,
- Impacts on salinity levels, soils carbon and erosion

These climate change-related issues and many others relevant to other agricultural industries across Australia must be addressed to ensure long-term development and prosperity of Australian agriculture.

The Issues Paper does not fully address regulatory issues where government intervention may be required to enable competitive agriculture. One of the most critical regulatory issues that needs to be collectively addressed is that of the links between land use planning, agricultural policy and natural resources policy.

Conflict between agriculture and other land uses, such as mining and urban development, can potentially undermine the stable operating and investment environment needed for agricultural businesses to enhance and grow their efficiency and value of production.

While land use planning is primarily the responsibility of the States and Territories, the Australian Government has significant influence on land use through taxation and other policies. The use of taxation rules to drive investment in primary production can potentially have perverse outcomes. The taxation treatment of some managed investment schemes of the 1990s and 2000s drove the displacement of agriculture by blue gum plantations across parts of South Australia, and confounded the implementation of nationally agreed water policy reforms.

Some regulation assists agriculture by maintaining the availability and condition of natural resources. Water allocation policy and management arrangements, including trading, have been significant in assisting agriculture. Appropriate regulation of scarce resources is critical not only for resource availability over the longer term; it provides a secure business environment supportive of development investment.

Finally there is the issue of changing community expectations about their environment, and their food. Modern Australia will largely not tolerate primary production activities that degrade natural resources such that they are then not available to future generations. As with mining and other resource dependent activities, agriculture needs a 'social licence' to operate.

A concrete measure that the Australian Government could take to assist the better integration of agricultural development and sustainable natural resources management, would be to include a person with national credentials in natural resources management and agriculture on the new Agricultural Industry Advisory Council.

Water resources

FOR CONSIDERATION

Removing unnecessary barriers to water trade will deliver economic efficiencies by allowing the market to facilitate the distribution of allocations and entitlements across the Murray Darling Basin system.

Achieving water recovery targets across the system will underpin the maintenance of water quality to appropriate levels that ensure agricultural production is not reduced or restricted.

Ensuring adequate investment by jurisdictions to maintain and manage the system, i.e. the engineering infrastructure and operations, are critical to agricultural productivity and hence competitiveness.

Partnerships between governments and with private enterprise can increase the level of alternative water resources such as recycling.

Regional water initiatives such as the SA River Murray Sustainability Program have the potential to encourage much needed agricultural development.

The reform agenda encapsulated in the 2004 Intergovernmental Agreement on a National Water Initiative (NWI) and previous COAG reforms have continued to drive water market reform nationally. Of specific relevance to South Australia, these reforms have informed the Commonwealth *Water Act 2007* (and the *Water Amendment Act 2008*) that requires the sustainable management of the Murray-Darling Basin and the South Australian *Natural Resources Management Act 2004* (as amended in 2007).

This reform agenda has yielded productivity benefits, particularly in the Murray-Darling Basin, and needs to continue to be actively pursued to deliver further productivity benefits in the longer term.

From an agricultural perspective, the South East and Murray-Darling Basin regions are the most important in terms of irrigated production, accounting for 52% and 36% respectively of the State's total irrigated water use from its major groundwater and surface water resource¹⁹.

South Australia now has a comprehensive, robust and transparent water management regulatory framework that supports sustainable development outcomes. The major water resources, and most other commercially important water resources in the State, are managed under a regulatory framework that contains requirements for sustainable water use.

Under the *South Australian Natural Resources Management Act 2004*, water resources can be prescribed, thus requiring all people who take water from that resource to hold a licence or approval from the Minister. Water allocation plans set limits on the amount of water that can be taken for consumptive purposes (the remainder being required to sustain the resource quality and its dependent ecosystems). Management of the resource in this way is critical to ensure that investment in water dependent industries is not threatened or undermined by overuse.

