The Australian Chicken Meat Industry: An Industry in Profile
THE AUSTRALIAN CHICKEN MEAT INDUSTRY:
AN INDUSTRY IN PROFILE

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This report is also available at
www.chicken.org.au/industryprofile

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It is an exciting time for Australia’s agricultural industries. The gross value of Australian farm production has been forecast to reach $50 billion for the first time this year building on the strong growth figures of previous years.¹

Australia’s chicken meat industry plays an integral role in Australian agriculture and in the broader Australian economy, with the industry conservatively estimating that consumers currently spend $5.6 billion per annum on chicken meat in supermarkets, fast food outlets, speciality shops and restaurants.

Yet the agricultural sector is not without its challenges. Concerns about the environmental impact of agricultural activities and the sustainability of food producing operations are topical; equally important are animal welfare matters and the land use restrictions faced in many regions. Food safety and, in more recent years, food security are quite rightly a focus of attention both at the political and the consumer level.

The Australian Farm Institute holds the view that the agriculture sector needs to take responsibility for its own future directions by engaging in objective and credible policy research, rather than relying on Governments and policy-makers to come up with solutions. The foundation of all good policy is a solid information base and a good understanding of the way the sector works. It is also important to share this information so that a well-informed policy debate is possible at all levels of the industry and government.

This report makes a valuable contribution to this process. It brings together available industry information to broaden our understanding of where the chicken industry fits into Australian agriculture and Australian society. The report also explains how the Australian chicken meat industry is equipping itself to face future challenges at a national and global level.

It considers recent trends that have shaped the industry and its place in a global context and looks at key industry drivers. The industry’s strong commitment to research, development, innovation and embracing new technologies is also canvassed.

Objective information and informed debate are key tools to ensure future profitability and sustainability of Australian agriculture. Industry reports such as this play a key role in delivering objective information to a wide range of audiences in a format that is clear and accessible.

Mick Keogh
Executive Director
Australian Farm Institute

1. ABARES, 2011, Agricultural Commodities, September Quarter 2011, p124
http://adl.brs.gov.au/data/warehouse/pe_A20110920.01/AC2011.V1.1_AgCommodities1.2.0_LR.pdf
The Australian Chicken Meat Federation (ACMF) is the peak representative body for participants in the chicken meat industry in Australia.

ACMF is the industry representative body recognised by the Australian Government. In this capacity, ACMF is a signatory to the Emergency Animal Disease Response Agreement and represents the industry at the national level in matters regarding international trade, quarantine, animal health, biosecurity, food standards, food safety and animal welfare.

ACMF is also strongly involved in providing strategic direction to industry relevant research and development, in particular to the Chicken Meat Program of the Rural Industries R&D Corporation, to which it provides research management services.

OBJECTIVES

The Federation was formed in 1964. Its main objectives are:

- The promotion and protection of the interests of the chicken meat industry.
- The conduct or support of research on all aspects of the industry.
- The securing of representation on appropriate committees, boards and commissions.
- The approaching of government bodies on all matters of concern to the industry.

www.chicken.org.au
This report has been compiled using data sourced from Australian Government Departments and Agencies, internationally recognised organisations, foreign Government Departments and companies within Australia’s chicken meat industry.

All references and information sources are cited at the end of this report in Section 9.

The **Australian Bureau of Agricultural and Resource Economics and Sciences** (ABARES) is a research bureau within the Department of Agriculture, Fisheries and Forestry. It provides professionally independent, world-class research, analysis and advice to inform decision-makers on current and future policy challenges affecting Australia’s primary industries.


The **Australian Bureau of Statistics** (ABS) is Australia’s official statistical organisation. The ABS provides accurate and objective statistics for use by government, industry and the community across the following themes: economy, people, environment and energy, regional and industry.


The **Food and Agriculture Organization of the United Nations** (FAO) leads international efforts to defeat hunger and acts as a neutral forum where all nations meet as equals to negotiate agreements and debate policy. FAO is also a source of knowledge and information and through FAOSTAT provides time-series and cross sectional data relating to food and agriculture for some 200 countries.

