



Food Processing Industry Change Drivers and Issues for Skills Development

February 2007 Report



Victorian Food Industry Training Board
*For the Food, Beverage
and Pharmaceutical Industries*

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The purpose of this report is to provide advice to the Office of Training & Tertiary Education (OTTE) regarding major issues impacting on enterprises within the industry and how they will shape strategic directions for training development, delivery and resources.

The report addresses the four key questions detailed in the 2006 OTTE Performance and Funding Agreement.

The information has been collated from the direct responses to the four key questions from selected enterprises and associations and from research derived from key industry publications.

Executive Summary- Changes in the last 12 months

Since February 2006 factors challenging the ability of food beverage and pharmaceutical companies to compete in domestic and export markets are increased prices for water, food ingredients, energy, chemical and metal inputs. Wages growth has also remained strong and finding skilled labour is increasingly difficult. A number of other factors are also creating significant pressure. In 2006 international competition from emerging countries such as China intensified. Due to the freely floated exchange rate of our currency and few non-tariff barriers Victorian firms are competing in a global market. The strength of the Australian dollar is likely to be sustained, partly as a consequence of our commodity boom resulting in selling prices being squeezed and thus the profit margins for manufactured exports reduced.

Drought and climate change are putting pressure both domestically and internationally on companies to improve environmental outcomes and supply chains. Climate change will affect all countries and possibly limit food production and the production capabilities of the new emerging economies. Victorian companies have the potential to increase their competitive advantage under these conditions. Some are already doing so.

Food, beverage and pharmaceutical manufacturing companies are capitalising on greater opportunities to develop value added products as the middle class grows across the globe and increases it's awareness of health and nutrition. Faster growth in high value products has also increased as companies cater for 'individualism' by producing convenience foods that capture cultural, ethnic and religious markets. The issue of obesity is a major driver of change for the food industry. Along similar lines of producing food with less fat content are food and pharmaceuticals that reduce allergic reactions and generally caters for the market sector that wishes to be well. Changing household structures are also increasing demand for pre-prepared meals throughout the developed world.

Enterprises need to have a more multi skilled workforce to accommodate the diversification of products and meet changing market requirements. Companies are increasing market analysis to identify new opportunities, especially for niche markets where they can gain greatest competitive advantage, and undertaking more research and development to create innovative products in new and alternative formats. An example of such activity is R&D in natural foods underpinned by science where vitamins are preserved and the nutritional value of products can be promoted to achieve a higher value added component.

Enterprises are also seeking solutions on how to perform their core business more efficiently and cost effectively. Other key responses are reducing the amount of sub optimal product and developing a workforce that is focused on achieving company objectives. As a result companies want competitive manufacturing capabilities such as lean thinking across all occupations in the workforce so employees know more about products and processes. Training for leadership and project management at supervisor/team leader level is becoming more of a priority, with the aim being that ideas will flow on through implementation. This training may be undertaken as upskilling of employees to manage project teams to meet new targets for production, water and waste management.

Cost cutting, the production of a broader range of products and the uptake of new technology means the workforce is required to undertake a broader range of tasks. This means production workers need to be multiskilled and able to deal with technological change.

The demand for higher level skills will increase the importance of training in post trade qualifications. More companies are requiring employees to have a higher level of technical knowledge for product development and for production as supervisors and operators may be required to undertake problem solving on the production line. Training in quality, technical skills and food science to underpin problem solving, will increase in importance. Higher level cognitive skills will also be required to be amalgamated with interactive communication and underpinning knowledge.

Companies want people who are adaptive, flexible, willing to learn on the job, technically competent and committed to excellence. Planning, information management, people management (particularly to maintain workplace relationships and, process improvements) supply and value chain management skills are currently required to upskill the workforce. This will be required over the medium and long term for middle and senior management at Certificate IV, Diploma level and above.

Enterprises give quality assurance, compliance (including WorkSafe regulations and legislation) and food safety training highest priority as they are critical to all sectors. Food Safety is particularly important for companies with export licences. Many companies are reporting that legal training to address WorkSafe requirements and general supervisory skills are becoming more important as the workforce becomes increasingly more diverse and issues of discrimination and harassment are arising more often. The likelihood of compliance training being required due to increased legislation on environmental management is imminent. Units of competence have been written to sit within the Competitive Manufacturing Training Package for a whole of business approach to environmental management at operator, supervisor and upper management levels.

The Department of Workplace Relations predicts that employment in the processed food industry will grow. Key issues will be the supply side of the economy concerning the availability of skilled labour and raw materials needed to increase production.

No one knows what will happen in relation to rainfall but many are finding they can't find the labour required to meet orders. In 2008 more workers will leave the workforce than enter it – a first in Australian employment history. The workforce is aging and by 2020 18 per cent of the population will be aged over 65 years. The National Australia Bank's regular survey of business conditions shows capacity use at historically high levels and tight labour market conditions, as 65 per cent of business report that labour availability is now a constraint on output. As competition for workers increases companies will need to identify new strategies to source and retain skilled people.

However, in the early part of the decade, the supply of labour has been on an accelerating trend as immigration and participation rates for both men and women have increased. The Reserve Bank's dissection of the participation rate by age groups shows that much of the increase is explained by those aged 55 to 64 years rising. There has also been strong growth in participation rates of females aged between 45 and 54 years. Enterprises will also employ more mature age workers such as parents returning to work. As participation of adult learners and multi-cultural groups increases there will be a greater need for language, literacy and numeracy (LL&N) training for new entrants to achieve work performance standards. Meeting the needs of adult learners of diverse age and multicultural backgrounds will be a challenge. Training providers will need to negotiate with enterprises to find the middle ground where release for training is balanced by combining work with learning and on the job application whilst maintaining relevance for learners.

Despite such statistics food companies, particularly in regional areas are finding it increasingly difficult to find suitable labour and the situation is likely to worsen. The greatest increase in employment is expected to be in Bakery Product Manufacturing with a projected increase of nearly 2,500 employees (Australia wide), Other Food Product Manufacturing- an increase of 1,500 employees, (Australia wide). Dairy Product Manufacturing may also have an increase (1,200 employees Australia wide). As nearly 51% of the 2004-5 workforce are estimated at forty five years of age and over, training and skills development for existing employees to supervisory level and attracting other employees into the industry will be a high priority to meet the forecast demand for the next ten years as the existing workforce retires¹. Entry level training (Certificate II) is still of high importance. Pre-employment pathways are being explored in some sectors. To offer career progression and retain and replace employees as they retire, higher level qualifications have been recommended as apprenticeships.

Introduction

The Victorian Food Industry Training Board (VFITB) is the industry training board for all sub-sectors of the Food Processing industry.

These include:

Baking

Plant, non-plant baking and retailing of bread, biscuits, cakes and pastry products.

Beverage

Still and carbonated drinks, fruit juices, cordials, health/sport drinks, beers and pre-mixed alcoholic drinks.

Confectionery

Chocolate, lollies and gum.

Dairy

Includes milk processing, cheese, yoghurt, ice cream and milk powder.

Edible Oils and Fats

Includes vegetable oils such as soya bean, sunflower, canola, cotton seed and palm oil as well as edible tallow. This sector supplies a diverse range of products to other food manufacturers, caterers and the hospitality industry.

Fruit and Vegetable

Fresh, canned, frozen, dried and other packaged products.

General Foods

Cereal foods, essences and flavours, food ingredients, frozen foods, health foods, ice cream cones, mustards, nuts, pasta products, pet food, potato chips, salt, spices, sugar, tea and coffee and materials used in other food sectors.

Meat

Fresh, frozen and other processed/packaged meats and smallgoods, includes meat retailing.

Milling

Of products used in other food industry sectors, stockfeed and of value added export products.

Pharmaceutical

Processing and packaging, includes some raw material production and processing.

Poultry

Fresh, frozen and other packaged poultry meat and manufactured poultry products.

