

Chapter 7

Innovation, research and development

Introduction

7.1 Throughout its inquiry the committee consistently received evidence suggesting that research and development led innovation will be critical to the future of Australia's food processing industry. As a result, one of the committee's key concerns has been to identify the settings and incentives for encouraging investment in research and development in the food processing sector.

7.2 This chapter examines the opportunities and challenges for ongoing innovation through research and development in Australia's food processing sector and identifies the role of government in enabling the industry.

An overview of expenditure

7.3 The government estimates that during 2008–09, rural research and development investment totalled \$1.5 billion, \$710 million of which was attributed to government funding for programs including Cooperative Research Centres, the CSIRO and universities, Rural Research and Development Corporations and revenue foregone through the research and development tax concession.¹

7.4 The CSIRO views research and development within the food supply chain as 'important to ensure that the Australian food industry is secure and sustainable'.² Similarly, the Australian Bureau of Agricultural Resource Economics and Sciences (ABARES) have stated that '[r]esearch and development on food supply chains could be as important to food security as research to improve yields'.³ Although ABARES considers that '[t]here is no foreseeable risk to Australia's food security', they have identified that there will be challenges to food security in the coming decades:

Australia's strength in providing food to other countries faces a number of challenges over coming decades. The rate of growth in agricultural productivity is declining in Australia, and perhaps globally, as growth in investment in research and development (R&D) has declined. Additional

1 Department of Agriculture, Fisheries and Forestry, *Issues paper to inform development of a national food plan*, June 2011, pp 44–45.

2 Jay Sallahewa, Sustainable Food Processing, CSIRO, Sustainable food manufacturing – challenges and opportunities, *Food manufacturing innovation and sustainability forum presentation: session one*, 4 June 2010, p. 37.

3 Australian Bureau of Agricultural Resource Economics and Sciences (ABARES), *Science and Economic Insights – Issue 1: 2011–Global food security: facts, issues and implications*, May 2011, p. 4.

challenges include climate change, increasing pressure on limited resources such as land, water and fertiliser, and, if Australia follows the path of a number of other countries, demand from non-food uses of crops, particularly for biofuel.⁴

7.5 ABARES considers strong productivity growth will be key to ensuring food security in the face of these challenges.⁵ Yet despite the benefits of research and development, ABARES has reported that 'public expenditure on R&D in agriculture, which grew at an average of 6.5 per cent a year between 1953 and 1980, has since grown at only 0.6 per cent a year'.⁶ The concern that investment in research and development has declined over recent years is shared by Dr Martin Cole and Mr Geoff Ball of the CSIRO:

Agricultural research and development investment has declined globally over the last two decades and is woefully inadequate to deal with the challenges... The lack of investment in innovation has also seen the food industry become one of the least profitable industry sectors...an increase in investment is needed if the food industry is to overcome the many challenges of globalisation and realise the growth opportunities of meeting the consumer drivers of health, convenience and premium foods...⁷

7.6 Dr Cole and Mr Ball claim that the 'complex issue of food security cannot be met solely by increasing production efficiencies', but that opportunities that improve sustainability must be found within the entire supply chain:

...this will require investment in both pre and post-farm gate food production and processing. The solution will require the development of new sustainable food manufacturing technologies that minimise the impact on the environment, water use, greenhouse gas emissions, waste generation and energy requirements.⁸

7.7 They consider that a 'global perspective to innovation' is required to ensure 'cutting edge ideas and technology from the rest of the world [can] be adapted and

4 ABARES, *Science and Economic Insights – Issue 1: 2011 – Global food security: facts, issues and implications*, p. 1.

5 ABARES, *Science and Economic Insights – Issue 1: 2011 – Global food security: facts, issues and implications*, p. 5.

6 ABARES, *Science and Economic Insights – Issue 1: 2011 – Global food security: facts, issues and implications*, p. 11.

7 M. Cole and G. Ball, 'Global trends and opportunities in food and nutritional sciences, JR Vickery Address, 2010, 43rd Annual AIFST Convention, *Food Australia*, October 2010, pp. 461–462.

8 M. Cole and G. Ball, 'Global trends and opportunities in food and nutritional sciences, JR Vickery Address, 2010, 43rd Annual AIFST Convention, *Food Australia*, October 2010, pp 461–462.

adopted here' and suggest that 'a collaborative research network that partners with industry will develop the human capital required for innovation.'⁹

The role of government

7.8 Although the food processing sector faces a multitude of challenges, many outside the realm of government control, there remain opportunities for government to ensure its policies encourage the sector's long term viability. One such area is by providing an environment conducive to ongoing investment in research and development.

7.9 Campbell Arnott's made the point that, despite its size and value to the economy, the food processing sector is often forgotten when the government is considering policy responses to encourage ongoing investment:

When the government talks about manufacturing, it is always about the car industry or heavy industry. There are more than 300,000 people employed in food manufacturing in this country. We have some manufacturers, including ourselves, which have leading-edge technology that does require some of our best and brightest from university to come and work with us to continue that trend. Without technology and innovation, you will not be able to compete here. You will never be able to compete with a box of biscuits coming out of China. ...The only way to change that game is to have great R&D and technology, and people in plants that can adapt that technology and scale it up.¹⁰

7.10 The Australian Manufacturing Workers Union (AMWU) agreed that as much as possible should be done to support Australian companies:

...to be able to effectively take up any opportunities that arise in our region including looking to greater support for R&D and innovation in the sector, assisting food companies to re-equip with state-of-the-art food production technologies that drive innovation and productivity, and effectively investing in the skills and training of their management and workforce.¹¹

Committee view

7.11 The committee notes the current government's claims it has fostered investment in the industry through its tax settings and research programs. However, the committee notes the changes that were made to the research and development tax

9 M. Cole and G. Ball, 'Global trends and opportunities in food and nutritional sciences, JR Vickery Address, 2010, 43rd Annual AIFST Convention, *Food Australia*, October 2010, pp 461–462.