For further information: [http://www.fao.org](http://www.fao.org)

The **Australian Department of Agriculture, Fisheries and Forestry** (DAFF) develops and implements policies and programs that ensure Australia’s agricultural, fisheries, food and forestry industries remain competitive, profitable and sustainable.


The **United States Department of Agriculture** (USDA) is the US equivalent of Australia’s DAFF and aims to provide leadership on food, agriculture, natural resources, and related issues based on sound public policy, the best available science, and efficient management.


**DATA REPORTING**

This report sources data from a number of publications, using the most recent data available at the time of writing. In some areas, this has led to discrepancies between data sources.

In some instances, while the most recent data have been used and are cited, older publications within a series may have been used to add historical depth.

The term ‘poultry’ includes chicken meat as well as meat from other birds, such as turkey and ducks and spent layer hens. As a guide, ACMF estimates that chicken meat currently represents 95.2 per cent of all poultry meat produced and consumed in Australia, and therefore recommends that this factor should be used to convert Australian poultry production and consumption figures to chicken meat production and consumption.

ACMF and industry estimates have been developed through an analysis of published material and figures, and through information provided by companies within the Australian chicken meat industry.
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Executive summary
Chicken meat touches the lives of most Australians on an almost daily basis, with 90 per cent of the population eating chicken meat at least once a week, and a third of us eating it three or more times a week.

Chicken has grown to become an important staple of the Australian diet, and is now Australians’ most significant source of meat protein. Chicken meat is widely recognised to be a low fat protein source and also provides essential vitamins and minerals, notably niacin, vitamin A, vitamin E and magnesium.

Its versatility and ease of handling and cooking has made it a popular menu item, whether cooked fresh at home or in a restaurant, eaten as takeaway from a quick service restaurant, or purchased as a partially prepared meal or snack to be cooked and served at home or in a wide variety of food service situations.

The chicken meat industry is substantial and growing, with a strong presence in many rural and regional communities, where it employs people in both agricultural and food processing environments. From production to processing, Australia’s chicken meat industry is wholly Australian-owned. With minimal international trade in chicken meat into or out of Australia, almost all chicken eaten in Australia, including all fresh and raw frozen chicken, is produced locally.

Forecasts uniformly predict continued steady growth in both production and domestic consumption of chicken meat.

The industry’s growth over the last fifty years has been supported by a strong commitment to research and a dynamic approach towards embracing the best new technology from all over the world and adapting it for the local circumstances. This has resulted in the adoption of superior genetics, improved bird nutrition and more effective management practices. Together, these have contributed to improved growth and bird performance and better feed conversion, boosting overall industry efficiency and productivity.

Participants in the chicken meat industry remain mindful of their responsibilities to the birds in their care, the environment in which they operate, and the consumers who place their trust in the food the industry provides. This is reflected in the industry’s involvement in a range of programs focusing on food safety, environmental sustainability, animal welfare and disease risk management.
Global context
Meat forms an important part of the diet for most people around the world.

“According to recent FAO work using longer term population and income projections, global food production needs to increase more than 40% by 2030 and 70% by 2050, compared to average 2005-07 levels.”

OECD-FAO Agricultural Outlook 2009–2018

Twenty years ago the global demand for meat was 173 million tonnes, of which poultry made up 23 per cent. Today the annual global demand for meat sits at 285 million tonnes, with poultry now comprising 35 per cent or 100 million tonnes of this (Rabobank, 2011).

Australia’s demand for chicken meat mirrors this global trend. In the last 20 years, Australia’s production of chicken meat has increased by over 160 per cent, with Australians now eating more chicken than any other kind of meat.

This growth has in part been driven by productivity gains that have allowed chicken meat to become the best value meat option. Chicken sales have also benefited from favourable consumer attitudes towards the product, in particular its versatility, consistency, popularity across the family and increasingly recognised contribution to a healthy diet.