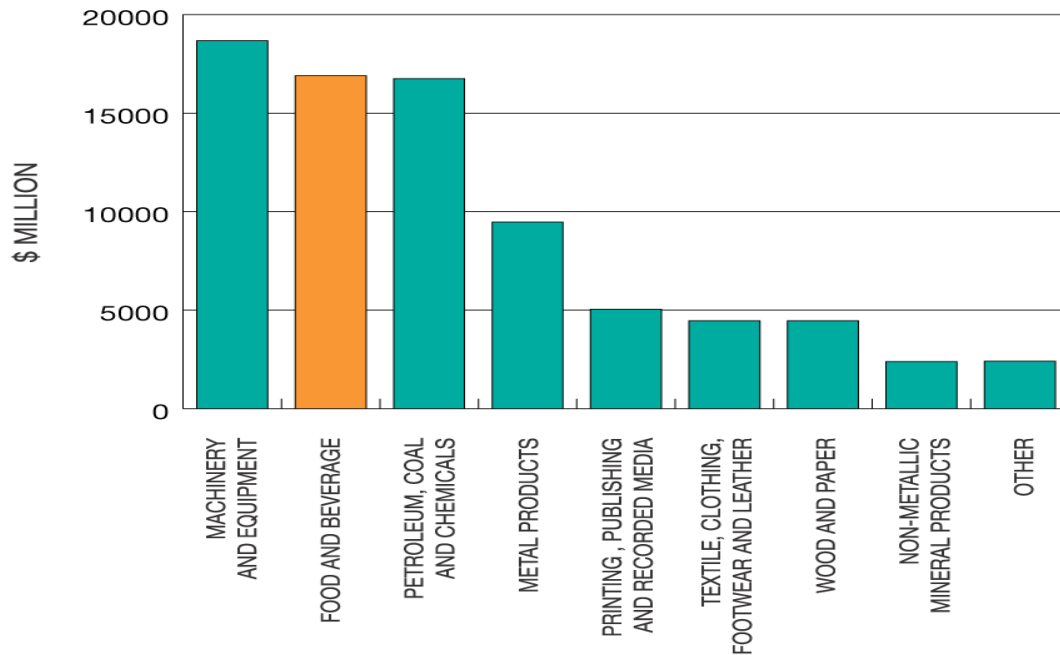
Seafood

Fresh, frozen and other packaged seafood and manufactured seafood products.

Wine

Wine and spirit production and processing of by-products.

Victorian manufacturing turnover by industry²



Industry profile

Food processing is the largest manufacturing industry in Australia. In 2002-2003 the industry had a turnover of \$65.9 billion and contributed around \$16.6 billion to Australia's total GDP. The industry comprises over 7,800 firms and employs around 190,000 people of which about half are located in non-metropolitan areas.

Victorian manufacturing turnover by industry

Victoria leads the way in Australian food production and processing with:

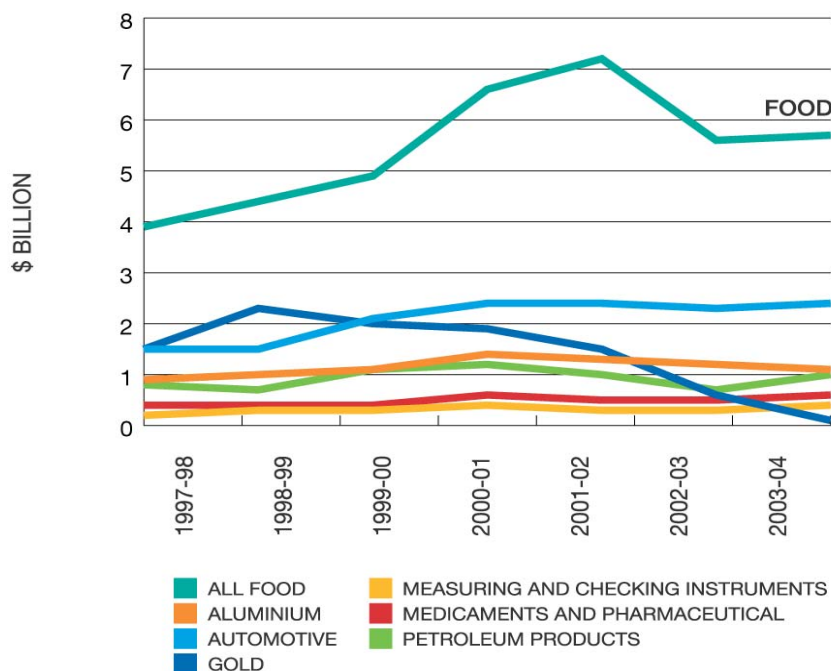
- 30 per cent of Australia's food processing output;
- 64 per cent of Australia's dairy production and over 80 per cent of its dairy exports;
- 70 per cent of Australia's confectionery exports;
- the bulk of Australia's processed fruit and vegetables and almost all dried vine fruits and
- Australia's three largest suppliers of packaging, headquartered in Victoria.

On almost every important indicator, Victoria is the food State. Food and wine are produced in every region. About 2,000 food processing firms employ 59,000 people directly, draw raw materials from 33,500 farms (that employ 79,000 people), and inputs from industries that supply farming and processing – stockfeed, fertiliser chemicals, agricultural machinery and food processing equipment, packaging, transport and logistics.³

Victorian employment trends

Whilst a slight decline in manufacturing employment in the long term (2004-2031) is predicted, prospects look strongest in food processing where strong job gains have been achieved. Leveraging off Victoria's dominant position in the dairy sector, this growth was interrupted by a drought induced downturn, experienced a strong recovery during 2005,⁴ and is likely to undergo another drought induced downturn in 2007.

Victoria's exports by industry, 1998-2004⁵



Internationally focused

Food is Victoria's biggest export, contributing 21 per cent of total goods and services exported. The industry is focused on international markets, with more than 600 food companies and more than 100 wineries engaged in exporting.⁶

Economic opportunities

Business will tend to pursue economic activities in areas where it has a comparative advantage (or at least, it is more likely to be successful in those areas).

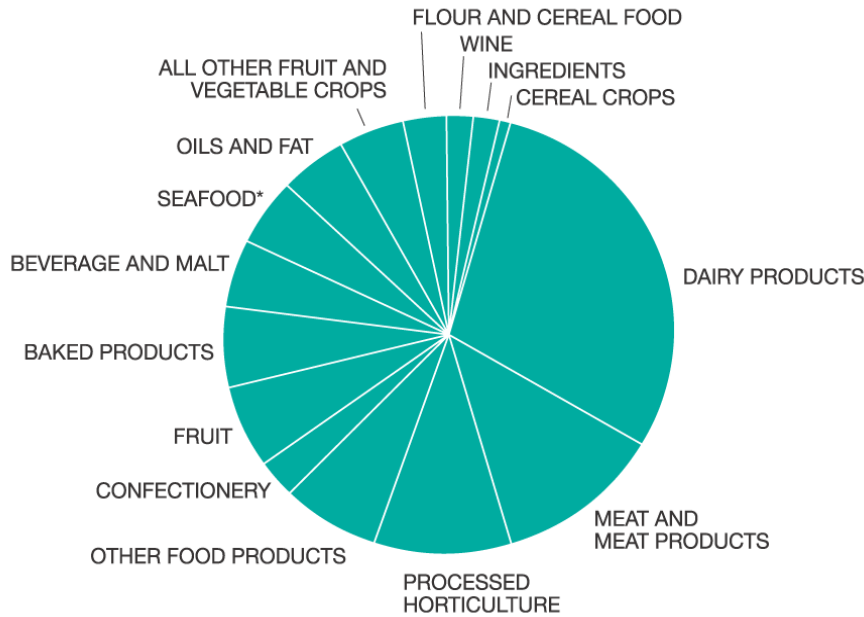
For Australia as a whole, sources of comparative advantage could be seen as stemming from our rich natural resources (particularly in minerals), ample farmland, skilled workforce, excellent track record in the application of technology, infrastructure, proximity to rapidly growing markets in Asia and political stability.

Australia has good relative comparative advantage in the likes of farming (and downstream of that in 'low tech' manufacturing) and we have significant comparative advantage in the likes of mining and downstream value adding on our mining and farm products – that is, in 'medium low' manufacturing.

Over time, this comparative advantage would appear to be swinging to the higher value added end of the chain. Australia's longer term fortunes will rest on us raising the skills of our workforce and leveraging our upstream strengths in mining and farming into increasingly complex downstream areas of strength.

Trade data suggests the standout net export for Victoria is dairy products – which is not surprising given its endowment of rich farmland. Victoria often has a relatively large surplus in dairy, meat products and cereals⁷. Periods of drought intermittently reduce surplus and export capacity.