10 Mr Craig Funnell, Vice President, Supply Chain – Asia Pacific, Campbell Arnott's, *Committee Hansard*, 10 February 2012, p. 59.

11 Ms Jennifer Dowell, National Secretary, Australian Manufacturing Workers' Union, *Committee Hansard*, 10 February 2012, p. 2.

credit in 2010 and the assertions of the then Minister, who, at the time, informed a parliamentary committee that the recent doubling in claims, which the government attributed to as resulting from illegitimate claims, was 'unsustainable'. The committee notes that although the government maintains that the definitional changes that were subsequently introduced would ensure only legitimate claims could be made, the effect of those changes would be a capping of the expenditure:

In my view, given the growth in expenditure that has occurred in this particular area—and it has doubled in the last couple of years—you have to make an assessment as to whether or not you think the level of genuine R&D investment has doubled in that length of time. It poses another question: are claims being submitted that are not legitimate? Under the current way in which the law is interpreted, people are able to do this. We want to make some changes because if you do not do the changes then the whole scheme becomes unsustainable, the whole process is brought into disrepute. In my judgement, I would be negligent not to act and take action if I knew this was going on, had responsibility for the administration of this program and held it in the regard that I do. That is what we have done. We have moved it from a system of deductions to a system of credits. We are doing it within a funding envelope, as I say, of \$1.5 billion a year.¹²

7.12 The committee takes the view that although it is too soon to understand the impact of the changes to the research and development tax credit, there is a need to continue to monitor if the reduction in the credit has a negative impact on the sector.

7.13 The committee considers that additional and ongoing government investment through tax settings and research programs is necessary to support research and development led innovation in the food processing sector. In this context, the committee views research and development led innovation as including improvements in all parts of the processing chain—improved equipment and processes that create production efficiencies as well as new product development. Innovation in all parts of the chain is necessary given the challenges confronting the industry.

The importance of research and development

7.14 Industry participants on this inquiry consistently highlighted the important role research and development needs to play, particularly if Australia is to capitalise on the opportunities presented by growth in the Asian markets.

7.15 Lion Pty Ltd identified the importance of investment and innovation in capturing the opportunities presented by Asian markets:

There is clearly an opportunity here for Australia to become the food bowl for Asia and feed emerging markets. To do this, we must support local production and build an international reputation as a producer of the highest

12 Senator the Hon. Kim Carr, Minister for Innovation, Industry, Science and Research, Senate Economics Legislation Committee, *Budget Estimates Hansard*, 31 May 2010, p. 81.

quality food and beverage products. It is only through investment and innovation that the industry can take advantage of this opportunity.¹³

7.16 However, in identifying this area of future growth, Lion Pty Ltd advised the committee that their ability to continue to invest and take advantage of such opportunities is suffering as a result of the current domestic market environment:

Unfortunately, the current economic climate provides limited scope for business in the sector to innovate and expand. Sustained low consumer confidence continues to put downward pressure on pricing while input costs continue to spike, meaning that most in the industry have found their margins squeezed and have limited ability to reinvest. The Australian dollar continues to undermine exports while enhancing opportunities for competing imports, particularly in private label.¹⁴

7.17 It is clear that the strong Australian dollar, which is placing downward pressure on profit margins, is affecting the level of investment businesses are able to make. Like Lion Pty Ltd, the Australian Meat Industry Council (AMIC) highlighted the difficulties they face in pursuing innovation and research and development:

The red meat industry processing sector operates on margins of the order of one to three per cent, against a set of tightly controlled cost-plus parameters. The risk-reward balance is not as attractive for R&D in the red meat processing sector because of the small margins industry has to fund innovation from. With a margin of one to three per cent it is very hard to fund innovation. Government needs to understand the specific needs of the red meat processing sector in R&D programs.¹⁵

7.18 Campbell Arnott's also identified the importance of innovation to their business and whilst it appears to the committee that they focus more on growing their share of the domestic market and are not as keenly looking to capture the opportunities presented by foreign markets, the role of innovation is no less important to their continued success:

To remain competitive we have to continue to invest substantially for innovation and growth. It is not just about cost. You have to be cost competitive but you have to be innovating to grow. You have to have a reason to entice the consumer to the supermarket shelves to want to buy your product. ...**So cost is absolutely important; innovation is more important.** [emphasis added] We need to make the products that our

13 Mr Duncan Makeig, Group Sustainability Director and General Counsel, Lion Pty Ltd, *Committee Hansard*, 10 February 2012, p. 50.

14 Mr Duncan Makeig, Group Sustainability Director and General Counsel, Lion Pty Ltd, *Committee Hansard*, 10 February 2012, p. 50.