Looking to the future, global food production needs to increase by more than 40 per cent by 2030 and 70 per cent by 2050 to meet the needs of an ever increasing global population (OECD-FAO, 2009).

The global demand for meat is estimated to increase by 44 per cent to over 400 million tonnes by 2030 to support the world’s growing population and its increased appetite for meat. Poultry’s growth rate is expected to be the highest at 60 per cent, with poultry forecast to make up 39 per cent of worldwide meat demand by 2030 and become the most consumed meat globally (Rabobank, 2011).

Whilst there are several reasons for this strong growth forecast, possibly the most significant is poultry’s efficient use of inputs including feed.

In Australia, many alternative agricultural pursuits are highly vulnerable to the biophysical impacts of climate change, such as water scarcity (Garnaut, 2008). Chicken production is less vulnerable to these impacts. This, combined with the Australian chicken meat industry’s productivity gains and value for money for the consumer, is expected to result in demand for chicken remaining strong.
The chicken meat industry in Australia
3.1 OVERVIEW

The chicken meat industry in Australia is vertically integrated, which has driven industry productivity and resulted in a number of important benefits for consumers. Chicken is the most economical meat option, a result of industry efficiencies and economies of scale. Consumers also enjoy consistent quality in terms of tenderness and flavour of the chicken available in the Australian market.

This vertical integration, where companies own or control most aspects of the supply and production chain, means that large chicken meat operations may include:

- **Breeder farms** – focus on producing fertile eggs to produce the next generations of meat (broiler) chickens. The industry does not sell eggs for consumption. Larger chicken meat companies tend to import new genetic stock as fertile hatching eggs (under extremely strict quarantine conditions) from specialist international breeding companies and keep several generations of breeder flocks, while some medium and smaller companies keep a single generation of parent breeder flocks to produce their own meat chickens. Some companies do not keep breeder flocks at all and simply buy fertile eggs or day-old meat chickens from other companies.

- **Hatcheries** – incubate fertile eggs until the chicks hatch. Hatcheries are physically separated from other parts of the operation to ensure the highest biosecurity standards. Modern hatcheries make extensive use of technology to ensure optimal environmental conditions are maintained at all times.

- **Meat chicken growing farms** – grow day old chicks to maturity. Typically, meat chicken growing is contracted out, with around 800 contract growers producing 80 per cent of Australia’s meat chickens. In these arrangements the processing companies own the birds and supply feed, technical direction and other support services to the grower.

- **Processing plants** – slaughter birds and prepare chicken meat products for sale.

- **Further processing plants** – receive processed raw meat and use it to produce value-added (generally cooked) products.

- **Feed mills** – produce animal feed to exacting nutritional specifications.

- **Laboratories** – contribute to food safety and quality control and assist in managing flock health and ensuring high standards of biosecurity.

- **Research and development** – ensures ongoing improvement to industry practices on farm (in particular animal nutrition, health and welfare), in processing (food safety) and product development (increased range of cuts and further processed products).

Generally medium and small integrated processors will have some of these facilities, but will use third parties for others.

Well over 95 per cent of the chicken meat grown and eaten in Australia is produced by seven privately owned Australian chicken meat processing companies. The two largest, Baiada Poultry and Inghams Enterprises, supply more than 70 per cent of Australia’s chicken meat, with the next five companies each supplying between 3–9 per cent of the market. A large number of smaller processors make up the balance.

The relatively concentrated nature of the industry is balanced by its small direct customer base (i.e. the supermarket chains and major quick service restaurant chains), as chicken is purchased from processors by a small number of major companies with substantial market power. Despite only limited exposure to international trade, the result is a highly competitive domestic market.
In each chicken producing region, chicken meat processing companies typically locate the various parts of their operations in close proximity to each other. For example each company’s hatcheries, broiler farms, processing and further processing (cooking) plants will typically be within a two hour drive of each other.