Size of food processing sectors by turnover⁸



* Food Victoria estimate

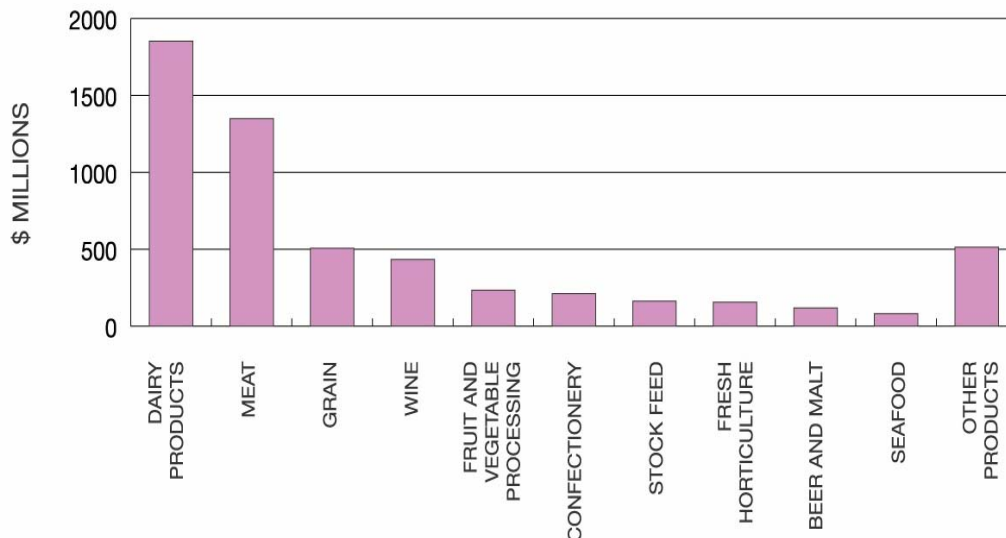
Rural and regional drivers

The food industry has enormous significance for rural and regional Victoria. About 35 per cent of food and beverage processing businesses are located outside Melbourne, representing about 43 per cent of the State’s food-processing turnover and 43 per cent of its employees.

A growing number of food processing businesses are choosing to locate close to primary production operations that provide raw materials and generate considerable wealth in local rural economies. Development of transport infrastructure will strengthen this trend. The link with primary production is the main reason why the food processing industry is not in decline like some manufacturing sectors and is running against the tide of decreasing employment in manufacturing.⁹

Victoria’s exports by sector 2003-04

Source: TradeData International



Q1. What are the major change drivers impacting the industry and its sectors currently and over the medium and long term future?

Economic

As population and urbanisation increases across the world the global market for processed foods and pharmaceuticals continues to grow strongly. This presents opportunities and risks for food, beverage and pharmaceutical manufacturing companies. The competition from emerging countries such as China, who have rapidly increased manufacturing capacity, has intensified. Combined with the freely floated exchange rate of our currency and few non-tariff barriers we have one of the most open economies and most globally exposed markets in the world. Whether exporting or not, Victorian firms are competing in a global market.¹⁰

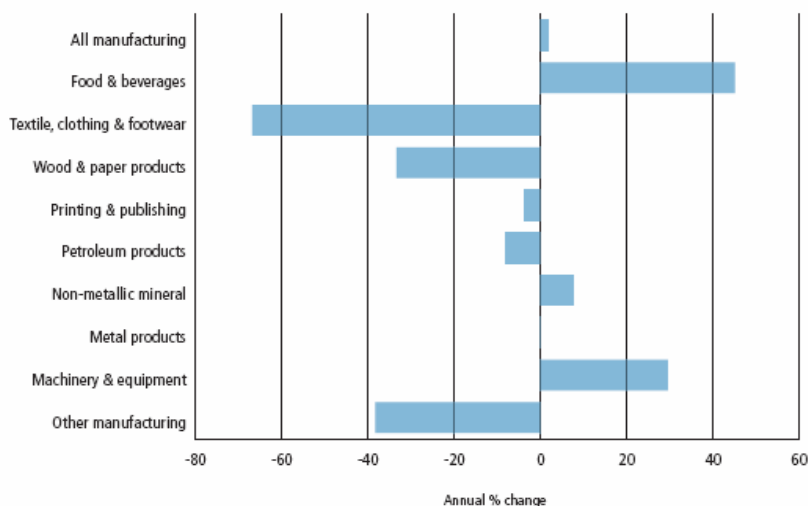
Emerging economies such as China and India are competing by injecting relatively cheap labour into export orientated manufacturing industries. Export demand is very strong and export opportunities and import replacement opportunities are the keys to growth for the Victorian food industry but international competition for the export market share has increased. Also the strength of the Australian dollar is likely to be sustained, partly as a consequence of our commodity boom. The higher dollar has squeezed selling prices and thus the profit margins for manufactured exports. These are two profound economic shifts contributing to the intensification of international competition for Victorian food, beverage and pharmaceutical manufacturers.

Other factors challenging the ability of Australian companies to compete in domestic and export markets are increased prices for water, food ingredients, energy, chemical and metal inputs. Wages growth has also remained strong.

Manufacturing export market share has dropped for most developed countries and, as a consequence, manufacturers' profit margins have been squeezed. Food and beverage manufacturers however, are running against the tide of other manufacturing sectors with pre-tax profits jumping 45.1% in 2005 for these sectors¹¹ This is mainly due to the dairy sector bouncing back after a downturn in the previous year.

Many enterprises are continuing to explore and expand export market opportunities. These activities are also assisted by State and National Government initiatives. The impact of the Free Trade Agreement with the U.S.A., discussions associated with the Free Trade Agreement with China and other trade reforms are likely to involve both positive and negative outcomes, with the final result yet to be seen.

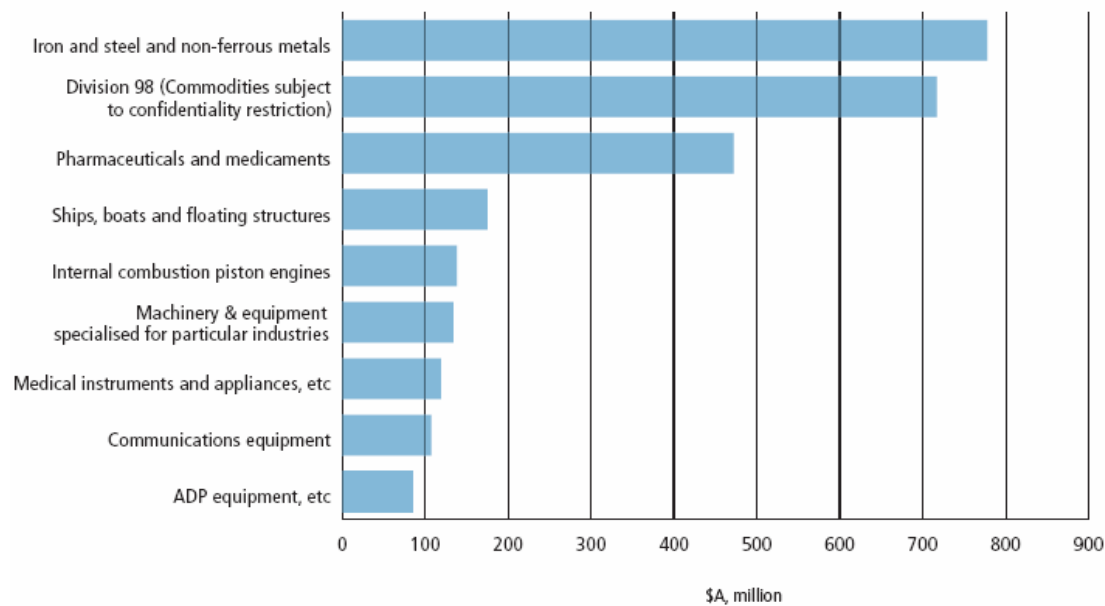
Annual change in manufacturing profits, June 2005



Expectations ran high when the US- Australia free-trade agreement (FTA) came into effect 3 years ago. Department of Foreign Affairs and Trade Officials caution it may take up to five years to reverse the downward trends in exports to the USA. Food companies have been among the first Australian firms to take advantage of the FTA. For example, Yellingbo Gold Extra Virgin Olive Oil has secured distribution coverage for its product across the US, after tariffs on olive oil were cut. On the other hand, US drug makers also won greater rights under the FTA to ask for a review of pricing under the 4.5 billion pharmaceutical benefits scheme (PBS), but the government insists the PBS is largely out of bounds to US infiltration.¹² The pharmaceuticals industry and the federal government have denied that drug prices will rise if an amendment to the FTA designed to stop the extension of patents to rivals from making cheaper generic medicines is scrapped.¹³ There has however, been growing manufactured exports in medicinal and pharmaceutical products.