15 Mr Gary Burrige, Chairman, Australian Meat Industry Council, *Committee Hansard*, 10 February 2012, p. 23.

consumers want and also tempt them with products they have not yet even thought of.¹⁶

7.19 However, not all participants in the food processing sector are optimistic about the opportunities that can be harnessed through increased investment in research and development. This was most clearly identified by Mrs Mac's who, in their submission, advised the committee that without 'radical innovation' the future of food processing in Australia is not 'bright':

The competitiveness of Australian processed foods at a global level is currently being further eroded by the strong Australian Dollar and a lack of any willingness by governments and retailers to consider applying a level manufacturing playing field by requiring foreign manufacturers that export food products in to Australia to meet the same processing standards and hence consequential costs that are imposed by government regulation here in Australia across all tiers of government.

Unless this situation changes, then with the exception of niche products, or some radical innovation to processing techniques developed in Australia, there is not a bright future for Australian food processing and manufacturing companies.¹⁷

Committee view

7.20 Given that investment in research and development and increased cost efficiencies and improved competitiveness, the committee takes the view that more needs to be done to support continued investment in research and development. As tighter margins further reduce the capacity of firms to invest in research and development, the committee considers it critical that the government needs to provide an environment that encourages ongoing investment in this area.

7.21 The committee considers that the evidence it has received demonstrates that research and development led innovation will be key to overcoming the challenging environment that many in the food processing sector face. Campbell Arnott's explained this very well:

We are beset at the moment with a number of unique challenges that we probably have not seen before occurring at the same time. As I said earlier, you can bemoan them or you can work out how to compete... We have certainly seen a huge benefit from incentivising good investment in technology in our plans to enable us to continue to grow the business and also move up the food chain, if I can use that word colloquially, in terms of

16 Mr Craig Funnell, Vice President, Asia Pacific Supply Chain, Campbell Arnott's, *Committee Hansard*, 10 February 2012, p. 55.

17 Mrs Mac's, *Submission 4*, p. 1.

technology, which then requires a different skilled workforce over time to manage.¹⁸

7.22 The committee is encouraged by the resilience of the sector and its commitment to facing the challenges head on but acknowledges the role of government in supporting industry through setting appropriate policies, specifically in this instance, those relating to research and development.

The challenges to research and development led innovation

7.23 A unique challenge among those facing food processors is the growth in private label supermarket products. The role of these products in the mix offered to the market place poses a significant risk to food processors that were once more able to rely on loyalty through their established brands:

Consumers do want choice, and the permeation of home brand damages the opportunity for food manufacturers to build brands and brand loyalty.¹⁹

7.24 Over time, however, as the major retailers have sought to grow their businesses by entering the market with private label products which provide a similar, if not identical alternative to consumers at a reduced cost, the need to capture improvements through innovation, whether that be through new products or improved processes, has become paramount for survival.

Intellectual Property

7.25 Research and development enables Australian food processors to innovate their product offerings and ensure that their business models are as lean and competitive as possible. However, with the growth in private labels, the incentive for such investment is diminishing given that the large retailers are able to take advantage of the available intellectual property for their private label brands, without having to make any investment.

7.26 The Australian Food and Grocery Council (AFGC) explained how this can occur:

There are several ways that it can happen, where the IP can be taken over by the supermarkets. One is the declaration, up to 12 months before the product launch, by the branded manufacturers of what they are proposing in terms of new products or product renovation. There are anecdotes of exactly what you say happening, where the supermarkets have launched a private label even before the branded manufacturers have, with the same product concept... The other way that they take the IP from the branded

18 Mr Craig Funnell, Vice President, Asia Pacific Supply Chain, Campbell Arnott's, *Committee Hansard*, 10 February 2012, p. 61.

19 Ms Catherine Barnett, Chief Executive Officer, Food South Australia Inc., *Committee Hansard*, 10 February 2012, p. 17.

manufacturers is simply when a product is seen to be successful on the supermarket shelves the retailers then demand a private label version of it, which is almost identical if not identical.²⁰

7.27 Food South Australia were also worried by this trend:

Retailers can capitalise on the leading brands' innovation without the risk and expense of developing the intellectual property. Gone are the days when people only bought home brand if they could not afford anything else.²¹

Success through innovation

7.28 Despite this concerning evidence, the committee also received information that suggests that some food processing businesses, who have continued to innovate, have been able to resist moving into private label processing by maintaining their brands and developing new products:

We certainly see our focus being around our brands. We have some very strong brands in this country. Arnott's is seen in 96 per cent of all households in the country. Tim Tam is one of the strongest brands in the country. We see our resources—our capacity management of the asset base as well as our R&D and plant personnel being focused behind those brands—as being of higher importance than manufacturing private label. We have an asset base also—and this is probably different to colleagues who have spoken today—that is highly utilised. You have to continue to ensure that that asset base remains highly utilised and that the investments that go in behind it are behind innovation and technology to enable your brands to grow.²²

7.29 Campbell Arnott's attribute their success to product innovation:

We have [maintained our share of shelf] through staying ahead of the game and giving retailers a reason for wanting us to be on the shelf—because the consumers want our product. Consumers are savvy. They certainly are looking for price, but they are also looking for innovation and new products. ...

We are fortunate that we are in a sector that is fairly exciting. We are able to bring different products, textures and flavourings to a marketplace to excite consumers. We are taking advantage of that. We also have a very

20 Dr Geoffrey Annison, Deputy Chief Executive Officer, Australian Food and Grocery Council, *Committee Hansard*, 13 December 2011, p. 19.

21 Ms Catherine Barnett, Chief Executive Officer, Food South Australia Inc., *Committee Hansard*, 10 February 2012, p. 17.