**Meat chicken growing farms** are generally located within 100km of a processing plant, minimising transport stress on the chickens on the day of processing. Growers need to be near a feed mill, with guaranteed water, power and access for trucks, as well as access to labour and services. The farms themselves are relatively small in area, with 75 per cent of the 765 farms in Australia in 2008–09 under 50ha (ABS, 2010).

**Primary processing plants** (where chickens are slaughtered) are generally located close to consumer markets, helping to keep distribution costs down and ensuring access to labour and other services. Most are within 2 hours drive of a capital city.

**Further processing plants or cooking plants** (where processed raw meat is converted into value-added cooked products) are generally located close to consumer markets, to reduce distribution costs and to ensure access to labour and other services.

**Feed mills** are located with a view to both access to ingredients and proximity to farms.

**Hatcheries** are located close to major chicken growing areas to ensure that transportation times for day old chicks being moved from the hatchery out onto the farms on which they will be reared is kept to a minimum.

**Breeding farms** are located across Australia, but with a tendency to keep the most valuable birds – the great grandparents and grandparents of the meat chicken birds – in more isolated areas to protect them from disease. Fertile eggs from the breeder farms are sent to hatcheries.
STATE SHARES OF TOTAL PRODUCTION IN 2010–11

<table>
<thead>
<tr>
<th>State</th>
<th>Chickens slaughtered</th>
<th>Volume of chicken meat produced</th>
</tr>
</thead>
<tbody>
<tr>
<td>NT</td>
<td>9.6%</td>
<td></td>
</tr>
<tr>
<td>VIC</td>
<td>8.9%</td>
<td></td>
</tr>
<tr>
<td>WA</td>
<td>13.2%</td>
<td></td>
</tr>
<tr>
<td>TAS</td>
<td>13.0%</td>
<td></td>
</tr>
<tr>
<td>QLD</td>
<td>20.0%</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>32.4%</td>
<td></td>
</tr>
<tr>
<td>SA</td>
<td>34.2%</td>
<td></td>
</tr>
<tr>
<td>NSW</td>
<td>20.0%</td>
<td></td>
</tr>
<tr>
<td>VIC</td>
<td>34.2%</td>
<td></td>
</tr>
</tbody>
</table>

Source: ACMF estimates, based on ABS (2011) data and industry information on number of chickens slaughtered and chicken meat produced in states not captured or disclosed in ABS publications.
3.3 TRENDS

In 1963 Australians ate an average of 4.2kg of chicken a year. By 2010 that figure has increased tenfold, making chicken the most popular meat in Australia. This huge shift in consumption is due to a combination of supply and demand factors.

The industry’s adoption of the outcomes of research has changed chicken breeding, feeding and management practices, contributing to a better quality and more consistent product, as well as production and cost efficiencies. Changes in primary and further processing, particularly the level of automation of processing, has also contributed to the more cost-effective supply of a wider range of products.

These efficiencies and cost savings have driven down the price of chicken meat in current dollar value terms over the past 50 years. Increased demand has also been supported by consumer demand for greater convenience and variety and growing consumer awareness of the importance of a healthy, low fat diet.

Demand for free range chicken has grown significantly. Five years ago free range chicken could most accurately be described as a cottage industry. In a relatively short period of time it has grown to be around 15 per cent of the total market.

The primary reasons for purchasing chicken, as identified by consumers, include that chicken is: popular in the household, especially amongst children; versatile; healthy; and good value for money. This is based on the findings of an unpublished ACMF consumer survey conducted in 2010, backed up by the results of a survey undertaken by RIRDC (2009).