Major sources of manufacturing exports increases for 2005 over last year

Source: International Merchandise Trade, Australia



The annual turnover of Australia’s Food and Beverage Industry is tipped to exceed \$125 billion in 2006-07. This prediction is based on an annual growth of six percent over the nine years up to 2004-05. Eighty percent of food industry revenue is derived from domestic food sales, with twenty percent coming from exports of food commodities and processed food products. The value of Australia’s domestic food sales has increased six percent annually since 1996-97, after which growth lifted to eight percent. Approximately a third of the international processed food industry is now controlled through transnational companies with worldwide subsidiaries and establishments.¹⁴ Some Victorian companies have reported they are now competing with sister sites in low labour cost countries such as China. This is resulting in a flow on impact to the whole industry, and particularly growth and job prospects within the food industry. Companies are sending managers to work in overseas plants.

The globalisation of the food industry sees the emergence of global retail chains, which will result in major changes to the structure and operation of the food processing industry over the next five to ten years. This includes the development of global sourcing networks, industry restructuring along global lines and the changing focus on brands.

Increasing concentration of the supermarket system in Australia, and the desire by the two major supermarkets to increase their higher end home branded sector from Australian or overseas sources, creates downward pressure on prices and margins. Due to the purchasing policies of the supermarkets, which require all specific production and process data to be provided, easy changing of suppliers for a particular good can readily occur. As

well as retail initiatives such as store brands, retailers are becoming more powerful and developing strategic initiatives to capture the emerging markets.¹⁵

Environmental

Drought and climate change are putting pressure both domestically and internationally on companies to improve environmental outcomes and further develop sustainable practices and supply chains. Climate change will affect all countries and possibly limit food production and the production capabilities of the new emerging economies. For example, the drought and this year's frost in Victoria have affected the quality and the growing season for fruit, vegetables and grain, increasing their price and reducing yields.

As a consequence of the impact of the drought on the agricultural sector food processing is experiencing pressure of the supply of raw materials particularly in dairy and crops. The drought is accelerating rationalisation of the industry, through vertical integration of supply chains, particularly through the use of water rights.

Strong global demand for milk and dairy products is expected with developing economies likely to provide 80 per cent of the growth. It is predicted China's consumption of dairy will grow by more than 9 per cent over the next few years. Important markets such as the Middle East, South East Asia, Japan and Korea, will still rely on imported products. While countries such as the Ukraine, Brazil and Argentina have rapidly growing dairy sectors, their combined exports in 2006 remained 30 per cent below Australia's export volumes. Australia is more competitive than the US or European Union. For processors, Mr Hunt said the smaller milk supply will exacerbate the excess capacity and strong competition for milk. "It will also force exporters to tighten their focus on high-value markets," he said.¹⁶

Other sustainable practices such as smarter packaging are being implemented and further explored to reduce handling along the supply chain.

Victorian food companies are supporting the State Government's moratorium on the use of genetic modification in food production. This is a position that may be reviewed as more evidence comes to light on either side of the debate. The tension exists between the desirable goal of improving production efficiencies and the undesirable potential to erode market confidence in the product. Genetically modified crops are increasing internationally.

Government policy

Regulation & compliance

It is highly likely that global warming will lead to a greater level of legislation regarding the impact industry has on the environment. In November 2006 the state government highlighted climate change as a key area of emerging need and created two new Offices; Office of Water and the Office of Climate Change.

In March 2005, The Department of Victorian Communities established Victoria's Workplace Participation Taskforce to examine the impact of demographic change, population ageing and slowing population growth on Victoria's workforce. Reports were commissioned and from this initiative barriers to and options for increased workforce participation in Victoria were documented, along with detailed case studies that profiled best practice approaches to addressing barriers to employment for mature jobseekers.

Tougher eligibility requirements for disability support pension and parenting payments are leading to more people entering the labour force, boosting Australia's productivity capacity.

Adding to the already complex regulatory environment is the issue of biosecurity. The Federal Department of Agriculture, Fisheries and Forestry supports the activities of the Food Chain Assurance Advisory Group. This group provides leadership and coordination in ensuring the food safety and security system is capable of dealing with new and emerging risks to the food supply chain in the security environment.

Adhering to the requirements that ensure traceability of product is rapidly becoming a standard international customer requirement. Enterprises also need to meet additional compliance requirements in order to minimise loss of product access to markets. For example: all of the meat processing sector must comply with the relevant Australian standards while exporting companies also have to comply with the Export Control Orders and the importing company requirements. Food processing companies undergo audits from major end users such as supermarket chains that have their own audit regime. All food companies must meet and maintain the world standard for food safety (Hazard Analysis and Critical Control Point-HACCP) and other rules, such as new labelling codes of trading partners and others defined by the Australian and New Zealand Food Standards Authority.

US Food and Drug Administration and European Union regulations relating to product labelling must be adhered to if companies are selling to those markets. Australian government and individual Australian companies are also demanding labelling standards. The product labelling that is causing more paperwork is the anti-terrorist measures, which in the first 12 months after September 11 saw a whole new set of requirements and changed supplier/agent relationships to ensure food security.

Occupational Health and Safety issues continue to challenge the industry with new programs supported by Work Safe being implemented. Project FRESH (Food manufacturers Reaching Excellence in Safety and Health) is an initiative between WorkSafe Victoria and Victorian food manufacturers to identify and solve common OH&S problems. This involves sharing innovative risk solutions and developing best practice measures to eliminate or control risk. The future use of these solutions by small enterprises is important to achieving a broad based industry response.

The regulatory requirements covering external audit, monitoring mechanisms and procedures, eg OH&S, environment, food safety, ISO and training impose levels of duplication and complexity that could be reduced with co operation and standardisation between states. Many enterprises provide food safety programs for their employees to address regulatory requirements.

The pharmaceuticals sector is at risk from government regulatory moves surrounding generic drugs on the Pharmaceutical Benefits Scheme. The federal government plans to save up to \$850 million a year by slashing the price of medicines in an effort to make the PBS more financially sustainable. Different models are being considered which may create pressure on the Victorian pharmaceutical industry from a new generation of copycat drugs, often from low wage countries in Asia.¹⁷

The food industry is continuing to respond to change supported by a range of strategies including those listed below:

- the Pharmaceutical Industry Action Agenda aimed at building capabilities;
- a new Co Operative Resource Centre (\$25.75 million) is to be established to build an "Internationally Competitive Pork Industry", aimed at reducing production costs and increasing demand for quality pork and niche products;
- the Victorian Government Department of Innovation, Industry and Regional Development, has released the *Next Generation Food Strategy*, which aims to support the food processing industry;
- *The National Food Industry Strategy*, the *Next Generation Food Industry Strategy* and the Ministerial Statement, *Moving Forward: Making Provincial Victoria the Best Place to Live, Work and Invest*, have targeted funds for programs to address the recruitment needs of the industry;
- A new *Ministerial Statement on Manufacturing and Industry Policy*, released in December 2006.

Responsible and effective management of the environment is essential to the continued growth of Australia's food and grocery manufacturers. The Zero Waste campaign, managed by Environment Victoria, aims to reduce our impact upon the environment by focusing on

consumer behaviour, materials production and waste disposal. The Zero Waste team aims to raise awareness of consumption issues and advocate for government and industry to:

- achieve a significant reduction in packaging waste;
- place a levy on plastic bags and
- support producer responsibility programs, such as the proposed waste take back scheme for TVs and computers.

Technological

Future increases in productivity will rely on many factors (such as more flexible working practices and the introduction of new technologies). While it is not possible to predict the exact form of technological change, we can reasonably expect that the rate of innovation will continue to produce further technological advances in the future.¹⁸

Many enterprises are investing in new technology and taking advantage of advances in machinery, information technology and biotechnology. Technology uptake has increased to help industry remain competitive by reducing labour costs and improving safety, quality and innovation.