22 Mr Craig Funnell, Vice President, Asia Pacific Supply Chain, Campbell Arnott's, *Committee Hansard*, 10 February 2012, p. 57.

large R&D marketing group who really do understand the consumer in this country and that allows us to bring those products to market.²³

7.30 Mr Vincent Pinneri of Coca-Cola Amatil also explained to the committee instances when they are able to take this approach and resist producing private label products:

On a particular innovation where we have first mover advantage we will not allow that to go into private label, versus other areas like tin cans, which is where our infrastructure is and our overheads are, it is about leveraging the infrastructure while we are in that space.²⁴

Wine

7.31 The committee heard that the growth of private label products is spreading further than everyday grocery items and now poses a potential problem to the Australian wine industry.

7.32 The Winemakers' Federation of Australia (WFA) explained the loss of diversity to the committee and how their industry organisation intends to confront the challenge that it presents through research and development. It also explained the importance of the RDC (Research and Development Corporations) model in including small grape growers and wine makers.

WFA believes that research and development plays a critical role in the wine industry's future, particularly in the areas of viticulture, oenology and market development. WFA's priority is to ensure that returns from R&D activities are maximisedIn partnership with Wine Grape Growers Australia (WGGA), we have established the Innovation Policy Committee to ensure R&D, especially that funded by industry levies, delivers cost-effective outcomes. WFA also works productively with [other organisations].WFA is seeking to achieve a better alignment of government and industry objectives from Research, Development and Extension (RD&E) and a stronger, expanded R&D base to ensure we maintain a dedicated R&D agenda that reflects the collaborative nature of the wine sector.

There are a large number of small grape growers and winemakers in the Australian wine sector – which is one of its greatest strengths. These businesses have little chance of conducting effective R&D on an individual basis and therefore rely heavily on the capability that is developed through levies allocated by the GWRDC towards research. WFA believes strongly that the RDC model is world leading and reflects the unique nature of much

23 Mr Craig Funnell, Vice President, Asia Pacific Supply Chain, Campbell Arnott's, *Committee Hansard*, 10 February 2012, p. 60.

24 Mr Vincent Pinneri, Managing Director, SPC Ardmona, Food Services Division of Coca-Cola Amatil (Aust) Pty Ltd, *Committee Hansard*, 10 February 2011, p. 42.

of Australia's agriculture and value-added businesses. Its preservation is important for ongoing innovation across the sector.²⁵

7.33 For those food processing sector participants that are unable to decline requests to provide product for private label goods, the committee received evidence that they must remain competitive, either through new product development or process improvements that reduce the costs in their business. However, in a tight market this can be difficult as spending on research and development may be one of the first areas of cost to be cut.

7.34 Mr John Berry of JBS Australia identified that this is occurring as operators look to take costs out of their business to ensure their survival, including funding that would otherwise be invested in research and development:

You may not be aware of this, but the meat-processing industry pays statutory levies on the processed animal direct to the Department of Agriculture, Fisheries and Forestry. That is then reallocated to the Australian Meat Processor Corporation. Its levy-paying members have access to 15 per cent of those funds to be used for the purposes of R&D. They can be leveraged on a dollar-for-dollar basis through the federal government.

That is a good model and has been a very successful model. But, without being too dramatic, I think we are currently in a situation where we are looking to take cost out of the business.²⁶

7.35 Mr Berry explained that in the meat-processing industry there are limits to the amount of automation and therefore 'leanness' that can be built into the production line and therefore, where research and development will not have a 'commercial payback' it will not be prioritised:

It is not realistic to expect that we can automate these businesses. They are and they will continue to be labour intensive businesses. So we are looking to implement technologies where we can. But, again, they have to meet commercial paybacks. We are looking to identify key areas of cost which we can take out of the business.²⁷

7.36 Although Coca-Cola Amatil do not face the same challenges as commodity processors such as the meat and dairy industries, they advised the committee that their ability to create new products through innovation will enable them to share more of the profits they make with their suppliers not only through requiring more product but also as a result of increased margins on new items. They gave the example of pears:

25 Winemaker's Federation of Australia, *Submission 35*, p. 9.

26 Mr John Berry, Director and Manager, Corporate and Regulatory, JBS Australia Pty Ltd, *Committee Hansard*, 12 April 2012, p. 38.

27 Mr John Berry, JBS Australia Pty Ltd, *Committee Hansard*, 12 April 2012, p. 38.

Historically, the business used to export a significant amount of pears to Japan, Germany and all over the world. We have subsequently reduced our quota to probably half, or maybe even less than that, but the trees are still there. So those pears are now going into the fresh market, which is reducing the fresh market price. Our ability to change that will be driven by our ability to execute a new processing technology, which we have found, that will allow us to do sliced pears that have a longer shelf life—21 days. They are still fresh, but sliced, and have anti-ageing and antibacterials. ...Being able to do a sliced pear is very different to selling a can of tinned fruit, which you can get from anywhere and can be easily replicated. It is about price realisation, which then allows us to share more equitably with the growers and other people in the supply chain²⁸

Committee view

7.37 The committee acknowledges that there are many complex challenges facing the Australian food processing sector and that the opportunities that research and development led innovation provide may not be accessible to all food processing sector participants. In light of this fact and given that researchers have identified that future success will depend on innovation within the entire supply chain, the committee considers that the role of government in ensuring that taxation and regulatory settings encourage innovation is even more important, particularly for small and medium enterprises and those commodity based processors that do not have the same ability to either access research and development or diversify their products.

Government support for research and development

7.38 The government currently provides support for research and development through the research and development tax concession and the provision of funding for Cooperative Research Centres, Rural Research and Development Corporations, the CSIRO, and universities.