This robust, regulatory framework is also critical to supporting water entitlements as a valuable business asset and to support the development and growth of water trade. Water licences provide a property right to licence holders that in most cases is tradeable. This market mechanism enables the movement of

¹⁹ABS, Catalogue 46180D0003_201112 *Water Use on Australian Farms*, 2011-12, Table 5, 25 September 2013.

water resources to its highest value use and helps to promote innovation and increase productivity. Water trading assists irrigators to respond to variable water availability as well as other market factors. During the Millennium drought, the capacity to move water allocations and entitlements around the system provided permanent horticulture in South Australia with sufficient water to maintain permanent plantings while at the same time providing other agricultural businesses with a cash flow from the sale or lease of water.

The Millennium drought also stimulated changes to policies and operations of system storage rights in the Murray-Darling Basin. South Australia gained the ability to defer delivery of water in one year in order to store water for use in subsequent years in upstream storages. As a result South Australia has been able to develop policies that allow water users to carry water over from one year to the next, providing them with greater flexibility to manage their water between water years in response to climate and market influences.

In the past two decades there has been a transformation of national water policy, with jurisdictions agreeing to implement the national policy. While many of the reforms are implemented, in South Australia there is further refinement occurring. For example, the Department of Environment, Water and Natural Resources (DEWNR), in conjunction with the statutory natural resources management boards, is developing a state-wide strategic plan to simplify policy application, streamline water planning and improve certainty for water licensees.

Another key reform element in facilitating effective water markets is providing access to up to date water market information, high performing registers of water rights and reduced transaction times for trades and other dealings. To this end continued Australian Government investment to finalise the development of the Common Registry Solutions (CRS) to replace and standardise existing State water registers, particularly for Basin jurisdictions, is critical.

Also in the context of the Murray-Darling Basin, both the implementation of the Basin Plan and operations of the current Murray-Darling Basin Agreement, there are a number of other important commitments made by the jurisdictions that need to be delivered to support agricultural productivity and competitiveness in the medium to long term:

- Removing unnecessary barriers to water trade will deliver economic efficiencies by allowing the market to facilitate the distribution of allocations and entitlements across the system;
- Achieving water recovery targets across the system will underpin the maintenance of water quality to appropriate levels that ensure agricultural production is not reduced or restricted.
- Ensuring adequate investment by jurisdictions to maintain and manage the system, i.e. the engineering infrastructure and operations, are critical to agricultural productivity and hence competitiveness.

In supporting development of agricultural competitiveness, there would be value in conducting additional investigations into ways to further facilitate water trade, carryover and access to storage to improve management of water resources over time and space.

Waste water recycling

South Australia recycles more than 20% of its wastewater and almost 30% of Adelaide's treated wastewater is reused, which is almost double the national average. Reclaimed water is used to irrigate parks, gardens and for industrial uses in both metropolitan and regional areas. However, the majority is used for horticultural and viticultural production to the north and south of Adelaide.

The Virginia Pipeline Scheme to the north of Adelaide, commissioned in late 1999, currently recycles 22 gigalitres per year, providing about 60% of the irrigation water that supports production of around \$250 million (farm gate value) of broad-acre and greenhouse vegetable as well as wine grape production on 5,000 hectares. There are plans to extend the growing area to the north and increase the use of reclaimed water by up to a further 40 gigalitres per year by 2040.

To the south of Adelaide, the privately owned Willunga Basin Water Company also started operation in 1999. From an initial contracted demand of 2.1 gigalitres per year, it has expanded to deliver over 5.4 gigalitres per year to 140 users across the McLaren Vale region servicing more than 2,000 hectares of wine grape and other fruit production.

The application of reclaimed water in agriculture not only increases productivity but also reduces the demand for scarce surface and groundwater that is fit for human consumption and manufacturing processes. It is anticipated that population growth and economic development, together with the impacts of climate change, will continue to put pressure on water resources across the country. This will place competitive pressure on irrigated agriculture.

CASE STUDY: RIVER MURRAY SUSTAINABILITY PROGRAM

The South Australian River Murray Sustainability Program (SARMS) is creating pathways to long-term sustainability for the South Australian River Murray irrigation industries and associated communities and helping regional communities adjust to new water management arrangements.

A key initiative is the \$240 million Irrigation Industry Improvement Program (3IP), which will be delivered over five years and recover 40 gigalitres of water access entitlement from SA River Murray Prescribed Watercourse to help meet water recovery targets under the Murray-Darling Basin Plan.