Social, demographic & workforce

Food, beverage and pharmaceutical manufacturing companies are capitalising on the greater opportunities for value added products as the middle class grows and increases its awareness of health and nutrition. Faster growth in high value products has also increased as companies also cater for 'individualism' by producing convenience foods that capture cultural, ethnic and religious markets. The issue of obesity is a major driver of change for the food industry. Along similar lines of producing food with less fat content is also food that reduces allergic reactions and generally caters for the market sector that wishes to be well. Enterprises need to have a more multi skilled workforce to accommodate this growth and diversification of products in order to meet the changing market requirements.

Changing household structures are also providing the food industry with opportunities as pre-prepared meals are increasingly in demand throughout the developed world.¹⁹ According to research commissioned by National Food Industry Strategy Ltd. today's supermarket shopper is most likely to be single, shops almost daily and makes a decision on what to have for dinner based on what's available in the supermarket. The research into Australian retail market trends, undertaken by *freshlogic* also revealed that the shopper is more frequently looking for ready prepared meals rather than ingredients²⁰.

Skilled and unskilled labour supply drivers

Department of Workplace Relations predict that in the Processed Food Industry employment will grow by 0.77 per cent on an annual average compound rate. Based on this, by 2009-10 there is forecast to be an extra 3,345 employees in the combined Australian Food Processing Industry and by 2014-15 an extra 8,700 employees. As Victoria leads food production and processing with 30 per cent of Australia's food processing output, 64 per cent of Australia's dairy production, over 80 per cent of its dairy exports, 70 per cent of Australia's confectionary exports, the bulk of Australia's processed fruit and vegetables and almost all dried vine fruits there is likely to be a higher share of the extra employees required in Victoria. The need for food tradespersons is forecast to grow at a higher rate of 1.01 per cent per annum²¹.

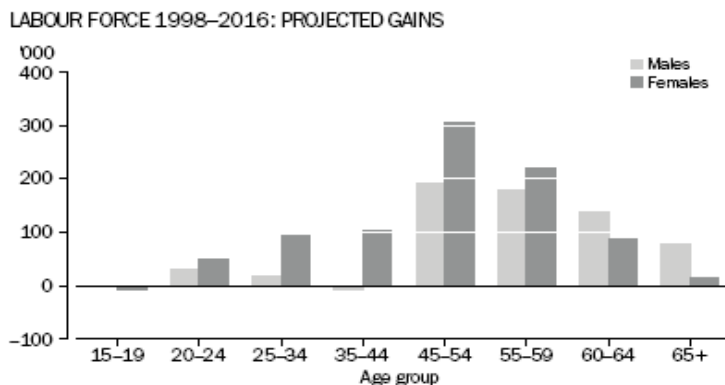
A significant change is coming in labour supply trends. By 2020 18 per cent of the population will be aged over 65 years and in 2008 more workers will leave the workforce than enter it – a first in Australian employment history. As baby boomers start to retire in increasing numbers, that ratio will slowly trend downward, applying a supply-side brake to economic performance, the full impact of which will be felt in the long rather than the medium term. While Australia's migration program has been increasing in recent years, it will still not be enough to offset the decline in birth rates which has also been seen in recent years.²²

A key issue will be what happens on the supply side of the economy concerning the availability of skilled labour and raw materials needed to increase production. The International Monetary Fund's projection in the medium term is for the unemployment rate to plateau at about 5 per cent, which many economists regard as the equivalent of full employment in an economy with a modern welfare safety net. The Organisation for Economic Co-operation and Development forecasts export growth for Australia of about 9 per cent in 2008 as rural output bounces back (economist generally assume the drought will lift).²³

The National Australia Bank's regular survey of business conditions shows capacity use at historically high levels and tight labour market conditions and 65 per cent of business report that labour availability is now a constraint on output. The supply of labour is however on an accelerating trend as immigration increases and rising participation rates for both men and women. The Reserve Bank's dissection of the participation rate by age groups shows that much of the increase is explained by those aged 55 to 64 years, probably as a result of the growing awareness among workers of the need to save for retirement and as a result of federal government welfare reforms. There has also been strong growth in participation rates of females aged between 45 and 54 years.²⁴

Social & Demographic Future Workforce Trends

Source: Labour Force Projections, Australia 1999-2016



Competition for workers will increase and companies will need to identify new strategies to source skilled people. The mining industry is capturing workers. Roxbury Downs alone requires 20,000 people in 2007 and the mining boom is expected to continue to well into the next decade. Rising living costs could be a further deterrent to attracting young entrants to take up apprenticeships and this is significant for the traditional trade areas of baking and meat retail.

Labour shortages are expected to be greatest in industries where there are already a high proportion of older workers. The impact on manufacturing (including food processing) is expected to be greater for this reason, than almost any other sector, in the short and medium term future.

Q2. What are the industry and enterprises responses (now and in the future) to the impact of these change drivers?

Industry response

Due to increased competition for export markets and competition for local markets from imports, enterprises are seeking out solutions on how to perform their core business more efficiently and cost effectively. Other key responses are improving quality, particularly in relation to meeting market needs, reducing the amount of sub optimal product and managing a workforce that is focused on company objectives.

For example, the expansion of brands into the Australian market, such as Krispy Kreme donuts, the cult American donut, who are opening stores in Australia, create competition for local baking companies. To broaden their market many baking companies are developing products to meet the needs of more diverse groups such as flat bread and 'health' breads.

Implementing and modifying water and environmental management practices are high priorities for many enterprises. The food industry is one of the largest consumers of water and companies understand they need to manage consumption of water and energy and the risks associated with potential environmental contamination. Organisations are planning consumption reduction according to energy efficiency plans to identify opportunities to reduce usage and also costs.

All food companies must maintain food safety standards and those registered for export must meet international standards. Pharmaceutical manufacturers must meet Good Manufacturing Practice and Therapeutic Goods Administration requirements for safety and quality. Regulators around the world are working collaboratively to address safety standards and international agreements are being developed to set standards for export markets. Other areas companies are addressing include OHS, first aid and other quality training that meet external audit requirements and some have an internal quality component to meet customers' expectations also.

The efforts of manufacturers are not limited to sharpening operations in the domestic economy. Many manufacturers are looking to expand their presence in export markets by; looking abroad for new, usually cheaper sources of supply; some are shifting production offshore; and others are investing directly abroad to access other markets.²⁵

For example, maintaining economic sustainability by improving productivity performance lead Kraft (a unit of the US-owned tobacco and food giant Altria) to close its Broadmeadows biscuit factory and move the production to China to boost competitiveness through increased production and lower costs.²⁶ Transnational companies may move manufacturing offshore to take advantage of the rise in Asian manufacturing and new low cost producers or better position themselves to reach other markets. These transnational companies are able to draw upon widespread food suppliers and supply chain networks to suit competitive contingencies. Victorian food companies are positioning themselves to participate in these global supply chain networks or risk losing existing markets and the opportunity to participate in new ones.²⁷

Victorian companies are benefiting from synergies with other local companies that reduce costs to export markets. Food associations and industry groups are continually furthering these efforts to increase Australian products in the world's markets.

Food companies are also using market analysis to identify new opportunities, especially for niche markets where they can gain greatest competitive advantage. Companies are moving up the value chain to achieve greater profits by undertaking more research and development to create innovative products in new and alternative formats. An example of such activity is R&D in natural foods underpinned by science where vitamins are preserved

and the nutritional value of products can be promoted to achieve a higher value added component.

In order to meet changing consumer demands and minimise rising input and output costs, enterprises are collaborating with packaging companies and establishing cross sector partnerships. This can also be seen in the ethnic, religious and cultural specific products that are expanding market opportunities nationally and internationally.

The issue of obesity is a major driver of change for the food industry. Food companies are responding to this market need by providing more detailed label information, and varying product sizes and packaging types.

Import replacements are being marketed using clean, fresh and healthy images. For example, Ingham's chickens have recently upgraded a plant in Victoria, with state of the art technology, to supply fresh chickens to supermarkets with a twelve hour turnaround. This capacity to supply fresh meat has created a niche market and prevented imported frozen chickens from capturing the market.

The following is a summary of strategies being used by confectionery, baking, dairy, beverage, wine, general foods, and functional food processing companies, in response to increased competition. The companies all have projects through the National Food Industry Strategy.