Based on recently released ABS (2011) statistics, ACMF estimates consumption of chicken meat in 2010–2011 to be 43.9kg per person and increasing.
3.4 VALUE OF THE INDUSTRY

Contribution of Chicken Meat to a Healthy Australian Diet
As Australia’s most significant supplier of high quality meat protein, the chicken meat industry makes an important contribution to the diets of Australian consumers. Chicken can contribute to a healthy eating pattern. The predominant cut consumed, breast meat, is low in fat, with its fat profile favouring polyunsaturated, rather than saturated, fatty acids. Chicken meat delivers essential vitamins and minerals and is the most affordable meat source (Charlton et al., 2008). Of the land based animal protein production systems, chicken meat production creates the least environmental burden, (Williams et al., 2006) and the Australian chicken industry is a significant contributor to the economy.

Value of Production
The gross value of poultry meat at the time of slaughter* was forecast by ABARES to total $2.179bn in 2010–11 (ABARES, 2011b). Industry estimates that consumers currently spend approximately $5.6bn per annum on chicken meat in retail outlets and restaurants. The chicken meat industry is also one of the largest customers of Australia’s grains industry, purchasing over 5 per cent of all grains produced in Australia.

Employment
Through its vertically integrated structure, the chicken meat industry provides a wide range of employment opportunities in urban, regional and rural areas.

These employment opportunities are in areas as diverse as farming, hatchery management, poultry processing, feed preparation, food processing, distribution, management, administration, quality control, research and development and veterinary services.

Many people are direct employees of the chicken meat processing companies, but employment in this sector also includes contract roles in farming, transportation and other services that support the poultry industry.

The number of people working within the industry is estimated to be approximately 40,000. In addition to this, a further 100,000 jobs are estimated to be directly dependent on the industry.

* This refers to the value placed on recorded production at the wholesale prices realised in the market place (ABARES, 2011b)
In 1975, it took 64.1 days and 4.66kg of feed to grow a chicken to 2kg. In 2011, it takes just 35 days and as little as 3.4kg of feed.

3.5 Boosting Industry Productivity

**Breeding** – Most of the genetic stock for Australia’s chicken meat industry comes from specialist breeding companies in the USA and Europe. Breeding companies select for characteristics such as robustness, disease resistance, growth, meat yield and more efficient feed conversion to help production and cost efficiencies. Change is achieved through conventional selective breeding techniques, not genetic engineering.

**Feed conversion** – Today’s chickens need less feed to reach market weight, due largely to improvements in the breeds used, that have been developed through targeted breeding programs, as well as improved animal husbandry and bird nutrition. There has been a strong research focus on chicken nutrition directed towards determining the best mix of nutrients to optimise growth and the efficiency with which feed is converted into meat for current meat chicken breeds, while maintaining optimal bird health. Nutrition specialists design diets to meet the bird’s precise nutrient requirements as it grows.

**Shed types** – Birds are kept on the floor in large, well-ventilated sheds, not in cages. Newer sheds have sophisticated ventilation systems with fans at one end of the shed which draw air into the shed through cooling pads in the walls, over the chickens, and out the far end of the shed, capable of completely renewing the air within a shed in under a minute. Temperature, humidity and air quality conditions in these sheds are monitored and managed by computerised systems which automatically adjust the fans, heating and cooling settings to optimise bird comfort.

**Changes to processing** – Increasing automation and computerisation have increased the capacity of chicken processing plants and reduced the labour required while improving occupational health and safety. Food safety, shelf life improvements and minimising waste are also primary targets.

**Managing waste for productive outcomes** – The industry minimises wastage across its production and processing operations by reusing or recycling a wide range of materials. For example, on the farm, spent shed litter – that is, bedding and manure – is collected for use as fertiliser after the birds leave the farm. At processing, all parts of the chicken are used; with approximately 70 per cent of the chicken going to human consumption while the rest is used as pet food or as ingredients in products such as blood and bone fertiliser.
“Since 1960, poultry meat prices have fallen by more than 75 per cent and there has been an almost ninefold increase in per capita consumption.”

Professor Ross Garnaut AO
The Garnaut Climate Change Review

Today’s chickens need less feed to reach market weight as they have been specially bred to grow quicker and be highly efficient at converting feed into meat.
3.6 Australia and the World

World chicken meat production has grown 36 per cent over the last ten years. While significant growth has been seen in all regions, it has been most evident in South America (54%) and Asia (39%). Growth in Australia, over the same period, was estimated at 52%.