In addition, SARMS will deliver new economic diversification and employment opportunities through the \$12.5 million Regional Development and Innovation Fund and strategic research initiatives through the \$5 million Industry-led Applied Research Sub-Program. The \$7.5 million redevelopment of the Loxton Research Centre will provide a hub to coordinate investment and innovation activities.

It is expected that this investment of \$265 million in the South Australian River Murray region will result in around \$1 billion of economic activity across the region. There also are plans to on-sell the expertise gained beyond the State.

THE GOYDER INSTITUTE

South Australia's future economic growth and resilience is dependent on the provision of sustainable water supplies under a variable and changing climate. In 2010, the State Government established the Goyder Institute for Water Research to implement a \$50 million, 5-year strategic research plan.

The Goyder Institute is a partnership between the State Government's Department of Environment, Water and Natural Resources, CSIRO, Flinders University, the University of Adelaide and the University of South Australia.

During its first three years the Goyder Institute has established itself as an independent expert science advisor providing quality, evidence based knowledge on water management issues important for South Australia.

Land resources

FOR CONSIDERATION

Establish a policy framework for agricultural investment, development and operations that supports primary producers' access and use of land.

South Australia's agricultural land resources are finite and increasingly constrained. Although there is considerable scope for broadacre cropping and grazing systems, this is likely to be significantly affected by climate change over the long term. In the short term those sectors are already faced with the evolving challenge of coexistence with the mining and energy sectors. On the other hand, opportunities for intensive, irrigated production systems are limited to a relatively small part of the State with access to suitable surface water, ground water or recycled water. Most of those water resources are now subject to a management regime that sets an upper limit on the amount of water available for consumptive uses, including irrigation. As a consequence, the land resources on which this water can be used are likely to be subject to increasing competition from within the farm sector.

Land resources that are capable of supporting sustainable, profitable agricultural businesses, only exist where they coincide with other, spatially variable, natural resource endowments such as suitable water resources and favourable climatic conditions. Depending on the industry, they may also be restricted to sites with features that assist the operation of agricultural businesses, such as the presence of infrastructure, access to labour, business-critical location (e.g. distance to processors) and designations that assist market access (e.g. Geographic Indicator or Fruit Fly exclusion status). Viewed in this way, South Australia's land resources for competitive agriculture are much more restricted than at face value and, in some cases, are becoming more difficult to access and use.

Important work is underway to ameliorate some of these constraints and help primary producers adapt to changing circumstances. For example, regional bodies, including local councils and Natural Resources Management (NRM) Boards, are currently preparing climate change adaptation strategies; and the South Australian Government's 'New Horizons' project is investigating scope for soil treatments that could increase the productive potential of arable land. Industry sectors are also supporting research and development that seeks to make their production systems more robust and resilient, such as research into drought tolerant cereal varieties by SARDI.

However, in other respects, and in contrast to progress in the water policy arena, South Australian policy relating to agricultural land has been due for review. The need for reform has been recognised in a variety of ways, including:

- A Select Committee of the SA Parliament investigating Sustainable Farming Practices.
- Recent Character Preservation legislation for key agricultural landscapes around metropolitan Adelaide.
- South Australia's participation in the development of a Multiple Land Use Framework to promote coexistence by the agriculture and mining sectors.
- Appointment, in 2013, of an Expert Panel to review South Australia's planning system.

Agricultural productivity and competitiveness will likely be best served by a policy framework for agricultural investment, development and operations that seeks to:

- Ensure primary producers have secure, long-term access to the best available land resources.
- Promote local conditions that enable primary producers to utilize those land resources to best effect and to adjust their businesses in a timely manner.

Efficiency and effectiveness of regulations

FOR CONSIDERATION

Continue the Australian Government's important role in supporting and promoting national consistency in agriculture and food safety regulation.

Maintain the Australian Government's important role in ensuring national capacity in key areas that support effective regulation and response.

Effective food safety and biosecurity protection necessarily involves State and Australian Government and industry collaboration and support.