Risk Management:

- improving product mix as a hedge against changing import/export markets;
- developing products that have a higher value added component;
- more research and development to increase market share;
- an increase in the speed of innovation applied to product development;
- continuous OH&S and food safety standards improvements;

Opportunities:

- identifying opportunities opened up by free trade agreements;
- marketing and promotions of products;
- exporting product and becoming more internationally competitive through supply chain management and team approaches when going into new markets;

Capital Investment:

- adopting new technologies to reduce costs and time of manufacturing and increase output to meet export demand;
- building new plant and logistics centres;

Innovation:

- exploring new processing techniques using new equipment and processing schemes to enable the development of innovative products;
- solutions maximising yields by increased recovery of potential product;
- reduced washing and cleaning operations;
- packaging solutions that reduce costs and provide evidence of seal, pack and product integrity which helps to prove that the contents are clean, green and Australian;
- innovation that reduces manual handling and loading of containers;

Quality Assurance:

- ongoing improvement in quality protocols to maximise effectiveness of quality performance and training systems;
- regulatory and customer service audits;

Environmental management:

- reducing plant emissions and
- developing biodegradable products in relation to packaging.

Case Studies

Wine

The wine sector is a dynamic and important industry for Australia in terms of export and growth. Around ten national and international companies have developed production operations that are highly automated, high volume and export focused. This large business base is supported by an important small business network which is regionally based and thus faces some typically regional issues. For example, weather conditions during 2004-05 produced bumper crops and an over supply of grapes enabling some wine makers to push grape prices down to levels unsustainable for some growers.²⁸

Over production has been an issue for wine makers, who say marketing is the key to capturing more export opportunities. The Australian wine industry's excess inventory was estimated at something like 1.6 times annual sales.²⁹ This is typical of a cyclical industry which has just as quickly been affected again by drought.

Overall, the important areas the industry is addressing include:

- trade access;
- sustainable practices;
- technological advancement;
- research and development;
- licences and regulation including label integrity and
- training and development of existing workers and new entrants.

Baking

Since 1999 the export value of the Victorian bakery product has been growing strongly. The Baking sector has increased exports by over 11 billion US dollars and 5, 284 tonnes in 2003 - an increase of 45% over 2000 levels. Australian bakery product exports amounted to \$US106 million in 2004-2005.³⁰ Given that the international trade in bakery products is very diverse and fast growing the industry is responding by using technology to seize upon export opportunities or opportunities to replace imports.

Pharmaceutical

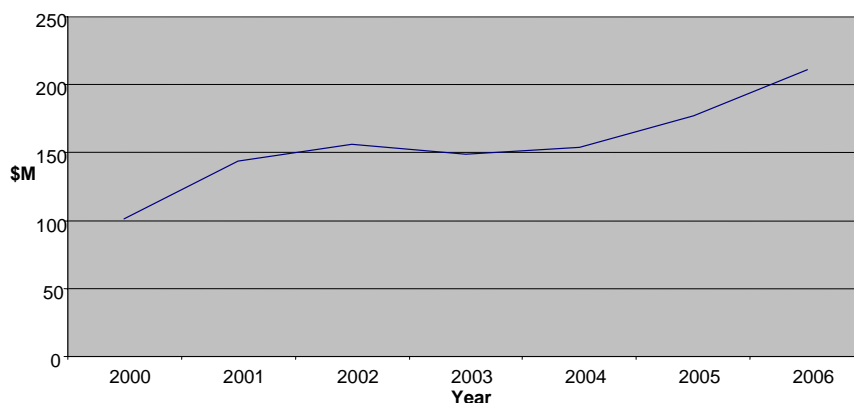
Australia has a relatively small existing pharmaceuticals sector, but one that has many strengths, for example a well-educated and skilled workforce and effective intellectual property protection. These strengths, together with rapid growth in the domestic and world pharmaceuticals markets, have focused attention on the potential of the sector for future growth.³¹

This sector is vitally important for Australia, especially in view of the growing reliance upon legal pharmaceuticals by the Australian community. It is also a highly regulated sector that is responding to the pressures of regulation and competition by developing high-level technical plant and commercialising research and development.

Australian Exports of Medicinal and Pharmaceutical Products

Source: ABS Merchandise Exports, FOB Value (\$ million)

Australian Exports of Medicinal and Pharmaceutical Products



Meat

Markets for meat are buoyant. Growth in the Australian meat industry has traditionally been driven by strong domestic and overseas demand. In recent years, however, international competition has intensified and is forecast to continue. The vast majority of Australian beef exports goes to just three markets: 42 per cent to Japan, 31 per cent to the US and 16 per cent to South Korea. While Australian beef exports to Japan remained constant, sales to South Korea surged 41 per cent due to that country's continuing ban on US beef. The booming demand from South Korea underpinned a 5 per cent jump in overall beef exports. After Tokyo banned US product due to detection of BSE (mad cow disease) in the USA and Canada, Australia capitalized on this by lifting its share of the Japanese beef imports from less than 50 per cent to more than 90 per cent. However the sector faces renewed competition as Japan has decided to lift their ban on imports of beef from the US.³²

As part of a range of initiatives to reassure importers Australia has developed a national livestock identification system (NLIS). This system enables reliable traceback to protect its reputation as an exporter of safe produce.

Due to the drought and the rising price of feed, farmers are selling stock and many meat works have been running to maximum capacity. As many farmers have been killing stock it will cause some dislocation of supply in the future.

The Red Meat Advisory Council Ltd has highlighted the following as critical issues to address:

- skill and labour shortages;
- access to international markets;
- product marketing;
- value adding (for example in areas such as convenience and interest);
- food safety;
- eating quality;
- community concerns (including animal welfare, methane/greenhouse gas emissions, effluent disposal and land clearing) and
- whole-of-chain efficiencies.³³

Seafood

The demand for seafood products both in Australia and overseas is predicted to continue to increase. However, due to declining fish stocks, the government has imposed severe limits to catch levels in Victoria, calling on half of Australia's 1,200 commercial fishermen to leave the industry. There is much pressure on aquaculture to grow to meet the increasing consumer demands for fisheries products.

There are several critical issues confronting the seafood processing industry.

- Ecologically Sustainable Development (ESD). The quest for environmental sustainability impacts upon the other main issues facing the industry.
- A strict operating environment. To ensure sustainability of the industry, the transparency and predictability of regulation of access rights for the wild-catch sector, and a production strategy of high quality, high value and low tonnage, are critical.
- A socially sustainable industry. All stakeholders need to work as partners and make short term sacrifices to deliver a sustainable system.
- Profitability is an important consideration for the seafood industry. The industry is facing pressure to lower costs to remain competitive. This pressure has led to cutting costs to achieve efficiencies. There is much debate that the industry must start to grow by value-adding to output. Marketing and differentiation of product are also important factors for success.³⁴

Q3. What are the implications of the industry's response for skills needs in the industry (now and in the future)?

Due to the highly competitive environment companies require high performance practices from their workforce. Employees will need to be more highly skilled to create efficiencies in production, be innovative and more attuned to customer needs. Project teams will also be increasingly charged with continuous improvement. As employers assemble teams to undertake tasks, high performance practice is more often required in teams. These teams are less hierarchical thus requiring workers to have the capacity for flexibility, autonomy, customer focus, knowledge, team-working, co-operation and ability to learn new skills³⁵. Responses to waste and water management including new technology will increase the need for trouble shooting at the operator level. Running effective meetings and teams, time management, motivating a team, planning and coaching, presentation skills, decision making and problem solving, conflict resolution, negotiation skills are required more.

Skills that support innovation

Being part of a global market is a reality for the industry. As the international business environment becomes increasingly competitive, more knowledge is needed to understand consumers and competitors in target markets and pursue global cost competitiveness and export opportunities through innovation and continuous improvement.

Innovation is the process of coming up with new ideas or new uses for old ideas. To be innovative the ideas must add value. They lead to new or improved products, services, systems, work procedures, tools and so on. Because innovation may happen randomly on occasion, many people think it cannot be taught. Research undertaken has found that innovation should be approached systematically. A guide has been developed on 'Innovation@work' skills called, *Innovation Ideas that Work*, to provide both the personal skills needed by individuals and a methodology for use by a team or organisation³⁶.

To achieve greater outcomes through innovation, leading companies are developing a culture of business to business collaboration on issues (particularly important for smaller companies) and becoming learning organisations. This requires a sophisticated approach to skill development. The VET system could share models being developed for a more system wide approach to such skill development for the benefit of more companies. The TAFE specialist centres and other RTOs may be able to also provide experiences and working models. The delivery of training that includes marketing and project management is also required to support innovation.