As the global supply of chicken meat grows, Australia has consistently produced around 1 per cent of the world’s chicken meat over the last decade.

Globally, the world’s largest chicken meat producing countries are the USA, China and Brazil, with world production growing steadily. These three countries also consume the most chicken meat.

While the Australian industry is relatively small compared to the largest global producers, Australians remain significant per capita consumers of chicken meat.

### Selected Chicken Meat Producing Nations (2010)

<table>
<thead>
<tr>
<th>Country</th>
<th>Production (kt)</th>
<th>Total domestic consumption (kt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>16,563</td>
<td>13,463</td>
</tr>
<tr>
<td>China</td>
<td>12,550</td>
<td>12,457</td>
</tr>
<tr>
<td>Brazil</td>
<td>12,312</td>
<td>9,132</td>
</tr>
<tr>
<td>European Union</td>
<td>9,095</td>
<td>8,779</td>
</tr>
<tr>
<td>Mexico</td>
<td>2,809</td>
<td>3,344</td>
</tr>
<tr>
<td>India</td>
<td>2,650</td>
<td>2,923</td>
</tr>
<tr>
<td>Russia</td>
<td>2,310</td>
<td>2,649</td>
</tr>
<tr>
<td>Iran</td>
<td>1,600</td>
<td>1,660</td>
</tr>
<tr>
<td>Argentina</td>
<td>1,600</td>
<td>2,063</td>
</tr>
<tr>
<td>South Africa</td>
<td>1,290</td>
<td>1,395</td>
</tr>
<tr>
<td>Thailand</td>
<td>1,280</td>
<td>1,514</td>
</tr>
<tr>
<td>Australia</td>
<td>934*</td>
<td>910**</td>
</tr>
</tbody>
</table>

Sources: USDA (2011); *ABS (2011); **ACMF estimate, see table at 4.1
WORLD CHICKEN MEAT PRODUCTION

Source: FAO (2011)

PER CAPITA CHICKEN MEAT CONSUMPTION (KG) FOR SELECTED COUNTRIES, 2010

Source: USDA (2011; accessed 2 November 2011)

*: ACMF estimate for 2010, based on updated ABS production statistics (see Table at 4.1) and Australian population estimates as at 30 June 2010.
From production to consumption
4.1 OVERVIEW

The table below outlines the production and utilisation of chicken meat in Australia during the last calendar year.

AUSTRALIAN CHICKEN MEAT PRODUCTION AND UTILISATION (2010)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slaughterings (million)</td>
<td>512.2</td>
<td>600</td>
<td>700</td>
<td>900</td>
<td>1,000</td>
</tr>
<tr>
<td>Production (kta)</td>
<td>934.4</td>
<td>1,000</td>
<td>1,100</td>
<td>1,300</td>
<td>1,400</td>
</tr>
<tr>
<td>Average dressed weight</td>
<td>1.82</td>
<td>1.9</td>
<td>2.0</td>
<td>2.1</td>
<td>2.2</td>
</tr>
<tr>
<td>Exports (kta)</td>
<td>24.7</td>
<td>28.0</td>
<td>30.0</td>
<td>32.0</td>
<td>34.0</td>
</tr>
<tr>
<td>Total consumption (kta)</td>
<td>909.7</td>
<td>1,000</td>
<td>1,100</td>
<td>1,300</td>
<td>1,400</td>
</tr>
</tbody>
</table>

Source: 
- a ABS (2011)
- b ACMF calculation (calculation based on the preceding figures)
- c ABS customised report for ACMF, 2011

4.2 PRODUCTION

The number of chickens slaughtered has increased steadily to meet increasing demand. This increase reflects the growing production and consumption of chicken meat in a period of relatively stable prices compared to other meats.