In many areas that directly affect the regulation of agriculture and food safety, the Australian and State Governments have overlapping constitutional responsibilities and need to work together to ensure the best possible regulatory outcomes.

The States have broad constitutional responsibility for regulation within Australia to support agriculture in areas including food safety, biosecurity, including endemic pests and diseases, natural resources management, animal welfare, and agricultural chemical use. South Australia supports initiatives that recognise state responsibilities and avoid unnecessary duplication between Australian Government and state laws while allowing states to tailor their systems to suit their needs and administrative structures.

South Australia agrees with the principle that the effectiveness and efficiency of government regulations should always be under review to ensure that they are achieving the stated objectives. However, experience has shown that some regulation of agriculture and food safety is necessary to protect and support trade, assist industry and protect the community. It should be noted that where a problem is not clearly identified, review processes can become an unnecessary regulatory burden of themselves.

The Australian Government is responsible for negotiating international agreements and standards to promote trade. Trade in agricultural products is guided by Australia's obligations as a signatory to the World Trade Organisation. Agricultural trade rules are defined in the *Agreement on the Application of Sanitary and Phytosanitary Measures* (SPS Agreement) and the *Agreement on Technical Barriers to Trade* (TBT Agreement). States have their input into these processes through national fora that ensure the Australian Government is abreast of the issues facing jurisdictions when undertaking international negotiations.

National regulatory systems

The Australian Government has a critical and ongoing role in supporting and promoting national consistency in agricultural and food safety regulation. This is achieved through the work of committees of Ministers and Senior Officials responsible for agriculture and for food regulation. Ongoing support for the work of these committees is important and of benefit to all stakeholders.

South Australia is a signatory to the Intergovernmental Agreement on Biosecurity, the Intergovernmental Agreement of Food Regulation and the National Registration System for Agricultural and Veterinary Chemicals, which seek to improve national biosecurity, food and AgVet chemical regulation through collaboration and joint decision making between the Australian Government and jurisdictions. In all cases, the national systems depend on the interoperation of Australian and state Government legislation (see Case Study 9).

Governments and industries have signed legally binding deeds for emergency responses to exotic pest and disease incursions, including the Emergency Animal Disease Response Agreement and the Emergency Plant Pest Response Deed. Governments have also signed the National Environmental Biosecurity Response Agreement for public benefit and situations that fall outside the two industry deeds.

Similarly, the Australian and state governments work together to apply their overlapping legislative capacities to implement comprehensive controls on agricultural chemicals through the national registration scheme. Under the scheme, products are registered by the Australian Pesticides and Veterinary Medicines Authority (APVMA) and the states control their use. Where applicable to food, Maximum Residue Limits are set to

ensure minimum effective use of chemicals. This regulation and its associated implementation is vital to ensuring safety and consumer confidence in the food supply and to access markets.

The Australian Government also has a critical role in ensuring that national capacity in key areas, such as diagnostic specialisations for rapid pest and disease identification, is maintained to support effective regulation and response as these areas are too expensive for jurisdictions to maintain independently. South Australia supports the Australian Government's election policy of establishing a national biosecurity first response capacity. Maintaining and building specialist capacity for exotic pests and diseases is critical for successful response.

State specific regulation

Agriculture and trade benefit through a nationally consistent approach to regulation, but jurisdictions must retain flexibility to implement controls to protect against significant regional and local threats. PIRSA supports a risk-based approach to regulation of domestic trade and allocates resources accordingly. Interstate certification assurance arrangements allow jurisdictions to control risks associated with pests while enabling trade between the states.

Once a pest or disease is established in Australia, it is a general principle of quarantine legislation that its management becomes a responsibility for landholders. Regulation by government should only apply where there are significant externalities that threaten broader public interests, for example where a pest has a limited distribution and enforcement can limit its further spread.

South Australia maintains a high level of regulatory control to maintain our State's freedom from fruit fly. In some cases, regulatory programs are established and funded by industry to meet their needs.

Similarly, the grape and wine industry supports and funds an ongoing awareness program to minimise the risk of phylloxera entering South Australia (see Case Study on following page).