Developing and improving skills that support innovation for all AQF levels will be required to increase the speed of innovation for product development. Employability skills are part of the skill sets required to achieve this. These are of high importance, particularly workers' capacity to learn new skills as required and the ability to use, utilise, learn and become proficient in technology. The mapping of the generic Agrifood (Skills Council) Employability Skills template to the food and pharmaceutical sectors is underway to support this training need.

Supply Chain Management

Supply chain management skills for senior management will be required. For example, understanding the costs of processes along the supply chain is essential if trading partners are to achieve cost savings and other benefits from distribution initiatives. Supply and 'value chains' are significant organisational arrangements expanding across global food markets. As companies look to compete in global markets they are controlled more by their supply chain and marketing and therefore need to develop products at a price that are more attuned to customer needs.

Multiskilling

Cost cutting, the production of a broader range of products and the uptake of new technology means the workforce is required to undertake a broader range of tasks. This means production workers need to be multiskilled and able to deal with technological change that is so rapid that capital equipment is being updated every second or third year, rather than every four to five years³⁷ as has been the case in the past.

As more companies increase product development to maintain and expand market share the need for paraprofessional, science based skills for food analysis and R&D in the laboratory will increase.

Global Competitiveness

To further support global competitiveness more companies will require:

- trade data and analysis to better target marketing especially for small business;
- greater understanding of how to guide and use market research to meet business needs, particularly small business;
- more knowledge for business compliance with the move to new international standards;
- need for food standards to be updated and incorporated into transport and storage;
- understanding of intellectual property and licensing of new technology to harness full potential for both the product and technology;
- increased understanding of how to use design for the branding of products and public relations for better point of sale marketing;
- knowledge of packaging legislation and how to meet these requirements and
- training to address environmental issues such as business practice for waste management.

On going training is needed in the following:

- food safety;
- food recall;
- quality assurance and auditing;
- business management;
- trades and other entry level training;
- environmental/waste management;
- innovation;
- quality assurance systems engineers;
- mechanical engineers;
- food induction – pre-employment training

Recruitment Issues

The industry in general continues to be challenged by a poor image (or no image) and is subsequently not often considered as a career option. Retention and recruitment is an issue for enterprises in both metropolitan and regional Victoria. This is further exacerbated by the ongoing exodus of young people from regional centres, where many food processing enterprises are located, to the metropolitan area. Difficulty in accessing an available labour pool is an issue especially for regional food industry enterprises.

As the demands of a highly competitive environment effects more companies, employers are requiring higher level skills and capabilities, some are inculcated as employability skills in training packages and can be learned on the job. Higher level cognitive skills will also be required and amalgamated with interactive and communication and underpinning knowledge. Companies want people who are adaptive, flexible, willing to learn on the job, technically competent and committed to excellence.

Enterprises will also employ more mature age workers such as parents returning to work. As participation of adult learners and multi-cultural groups increases there will be a greater need for language, literacy and numeracy (LL&N) training for new entrants to achieve work performance standards.

The potential of VCAL, Block Credit Recognition in the VCE, mainstream VCE and school based apprenticeships as a way of engaging young people in the industry to address skill shortages is being explored. This approach could link young people (particularly in regional areas) to companies where there are job opportunities and enable companies to promote their industry as a career option. Entry level training and pre-employment training such as pre-apprenticeships are being explored as alternative pathways into some sectors.

Further promotion of training pathways, including post apprenticeship qualifications that provide career opportunities in the food industry needs to be undertaken. The promotion of the Diploma of Food Science and Technology is needed to attract entrants into product development and the laboratory operations side of the industry. Food Victoria's upcoming publication on careers in the food industry has the potential to raise awareness of such qualifications and careers.

The National Food Industry Strategy, the Next Generation Food Industry Strategy and the Ministerial Statement, Moving Forward: Making Provincial Victoria the Best Place to Live, Work and Invest, have targeted funds for programs to address these ongoing issues. VFITB developed a strategy and piloted a program last year, for a sustainable model for food science/engineering students to be effectively introduced to food companies in the regions.

Labour Force Issues

One industry response to skills shortages has been to use the skilled migration program to fill labour needs for operators. Workplace communication, literacy and numeracy training is required for such new entrants, for other production workers from non English speaking backgrounds and also for employees who have left school without basic literacy and numeracy skills. These skills are important in such cases due to the high level of regulation e.g. food safety requirements.

The severity of the shortages identified is to some extent dependent on the location (urban or regional), and the infrastructure and flexibility in employment conditions of the business. Shortages in food safety, auditing and quality assurance, and the trades are, however, evident across the industry.³⁸

Baking

Baking is comprised of small business enterprises and a few large manufacturers. Its access to export markets is underdeveloped. This situation is undergoing change with the support of the Victorian Government and the desire to grow the baking export efforts of the industry.

Areas for future skill development are:

- entry level training - across all age groups;
- master level training for the artisan baker;
- business management training and
- marketing and promotions training.

Areas that must be maintained and continually reviewed are:

- technical training;
- food safety training;
- OH&S training;
- quality assurance and
- training to address water and waste management.

Entry level training at AQF 2 for new entrants is critical to meet current skill shortages.

Wine

Specific skill shortages in the industry include:

- logistics;
- engineering;
- production management;
- technical operators;
- management skills and
- vine operators.³⁹

Meat

To remain competitive, especially in the international market, the industry needs to continue to maintain its reputation for clean and safe production methods, quality assurance and product integrity⁴⁰. Export plants are now subject to the Export Meat Orders and a whole range of new “outcomes-based” requirements. These will have significant impact on industry needs for up-skilling middle managers, particularly in the areas of quality assurance and meat safety.

Likewise, the new Animal Welfare Standards will necessitate stock handler and supervisor training to ensure compliance.

A widespread labour shortage in the meat processing sector has seen a number of companies importing labour for specific tasks. In addition companies are exploring a wide range of ways to attract and retain employees. Enterprises are keen to support pathways into the sector and higher level qualifications such as the Certificates III, IV and Diploma of Meat processing. These qualifications provide a structured framework and pathway for job progression in meat processing plants at a time when companies are keen for employees to understand there is a future in the industry.

Changes to the way meat products are being prepared for retail as well as increased interest in value adding (e.g. producing ready cooked dinners for sale in supermarkets) is going to impact on the skills sets required by workers in the post processing sectors.

Areas for future skill development include:

- entry level training;
- management training;
- quality assurance and management;
- supply chain management;
- environmental management;
- intensive pre-employment training courses;
- retail butchery (including supermarkets);
- smallgoods manufacturing;
- domestic & export abattoir practices;⁴¹
- level III training of boners, slicers and slaughterers;
- hybrid operations such as portion control;
- mass production of value-added meat products and ready-to-eat meals and
- wholesale meat supply through the Food Services qualifications.

Seafood

Supporting the development of the aquaculture sector is critical for the ongoing overall competitiveness of the seafood industry. To become more lucrative the industry needs to develop an ecological, economic and socially sustainable industry where all stakeholders work as partners. This partnership includes the skills development of the existing workforce within the industry, the capacity of the industry to deliver a sustainable system, and its ability to communicate with stakeholders.

The seafood industry is experiencing specific skills shortages at all levels. The main areas of concern are:

- workplace environmental management;
- food safety skills;
- seafood processing skills;
- product and industry promotion;
- occupational health and safety skills;
- leadership and mentoring skills – succession planning;
- quality assurance and
- business management skills.

Q4. What is the relative importance of changing skill sets for training provision (now and in the future)?

The Food Processing industry presents the VET system with the challenges of addressing the needs of the existing workforce, entry level training and the demands of thin training markets in regional areas as it is a geographically dispersed industry that is undergoing constant change.

Competitiveness in a global market place and a training system that can deliver appropriate education and training targeted at building a highly skilled workforce with new and more extensive skills is critical to the sustainability of the industry.

Importance for Training Provision

Increasing importance for supervisor level training in competitive manufacturing skills/lean thinking

Important skills for food, beverage and pharmaceutical companies are those that will maintain their competitive advantage to ensure they have a future. Food companies want competitive manufacturing capabilities such as lean thinking across all occupations in the workforce so employees know more about products and processes. Trainers will need to take operators (Certificate II level training) to the next stage so they can take a systematic approach to systems and processes. Companies want training to be set in the relevant context by explaining why changes need to occur.