The percentage increase in chicken meat produced over the same period is even greater, due to market and product range changes that have fuelled demand for larger birds.

CHICKEN MEAT PRODUCTION IN AUSTRALIA

Source: ABS (2011) and earlier releases of the same catalogue
4.2 PRODUCTION (continued)

In the 1960s, whole birds represented the main product sold. Since then there has been strong growth in demand for chicken cuts and fillets, such as raw chicken breast fillets or chicken drumsticks, together with increased demand for further processed chicken products, which has led to demand for, on average, larger birds at the time of slaughter.

However, as the marketplace still requires a range of bird sizes, chicken meat processors process birds at different stages of growth depending on customers’ requirements for the size of the bird or chicken meat cuts.

The graph below shows how the average dressed weight of a chicken - that is, following slaughter, plucking, evisceration and cleaning - in Australia has changed, reaching over 1.8kg in 2010.

Source: ACMF calculation, based on ABS (2011) data for number of chickens slaughtered and chicken meat produced
“The Australian chicken meat industry offers the consumer a wide range of product variety whilst maintaining a relatively inexpensive yet significant meat option for today’s diet.”

Gary Ekert
President, Australian Chicken Growers’ Council

4.3 PROCESSING AND DISTRIBUTION

There are two stages in chicken meat processing. The first stage is primary processing, where the birds are slaughtered, plucked, cleaned, cooled and either filleted, cut into pieces or left ‘whole’. The raw meat is then frozen or chilled, packaged and sent to distributors or on to the next stage - further processing. In this second stage, chicken meat is further processed by coating, crumbing, partial or complete cooking, or otherwise adding value.

**Fresh and frozen raw chicken**

Fresh and frozen raw chicken meat can leave the primary processing plant whole, filleted or in pieces and about 69 per cent of production does not get processed any further. Supermarkets represent the largest distribution channel for such fresh or frozen chicken, with 40 per cent of raw chicken meat going to supermarkets. Wholesalers follow with 19 per cent. Sales to quick service restaurants, the hospitality and food services industry, specialty poultry retailers, pet food manufacturers and butchers make up a further 39 per cent.

Australia has witnessed a steady trend away from frozen chicken, with volumes of fresh chicken now outweighing frozen by ten to one. Consumers have also shown a growing preference for purchasing chicken in pieces, ready to cook, although the sale of fresh whole chickens remains strong.

Chicken may leave primary processing packaged in bulk, or ready packed for consumers to select from the retail shelf. Some may include light spicing or marinades.
4.3 PROCESSING AND DISTRIBUTION (continued)

Value added products
Approximately 31 per cent of chicken meat goes to further processing. Further processing provides value added processes such as further cutting, coating, crumbing and cooking. Most of the finished products from further processing go to supermarkets (34 per cent) and quick service restaurants (33 per cent).

The final products of further processing include a wide array of ready-to-cook foods such as coated chicken pieces, nuggets, chicken tempura products, burger fillets, chicken skewers and crumbed or coated chicken pieces.

Also products from further processing go to customers such as hospitality and food services providers (17 per cent), wholesalers (6 per cent), specialty shops (6 per cent), and butchers (<1 per cent).
“The vertically integrated nature of the industry means that market signals can move quickly along the supply chain and advances in farming and processing can be quickly applied, affording the sector a competitive advantage over other, less integrated protein production sectors.”

Kevin McBain
Chief Executive Officer, Inghams Enterprises Pty Limited

Source: Industry estimates, 2011

RELATIVE IMPORTANCE OF DISTRIBUTION CHANNELS

69%
Raw chicken meat (with no further processing)

100%
All chicken meat products

Further processed chicken meat

31%
4.4 CONSUMPTION

Over the past 40 years, chicken has grown from an occasional treat to a staple part of the diet of most Australians. In this time per capita consumption of poultry meat in Australia has soared from 10.5kg (1969–70) to well over 43.9kg (2010–11).