The South Australian sheep industry supports and funds the ongoing management of Ovine Johne's Disease through a combination of measures including regulation and vaccination. Abattoir monitoring provides evidence that the current approach is succeeding in reducing the impact of the disease across the industry.

CASE STUDY - AUSTRALIA'S BIOSECURITY SYSTEM PROTECTING AGAINST FOOT AND MOUTH DISEASE

Foot and mouth disease (FMD) is the most significant threat to Australia's livestock production and trade. Protecting Australian livestock industries from foot and mouth disease depends on the effective interoperation between the Australian, state and territory governments. Direct economic losses over a 10 year period have been estimated at \$6 to \$52 billion depending on the size of the outbreak (Buetre et al, 2013).

Shared responsibility is integral to the effectiveness of Australian biosecurity, in a system where each party fulfils their individual roles. Preparing, preventing, responding and recovering from an outbreak of FMD requires the full cooperation from all partners.

Australia's preparedness for FMD is overseen by governments and industry through Animal Health Australia as custodian of the Exotic Animal Disease Response Agreement (EADRA). This is an agreement between governments and industry that sets out the arrangements for decision making and terms for cost sharing emergency animal diseases responses.

The Australian Government has an ongoing and critical role through international quarantine and in maintaining critical national

diagnostic capacity through the Australian Animal Health Laboratory (AAHL). In the event of an outbreak, the Minister may also need to approve the importation of vaccines.

All states have introduced regulations to prohibit swill feeding and to implement the National Livestock Identification Scheme under the guidance of the Animal Health Committee as preventative and preparedness strategies for FMD. States are also responsible for emergency response training and disease surveillance overseen by the Animal Health Committee. In the event of an emergency, all jurisdictions will apply the emergency powers in legislation to allow them to implement the measures in AUSVETPLAN.

Industry roles overseen by Animal Health Australia include collaborating with the jurisdictions on maintaining AUSVETPLAN and EADRA, education and training, and support for farm biosecurity.

Buetre, B, Wicks, S, Kruger, H, Millist, N, Yainshet, A, Garner, G, Duncan, A, Abdalla, A, Trestrail, C, Hatt, M, Thompson, LJ & Symes, M., *Potential socio-economic impacts of an outbreak of foot and mouth disease in Australia*, ABARES research report, Canberra, September 2013

CASE STUDY – PROTECTING SOUTH AUSTRALIA AGAINST FRUIT FLY

Fruit flies are the world's worst fruit pest, destroying fruit and vegetables in commercial crops and home gardens. Maintaining South Australia's status as the only mainland state to be fruit fly free is vital to the State's \$677 million fresh fruit and vegetable growing industry (PIRSA Food Scorecard 2012-13).

The South Australian Government's annual investment in ensuring we maintain that 'fruit fly free' status is around \$5 million. This maintains quarantine border controls, quarantine roadblocks, community awareness campaigns, surveillance and eradication efforts. This investment is 40% of Biosecurity SA's total budget.

Fruit flies are declared pests under the Plant Health Act 2009 (SA). Biosecurity SA monitors fruit fly activity through a trapping grid at entry points into the State, across the metropolitan area and in fruit producing regions. If fruit flies are detected, a response is initiated based on nationally agreed protocols to delimit and eradicate the infestation. Community and industry engagement is facilitated by the Riverland Fruit Fly Committee and the South Australian Fruit Fly Standing Committee.

Several years ago, the (then) SA Citrus Industry Development Board estimated that Fruit fly freedom saved Riverland export citrus growers \$4 million annually in avoided cold treatment costs to meet the access requirements of major international markets alone. Similar but unquantified benefits also apply for other industries throughout the state.

To facilitate trade with other states and territories where fruit flies are endemic, South Australia recognises Interstate Certification Assurance (ICA) arrangements where interstate trade in fruit and vegetables is allowed based on agreed production protocols.

In late 2013, the South Australian Government committed to invest \$3 million to build a facility at Port Augusta to develop a male only line of Queensland fruit fly. This initiative will involve a research partnership with the CSIRO's Biosecurity Flagship, Plant & Food Research Australia and Horticulture Australia Limited, which will invest \$15 million in a five-year program.