Training for leadership and project management is currently being delivered for leading enterprises in lean or competitive manufacturing for continuous improvement to improve productivity. Qualifications and units of competence (including those in the Competitive Manufacturing Training Package) are becoming a higher priority as more enterprises need to address these skills. This priority is at supervisor/team leader level with the aim being that ideas will flow on through implementation. Units can be delivered at Certificate IV and Diploma of Food Science and Technology levels and are increasingly required as companies upskill employees to manage project teams to meet new targets for production, water and waste management. Delivery will vary from company to company. Some will offer full qualifications to staff also as a pathway to management positions others will require delivery of skill sets, others may not be able to afford such training as profit margins are tight, and compliance training will have claimed all allocated training dollars.

Post trade training in qualifications such as the Diploma in Food Science and Technology, including the Certificate IV in Food Science and Technology is increasing in importance as companies require workers to have underpinning knowledge whilst trouble shooting on production lines.

The demand for training in the Diploma of Food Science and Technology is also increasing in importance as more companies require technical knowledge for value adding as companies are forced to tighten their focus on high-value markets during product development. This qualification also offers training for quality and the specific technical and food science knowledge base that underpins problem solving. More companies require production supervisors to undertake problem solving on the production line. The Certificate IV in Food Science and Technology is nested in the Diploma of Food Science and Technology thus adding to the importance of this qualification as it develops understanding of food businesses and can be used as bridging qualifications to higher level training and education.

Planning, information management, people management particularly to maintain workplace relationships, process improvements, a higher level of technical expertise for technicians and supply and value chain management skills are currently required at Certificate IV, Diploma level and above and will be required over the medium and long term for middle and senior management.

This qualification has a long training lead time and is currently a 'long haul' for those undertaking training. Meeting the needs of adult learners of diverse age and multicultural backgrounds will be a challenge. Training providers will need to negotiate with enterprises

to find the middle ground where release for training is balanced by combining work with learning and on the job application whilst maintaining relevance for learners.

Highest priority critical for enterprises, is meeting compliance.

Enterprises give quality assurance, compliance (including WorkSafe regulations and legislation) and food safety training highest priority as they are critical to all sectors. Food Safety is particularly important for companies with export licences, and is of high priority for all sectors **mainly at Certificate II level** and some at Certificate I and III. Legislation requires OHS training and food safety training and other quality standards. Every year most companies at least run an update with a need for some specialized training to meet more complex labelling, food safety, traceability requirements at higher AQF levels..

Many companies reported that legal training to address WorkSafe requirements and general supervisory skills were needed more as the workforce becomes increasingly more diverse and issues of discrimination and harassment are arising more often due to age and cultural differences.

Meeting compliance requirements such as OH&S, GMP, food safety and traceability will continue to have a high priority across all industry

The likelihood of compliance training being required due to increased legislation on environmental management is imminent. Units of competence have been written to sit within the Competitive Manufacturing Training Package for a whole of business approach to environmental management at operator, supervisor and upper management levels. The VFITB ran a number of workshops in 2006 on lean and competitive manufacturing. Over sixty different organisations attended including those from companies, RTOs and government suggesting there will be an increase in training in this skills area over the next 5 years.

Linked to compliance requirements is a need for training existing middle management to meet the needs of process improvement, planning, audit requirements, risk management and workplace relationships. This will also increase the demand for training at Certificate IV and Diploma levels. Training will be required, as whole qualifications and targeted short courses using groups of competencies, in the current, medium and long term.

Skill needs vary according to the company. Skill set delivery for existing employees to up-skill and multi-skill in new technology, waste and environmental management (at Cert II, III and IV qualification levels) is a medium need in relation to compliance training and supervisor, Certificate IV level, training.

Training of Managers

The VET system has in the main been focused on delivering training to production workers. Whilst entry level training will remain a constant requirement, a new model of training delivery will be required to make training meaningful for those who will lead others in meeting the challenges of globalisation and operating in an environment responsive to international demands.

Companies already meeting these challenges are inculcating innovation at all levels and using project management skills to develop and commercialise ideas. The skills to improve product mix for changing market import/export demand and develop products that have a higher value added component, require market analysis and the ability to work in teams that incorporate multidisciplinary approaches.

Business owners, general managers and middle managers will require a training delivery approach that more clearly aligns to achieving such enterprise outcomes and skills development. There is, and will continue to be, a demand for short targeted training. This is another opportunity for the VET system to unpack the training package and offer more flexible "just in time, just for me" training options. This again, requires many RTOs to recognise that full qualifications may not meet industry needs at all times.

The food processing industry (apart from the meat processing sector and a small amount of training for Food Technology) has not historically sought training for its frontline/middle managers from the VET system. There is an opportunity for VET provision to address the need for optimal planning and negotiation skills that are necessary along the supply chain if the best possible outcomes are to be achieved. There are available training options to meet this demand and build an appropriate skill base. Promotion would need to be undertaken to foster both companies' and RTOs' understanding of each other's requirements and options to develop solutions at a local level.

Promotion of training, training pathways and careers

The food processing industry has a high proportion of workers with a low level of engagement with education. The industry is often not the preferred career choice of participants and subsequently interest in skills development needs to be stimulated with models of training that are relevant and linked to the tasks being performed.

Also of high importance is career promotion and training pathways development. This will be an ongoing requirement in order to attract new entrants to meet the ongoing skill requirements of the industry. This should be targeted to young people as well as exposing older workers to the opportunities that may be appropriate when they are considering a career change.

In terms of industries the greatest increase in employment will be Bakery Product Manufacturing with a projected increase of nearly 2,500 employees (Australia wide), Other Food Product Manufacturing has an increase of 1,500 employees, Australia wide. This class includes manufacture of coffee, tea, food flavourings, seasonings and colourings, frozen pre-prepared meals and health supplements. Dairy Product Manufacturing will also have an increase (1,200 employees). However as nearly 51% of the 2004-5 workforce is estimated at forty five years of age and over, training and skills development for existing employees to supervisory level and attracting other employees into the industry will be a high priority to meet the forecast demand for the next ten years as the existing workforce retires⁴².

Language, literacy and numeracy training will increase in importance as companies recruit people from more diverse age and multi cultural groups. Recognition of prior learning and the building of a skills profile appropriate to the workplace will also be required.

New and improved models of training to suit the industry need to be supported and developed. This will emphasise the link between training and improved business performance, including financial gains and also resulting in:

- decreased staff turnover due to increased staff motivation;
- improved career pathways;
- a more flexible workforce that may assist in providing improved plant efficiencies;
- and
- improved worker safety outcomes.

Casualisation of the workforce and the use of labour hire firms continue to influence a shift in training responsibilities and commitments across the food industry. A trend to watch is that some larger enterprises are reverting to permanent staffing options with an emphasis on multiskilling. Flexibility in training to meet demands of industry in areas such as seasonality and flexible training delivery models will be an ongoing demand.

There will be increased demand for short targeted training. This requires many RTOs to recognise that full qualifications may not meet industry needs at all times. The current use of federally based incentives has distorted the realities of the skill development needs of this industry. Training that is linked to real business outcomes is the need of all sectors across the food processing industry.

The Baking and Meat Retailing industry sectors recognise as a priority the need to have higher level training specifically targeted at Certificate IV and Diploma level to meet their ongoing development needs. A "master class" for Baking could be an appropriate option for

training delivery at the higher AQF levels and would need to be considered in the training package review. Retail butchers, to compete and stay viable, will need to increasingly add value to the products they sell as a way of differentiating their retail outlets. For these reasons the Diploma of Meat Processing (Meat Retailing) will be increasingly relevant. This is considered to be a low need.

The increasing use of computers in all aspects of the food industry means all levels of the workforce require the knowledge and skills to the use technology and attitudes that support the adoption of new technologies.

The ability to develop products in multidisciplinary teams needs to be enhanced by suitable training strategies. To improve product development there is an increased need to diversify employee and contract people that bring expertise in areas such as marketing and sales, product design/industrial design. Multidisciplinary approaches to product development that also engage technical and scientific people with production people for small and large scale manufacturing is becoming increasingly important. This will require training in project management across all sectors, for large and small companies and is a high priority.

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