7.39 Throughout its inquiry, the committee sought to understand how effective the existing support provided by these programs has been in encouraging research and development.

Overview of industry research programs

7.40 Cooperative Research Centres (CRCs) support research and development by fostering collaboration between researchers, industries, communities and governments to solve major challenges facing Australia.²⁹ They do this by linking researchers with industry to focus research and development towards utilisation and

28 Mr Vincent Pinneri, Coca-Cola Amatil (Aust) Pty Ltd, *Committee Hansard*, 10 February 2012, p. 40.

29 Department of Industry, Innovation, Science, Research and Tertiary Education, *CRC Directory 2011–12*, p. iv.

commercialisation.³⁰ CRCs may have many participating organisations including universities and research institutions, businesses, governments, international partners, not-for-profit organisations, and industry and community associations. At present there are eight active CRCs related to the food industry.³¹

7.41 Research and development corporations (RDCs) cover nearly all of Australia's agricultural industries and are the primary channel through which government provides funding for rural research and development.³² RDCs do this by investing in research, development and innovation that seeks to improve productivity and quality to ensure competitiveness, profitability and sustainability.³³ RDCs involve partnership between government and industry.³⁴

7.42 The Clean Technology Investment Program is a competitive, merit-based grants program introduced in 2011 to support Australian manufacturers to maintain competitiveness in a carbon constrained economy. It seeks to do this through grants for investments in energy efficient capital equipment and low emission technologies, processes and products.³⁵

The effectiveness of these programs

7.43 The committee sought the advice of the responsible government departments as to the effectiveness of these programs. On raising the matter of CRCs with the Department of Industry, Innovation, Science, Research and Tertiary Education (DIISRTE), the department explained that there are currently eight active CRCs related to the food industry but that none of those CRCs is specific to food processing:

I will start with the eight active CRCs... We listed the National Plant Biosecurity CRC, which had a ceasing date of 30 June 2012. It was actually successful in the 14th selection round we ran last year, and will continue funding for another six years starting from 1 July 2014. The Beef Genetics Technology CRC will cease on 30 June 2012...The other CRCs that are

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https://www.crc.gov.au/Information/ShowInformation.aspx?Doc=about_programme&key=bulletin-board-programme&Heading=The Program (accessed 24 May 2012).

31 Ms Ann Bray, General Manager, Food and Chemicals Branch, Department of Industry, Department of Innovation, Science, Research and Tertiary Education, *Committee Hansard*, 11 May 2012, p. 32.

32 http://www.daff.gov.au/agriculture-food/innovation/research_and_development_corporations_and_companies (accessed 24 May 2012).

33 http://www.daff.gov.au/agriculture-food/innovation/research_and_development_corporations_and_companies (accessed 24 May 2012).

34 http://www.daff.gov.au/agriculture-food/innovation/research_and_development_corporations_and_companies (accessed 24 May 2012).

35 <http://www.usindustry.gov.au/programs/CleanTechnology/CleanTechnologyInvestment/Pages/default.aspx> (accessed 24 May 2012).

currently in place are the Sheep Industry Innovation CRC, , the Australian Seafood CRC, and the Future Farm Industries CRC [which will all] cease on 30 June 2014. We have another three which will cease over 2016, 2017 and 2019, the latter being the High Integrity Australian Pork CRC. .³⁶

7.44 Despite there being no active CRCs that specifically look to assist the food processing sector, DIISRTE did advise the committee that they are in the early stages of looking at possible opportunities to address this situation:

We are looking at some early concepts around working closely with the research organisations, academia, state governments, the Commonwealth government and the CSIRO around what we can do to assist the process of collaboration. We only have early ideas at the moment. They are not developed enough to be mentioned today, but they might be developed well enough at the stage of the National Food Plan, the white paper.³⁷

7.45 In evidence to the committee however, Mr Callum Elder, Executive General Manager, Quality and Innovation, Simplot Australia Pty Ltd explained that investment beyond CRCs is required. Mr Elder explained that in order to innovate businesses need access to pilot plant and equipment to test whether or not the new equipment will provide their processes with efficiencies, and therefore whether the investment in the capital is worthwhile. Mr Elder explained however that access to pilot plant and equipment in Australia is very limited:

Every university has a nutrition or food course; hardly any of them have any technical food science courses anymore, because they are required to have equipment and this equipment is expensive to buy and maintain. So we find access to pilot plant equipment and expertise that we can draw on in people who can utilise that equipment to be a very difficult thing. Quite often now we are actually getting graduates and people from overseas, from Germany and other countries that do have wonderful centres. [Here there is only the] CSIRO centre at Werribee.... How do SMEs, which are not big companies like us, get to trial new equipment...if they cannot access that at a centre of excellence or a research centre?³⁸

7.46 In response to the committee's questions concerning the level of demand for access to the Clean Technology Investment Program by the food processing sector, the department advised that there had been a lot of interest in the Food and Foundries Investment Program:

36 Mr Anthony Murfett, General Manager, Cooperative Research Centres Program, Department of Industry, Innovation, Science, Research and Tertiary Education, *Committee Hansard*, 11 May 2012, p. 33.

37 Ms Ann Bray, Department of Industry, Dept of Innovation, Science, Research and Tertiary Education, *Committee Hansard*, 11 May 2012, p. 34.

38 Mr Callum Elder, Executive General Manager, Quality and Innovation, Simplot Australia Pty Ltd, *Committee Hansard*, 12 April 2012, p. 21.