CASE STUDY – OVINE JOHNE'S DISEASE MANAGEMENT IN SOUTH AUSTRALIA

Ovine Johne's disease (OJD) is a bacterial disease of sheep that prevents infected animals from absorbing nutrients causing wasting and death. It has become endemic in some sheep production areas of Australia but its prevalence in South Australia is low.

In 2005, Meat and Livestock Australia concluded that OJD infection resulted in a 6.4% average reduction in the expected gross margins on infected properties, with average losses on infected farms at that time of \$65.92 per hectare but could be as high as \$244.80 per hectare on some properties.

WoolProducers Australia and the Sheepmeat Council of Australia prepared a National OJD Management Plan 2013-18, with the objectives of:

1. Minimising the risk of infection by *Mycobacterium paratuberculosis* (Mptb) OJD spreading to properties and regions that currently appear disease free; and
2. Reducing the financial impact and adverse animal health and welfare effects of the disease on individual flocks, and on the sheep industry as a whole.

The 2013-2018 National OJD Management Plan relies on a risk management approach and greater producer responsibility. It provides a National Framework for states to work from in setting their OJD policies, and does not interfere with trade.

The South Australian OJD Control Program aims to prevent the disease from spreading in South Australia. The program is largely funded by South Australian sheep producers with the primary aim of slowing the rate of spread among sheep flocks so that the incidence of OJD remains at less than 5.0% by 2025. It involves abattoir monitoring and tracing programs to identify infected properties, risk assessment and Property Disease Management Plans. This program is supported by regulatory controls on movement of sheep from infected properties.

In 2013/14, sheep producers and the State Government contributed \$890,000 and \$200,000 respectively to deliver the program. In future, the program will move to 100% industry funding.

Reference: Meat and Livestock Australia, (2005), the economic impact of OJD infection on sheep farms.

CASE STUDY – KEEPING PHYLLOXERA OUT OF SOUTH AUSTRALIA

The Phylloxera and Grape Industry Act (SA) 1995 (the Act) established the Phylloxera and Grape Industry Board of South Australia (PGIBSA) to prevent phylloxera entering the State, to control outbreaks of phylloxera and to develop plans for the eradication of phylloxera in South Australian vineyards. Section 23 of the Act empowers PGIBSA to seek contributions from grape growers and other persons to cover its costs in carrying out its functions under the Act.

In November 2011, the South Australian Government revised the Plant Quarantine Standards to bring them into line with a National Standard. Late in 2012 concerns were raised within the industry that the changes heightened the risk of phylloxera establishing in South Australia.

As a result the South Australian Government reinstated the pre-November 2011 Plant Quarantine Standard to allow PGIBSA to examine the concerns raised within the industry in detail and to consult with the industry on the changes. A best practice risk management process identified 262 risks as potential pathways for phylloxera establishing in South Australia, with ten posing the greatest threats.

At the conclusion of its assessment, PGIBSA resolved that the Plant Quarantine Standards as of July 2012 be retained until further notice. In addition, PGIBSA made

recommendations in respect of: the ten high and very high risks identified in the risk assessment undertaken by it:

1. the National Phylloxera Management Protocol, which is used by all Australian states and territories as the basis for regulating the movement of grapes and grapevine vectors;
2. the movement of vineyard machinery; and
3. the movement of grapes from a new Phylloxera Exclusion Zone (PEZ) into South Australia.

PGIBSA also identified the need to ensure there is in place an effective industry structure to maintain an ongoing review of the Protocol and ensure consistency of national phylloxera management strategies.

As an educational exercise, PGIBSA has placed the 262 risks it identified as potential pathways for Phylloxera establishing in South Australia on its website. The PGIBSA website now encourages its stakeholders to report incidents of any suspicious or unusual looking pest or disease symptoms or any behaviour that could lead to phylloxera establishing in South Australia.

The risk assessment process has also prompted PGIBSA to accelerate its work in finding a new method of testing for Phylloxera and other vine diseases by DNA sampling.