\$150 million is dedicated to food. We launched it on 16 February. It would be fair to say we have had a very significant response to the food and foundries program. Our initial push into the industry was electronically. Since [the launch day], the webpage for the program has had over 15,000 hits. ...We already have 16 applications from the food industry, seeking grant support of about \$12.9 million, and we are working through that at the moment. Considering a 16 February launch, that is a fairly impressive response, from our experience of launching grant programs in the past.³⁹

7.47 Dr Edwards explained that the funding that has been set aside for the program is to be allocated over six years and that 16 applications had been received.⁴⁰

Committee view

7.48 The committee takes the view that the Food and Foundries Investment Program is not in fact additional investment in the food processing sector, rather the funding that has been set aside for this program represents compensation for the industry. This compensation is only necessary as a result of the additional costs being introduced by the government through its carbon price.

7.49 The inquiry heard that the industry is generally complimentary of the RDC program. Indeed, the Australian Dairy Industry Council (ADIC) in their submission explained that they have found RDCs to be responsive to changing conditions:

Over the years the RDCs have proved responsive to changing external conditions. While the overall structure of RDCs has remained the same, the governing framework has been modified. Internal governance systems have seen RDCs devise a range of approaches to developing R&D investment strategy, measuring return on investment, managing commercialisation and developing extension/application programs.

7.50 ADIC explained that they see RDCs as playing a 'valuable role in identifying, funding and guiding the commercial application and extension of innovation' and gave the example of the dairy RDC, Dairy Australia Limited, which was established five years ago:

[The dairy RDC was established] out of an industry-led initiative to respond to and manage the changing needs of dairy farming, and maximise the returns to farmers from levy-based investment. The Dairy Australia / RDC model provides a framework for Australia's 8,000 dairy farmers to directly invest in R&D and encourages farmers collectively to engage in the continuous pursuit of industry innovation and advancement.⁴¹

39 Dr Russell Edwards, General Manager, Clean Technology Investment, AusIndustry, Department of Industry, Innovation, Science, Research and Tertiary Education, *Committee Hansard*, 11 May 2012, p. 34.

40 Dr Russell Edwards, DIISRTE, *Committee Hansard*, 11 May 2012, p. 34.

41 Australian Dairy Industry Council, *Submission 47*, p. 43.

7.51 They did explain however that RDCs could be further improved by ensuring '[m]aintenance of the RDC model with closer alignment to industry focus and funding and government priorities.'⁴²

7.52 Like the dairy industry, the WFA were also complimentary of the RDC model:

WFA believes strongly that the RDC model is world leading and reflects the unique nature of much of Australia's agriculture and value-added businesses. Its preservation is important for ongoing innovation across the sector.⁴³

7.53 Although most industry participants view RDCs favourably, AMIC suggested that existing research and development programs, including RDCs, are uncoordinated as a result of their joint administration:

The disconnected nature of R and D investment and prioritisation between the RDC structure overseen by DAFF and that of the Department of Innovation, Industry, Science and Research (DIISR) presents an on-going source of frustration (due to competition and/or fragmentation of investment) for the red meat and livestock industry (and agriculture more broadly).⁴⁴

7.54 The committee is concerned by recent government decisions to reduce investment in research and development, including the decision to stop funding Land and Water Australia and an apparent move away from agricultural CRCs. The committee is particularly concerned by these developments particularly in light of evidence it received throughout the course of its inquiry that demonstrated the importance of research and development and innovation to the food processing sector.

7.55 The committee does however consider that in view of the government's commitment to the development of a National Food Plan, there are opportunities for new CRCs to be established that specifically look to address the challenges facing the food processing sector. The committee would also like to see that funding arrangements due to expire for existing CRCs be reviewed with a view to providing ongoing support.

7.56 The committee is encouraged that industry participants do appear to be engaging with government sponsored programs that aim to enable and support investment in research and development but notes the evidence it received suggesting that more needs to be done to encourage investment in pilot plant and equipment. The committee takes the view that in the absence of such investment, it is clear that the

42 Australian Dairy Industry Council, *Submission 47*, p. 36.

43 Winemakers Federation of Australia, *Submission 35*, p. 9.

44 Australian Meat Industry Council, *Submission 36*, Attachment 1, pp 7–8.

food processing sector will continue to rely on importing skilled labour and intellectual property.

7.57 The committee is pleased that food industry participants have shown interest in the Food and Foundries Investment Program (part of the Clean Technology Investment Program) however remains convinced that this program does not reflect additional investment in research and development but is rather compensation for additional costs being imposed by the government through the introduction of a carbon tax. Further, the committee notes that given there have only been 16 applications, more should be done to ensure that smaller businesses within the industry are aware of the program and the opportunity it provides to upgrade plant and equipment.

7.58 In respect of the RDCs, the committee is pleased that in their preliminary response to the Productivity Commission's report into RDCs that the government has indicated it will not adopt the recommendation to reduce funding to these research bodies but suggests in fact that what is required is an increase in funding for these bodies.

7.59 The committee notes that small and medium enterprises at times struggle to access research and development funding. The committee views equity of access to research and development funding as vital to an ongoing vibrant and sustainable food industry.

Research and development tax concessions

7.60 Throughout its inquiry, the committee also sought to understand how the recent changes in the research and development tax concession had affected business investment activity.

About the concession

7.61 From 1 July 2011 the government introduced changes to the research and development tax concession. The existing research and development tax concession was replaced with a new incentive comprised of two elements:

- A 45% refundable research and development tax offset available to eligible companies with an aggregated turnover of less than \$20 million per annum; and
- A 40% non-refundable R&D tax offset available to all other eligible companies. (Any unused component of the non-refundable offset can be carried forward for use in future years.)⁴⁵

45 <http://www.innovation.gov.au/Industry/FoodProcessingIndustry/Pages/About.aspx> (accessed 24 May 2012).

7.62 Prior to these changes, the tax concessions available for research and development included:

- a 125 per cent tax concession that provided claimants with a deduction of 125 per cent of eligible expenditure incurred on Australian owned R&D activities;
- an R&D tax offset that enabled small companies with an annual turnover of less than \$5 million and whose aggregate Australian-owned R&D expenditure was more than \$20,000 but less than \$1 million to obtain a tax offset equivalent to their tax concession entitlement;
- an incremental 175 per cent premium tax concession for those companies that increase their R&D expenditure in Australia relative to their average R&D expenditure over the previous three years; and
- an incremental 175 per cent international premium tax concession available for increased in foreign-owned R&D activities carried on by a company incorporated in Australia.⁴⁶

7.63 The changes to the tax concession that took effect from 1 July 2011 were the subject of a Senate Economics Legislation Committee inquiry in June 2010. Throughout that inquiry stakeholders raised concern that the changes would result in a reduction of investment in research and development in Australia. Submitters criticised the time which the government had allocated for consultation with stakeholders as well as the definitional changes to 'core' and 'supporting' research and development that the bill contained. Stakeholders were concerned that these changes would disqualify their investment in research and development activities from the concessions.⁴⁷

7.64 The committee notes, however, that the recommendation of the majority report to review the program after two years was taken up by the government and as a result an R&D Tax Incentive Advisory Committee has been established, under Innovation Australia:⁴⁸

The Advisory Committee will canvass a broad range of views and provide advice to the government on the implementation and operation of the new

46 Senate Economics Legislation Committee, *Tax Laws Amendment (Research and Development) Bill 2010 [Provisions] and Income Tax Rates Amendment (Research and Development) Bill 2010 [Provisions]*, 15 June 2010, p. 9.

47 Senate Economics Legislation Committee, *Tax Laws Amendment (Research and Development) Bill 2010 [Provisions] and Income Tax Rates Amendment (Research and Development) Bill 2010 [Provisions]*, 15 June 2010, pp 81–86.

48 <http://www.innovation.gov.au/Industry/FoodProcessingIndustry/Pages/About.aspx> (accessed 24 May 2012).

R&D Tax Incentive. The R&D Tax Incentive will be reviewed after two years of operation to gauge the policy's effective implementation.⁴⁹

7.65 Despite the newness of the research and development tax arrangements, throughout its inquiry the committee sought to identify whether or not the changes had had the effect of reducing investment in these activities.

Effects of the changes to the concession

7.66 When asked about the effect of the changes to the regime, Mr Andrew Redman, Regional Quality and Regulatory Operations Manager, General Mills Australia and New Zealand commented:

I personally do not have any sense of how that has played out for industry in that short period of time. I know that things like compliance with the legislation makes it difficult. Being a larger company, we are in a position to do that. ... I think it would be prohibitive for smaller companies [without the infrastructure in-house] to take advantage of the R&D concession.⁵⁰

7.67 The AFGC however do consider that the 'erosion' of the tax concession has dampened investment in research and development:

Public sector support for the food processing industry, however, is lower now than any time in the past decade through a combination of the erosion of the value of the R&D Tax Concession scheme and a loss of direct grants to the industry.⁵¹

7.68 Simplot's Executive General Manager of Quality and Innovation, Mr Callum Elder, also commented on the recent changes to the research and development tax concession. He suggested that although it is hard to measure the impact at this point in time:

...fundamentally, to increase productivity you need to invest. One of the forms that you need to invest in is new technology, new approaches to doing things—doing things smarter and better, as you talked about. To undertake that research and development costs money. I think one of the best encouragements that government can give to industry is to have an effective IRD [interest rate differential] tax concession that truly encourages innovation and the use of the skills that we have right across this country, in universities, research centres of excellence and within companies. ...[but] it looks at the moment like our particular tax concession amount will drop

49 <http://www.innovation.gov.au/Industry/FoodProcessingIndustry/Pages/About.aspx> (accessed 24 May 2012).

50 Mr Andrew Redman, Regional Quality and Regulatory Operations Manager, *Committee Hansard*, 8 March 2012, p. 3.

51 Australian Food and Grocery Council, *Submission 12*, p. 15.

by 30 per cent next year, because the range of activities for which you can make claim have been narrowed.⁵²

Risks to local research and development

7.69 Mr Elder identified the risk that changes to the tax concession may lead companies offshore for their research and development activities:

There are certain provisions that are also restrictive relating to it. In the global economy, R&D can be conducted by multinationals literally anywhere. Where do we want that R&D to be conducted? It should be conducted in this country for the benefit of our society, our people and our industry. In relation to an effective tax rate, for our return at the moment we would be lucky to get 7c in the dollar for our R&D spend. By the time we put our costs against that—all the record-keeping and other activities required, the accounting costs—it is barely worth doing, and that is for a large company like ours. For a smaller SME, it would not even bother. It would not be worthwhile.⁵³

7.70 General Mills Australia and New Zealand also suggested to the committee that there is a need to encourage local investment in research and development and ensure any 'temptation to take R&D offshore' is removed:

One of the things we have here to try and help value add in the industry is the ability to add some innovative R&D to differentiate ourselves. I think a lot of companies really value the R&D tax concessions... If we can encourage more local R&D in the food manufacturing sector I think that is only going to add a lot of value [and] benefit the whole community.⁵⁴

7.71 Simplot is of the view that the changes will lead to a reduction in local research and development expenditure, particularly for the multinationals:

They will conduct the R&D offshore where they get better tax effective treatment for that investment. Of course, there are all sorts of flow-on benefits to the R&D apart from just conducting it. The maintenance of our skill sets and know-how in universities right through is very short-sighted. There are countries out there that have 150 or 200 per cent deductibility on R&D activities. Ours is roughly 125 to 130. You can claim the 100 per cent as a business activity anyway. It is effectively 25 or 30 per cent of then a 30 per cent tax rate on a company. You can see the numbers come down very rapidly to say, 'Is this actually worthwhile?' I know some of my

52 Mr Callum Elder, Executive General Manager, Quality and Innovation, Simplot Australia Pty Ltd, *Committee Hansard*, 12 April 2012, pp 18–19.

53 Mr Callum Elder, Simplot Australia Pty Ltd, *Committee Hansard*, 12 April 2012, pp 18–19.

54 Mr Andrew Redman, General Mills Australia and New Zealand, *Committee Hansard*, 8 March 2012, p. 3.

counterparts across the industry are saying that this will probably be the end of their R&D activities in this country in the future.⁵⁵

7.72 The evidence provided to the committee by Simplot was noted with concern by the Tasmanian Government, particularly in light of investment they expect will occur in Tasmania in the future:

I hear with concern comments made by Mr Elder from Simplot that, given a company of that size and the R&D framework that is currently in place, it is barely worthwhile for them to be undertaking it. My impression is that R&D is generally carried out by larger companies—I am thinking in the food processing and manufacturers space and leaving aside primary industries. Given that they are often global or national companies, that in most cases will be taking place outside Tasmania. There is, from what I have seen, not a lot going on in the R&D space in the manufacturing area.⁵⁶

Committee view

7.73 Although the committee heard that it is still too early to tell if the recent changes to the tax concession for research and development have affected investment activity, the committee is concerned by the evidence that it received and particularly the suggestion that processors may consider relocating their research and development activities offshore.

7.74 Throughout its inquiry, the committee has heard of the difficult challenges which confront the industry and, like those who have contributed to the inquiry, considers that research and development led innovation will play a vital role in ensuring the ongoing viability of the sector. Given this, the committee is concerned by any suggestion that the new research and development tax framework will not provide the support the industry desperately needs.

7.75 The committee considers that government has a role to play in ensuring that taxation and regulatory settings are appropriate so the sector can continue to innovate and remain competitive in international markets. Campbell Arnott's supported this, advocating that:

What we are asking government to do is this: if you can level the playing field, that would be great, and continue to support us on tax advantages and tax investment strategies and work on the labour piece and the regulatory environment. If we continue to ensure that they are being focused on, we as an organisation can continue to keep a manufacturing footprint that is significant in this country and we will continue to be very competitive and

55 Mr Callum Elder, Simplot Australia Pty Ltd, *Committee Hansard*, 12 April 2012, pp 18–19.

56 Mr Anthony McHugh, Senior Project Manager, Food and Agribusiness, Department of Economic Development, Tourism and the Arts, *Committee Hansard*, 12 April 2012, p. 31.

have some of our competitors from overseas continue to try to work out how to beat us.⁵⁷

7.76 As identified in both this chapter and chapter 2, investment in research and development has a role to play in ensuring a future skilled workforce for Australia's food processing sector. A failure to encourage such investment, particularly through investment in the CSIRO, CRCs, RDCs or joint ventures with industry, will diminish capacity and potentially inhibit the ability of the industry to play a role in satisfying the growing demand out of Asia.

7.77 The committee agrees with the evidence it has received that competition in the sector 'ensures efficient use of resources, incentivises innovation and encourages rapid uptake of technology' and the suggestion that the government needs to do more in terms of 'co-investment and collaboration in new technology, particularly in manufacturing, environmental sustainability and in non-food-specific areas such as food safety R&D.'⁵⁸

7.78 The committee is convinced of the role research and development led innovation has to play in enhancing efficiency and competitiveness in the Australian food processing sector.

Recommendation 27

7.79 The committee recommends that the government investigate the effectiveness of research and development in the food processing sector and in doing so consider the following questions:

- **has been a market failure of research and development in the food processing sector?**
- **are food processors relying on research and development conducted by primary producers?**
- **is there scope to develop a cooperative research and development approach in the food processing sector similar to rural research and development corporations?**
- **do the current arrangements for research and development funding support equity of access, particularly for small and medium enterprises?**

Recommendation 28

7.80 The committee recommends that the government consider providing research and development assistance specific to the food processing sector.

57 Mr Craig Funnell, Campbell Arnott's, *Committee Hansard*, 10 February 2012, p. 60.

58 Australian Meat Industry Council *Submission 36*, p. 5

Recommendation 29

7.81 The committee recommends that the government reviews tax and regulatory settings to support innovation.

Recommendation 30

7.82 The committee acknowledges the establishment of the Food Processing Industry Strategy Group and encourages its active engagement of leading food manufacturing and processing companies to encourage large scale investment in food manufacturing in Australia.

Recommendation 31

7.83 The committee recommends that the government review the funding it has allocated for research and development in the Australian food processing sector.