Almost 90 per cent of surveyed Australians eat chicken as a main component of a meal at least once a week, with one in three eating it at least three times a week (unpublished ACMF consumer survey, 2010).

Based on recently released ABS (2011) statistics, the ACMF estimates consumption of chicken meat in 2010–2011 to have reached 43.9kg per person, easily outstripping beef consumption, and is fast gaining upon total red meat (beef, veal, lamb, mutton) consumption.

The retail price of chicken – assessed on the basis of the price of a fresh whole chicken – has remained relatively flat over the long term compared to the other meats. Some 58 per cent of Australians consider chicken to be the best value for money meat option (unpublished ACMF consumer survey, 2010). The top graph on the opposite page illustrates the movements in the nominal price for each of the main meats over the past decade and clearly demonstrates the increased value proposition that chicken meat offers the consumer.

These pricing trends supported the strong growth in consumption of chicken and its growing place in the Australian diet, with the long term downward trend in the real price of chicken matched by a steady increase in consumption.

These two trends are illustrated in the bottom graph on the opposite page which shows the growth in consumption relative to 1987–88, together with the decline in the real price of chicken (i.e. adjusted for Consumer Price Index (CPI) movements).

Over the past two decades, consumption has increased by over 60 per cent while over the same period price decreased 40 per cent.
“We take great pride in what we do because we see ourselves as a major provider of quality food for Australian families.”

John Cordina
Chief Executive Officer, Cordina Chicken Farms Pty Ltd

The historical flat trend of chicken meat prices relative to growth in the price of other meats is due to a combination of factors affecting productivity and costs of production:

- Selective breeding – chickens have been selectively bred for characteristics such as the ability to put on muscle (meat) quickly, and the efficiency with which they convert feed to meat.
- Animal husbandry and feeding – research has focused strongly on identifying the best mix of nutrients to support optimal growth of chickens, and on farming techniques to keep birds healthy and productive.

- Processing automation – rapid adoption of constantly improving technology to process, cut and pack chicken meat, has contributed to reduced retail prices.

With regards to genetic gain, while other meat industries also seek to improve the productivity of animals through genetic selection, the relatively short time that chickens take to reach sexual maturity and the fact that they can then produce many offspring over a very short period of time has meant that breeding companies have been able to make significant advances in improving the productivity of chickens more quickly compared to other livestock species.
Chicken meat and trade
“Australian consumers can be confident that chicken meat produced in this country is of a quality equal to the best in the world. We adopt world’s best practice in farming, processing and quality control.”

Simon Camilleri
Chief Executive Officer, Baiada Poultry Pty Limited

5.1 OVERVIEW

Australia has strict trade policies and biosecurity measures in place to ensure that the country and its domestic poultry industries are protected from diseases not usually found in Australia. Imports of chicken meat (other than from NZ, or as canned or fully retorted products) were prohibited until 1998, and remain subject to stringent conditions, resulting in very limited imports of processed chicken meat and no imports of fresh chicken meat.

This means that virtually all chicken meat eaten in Australia is grown in Australia. Also, almost all chicken meat produced in Australia is consumed locally, with just under 5 per cent being exported.

5.2 IMPORTS

Chicken meat cannot be freely imported into Australia due to strict quarantine requirements in place to protect both local commercial poultry and native birds from disease and consumers from certain food safety hazards. Quarantine conditions focus on nine diseases and pathogens of concern, and any chicken meat products from regions which are not free of all of these diseases needs to be cooked to various extents depending on the disease in question in accordance with the relevant import protocol.

As a result, Australia is not a significant importer of chicken meat. In the ten years to 2010, Australia imported 60 tonnes of chicken meat, whereas it produced well over 7,000,000 tonnes of chicken for Australia’s consumers.

The chicken imported to Australia is generally in tinned and fully retorted foods, such as canned chicken meat, which has had prolonged exposure to high temperature while in its container. Occasionally, small amounts of frozen cooked chicken meat are imported from New Zealand when exchange rates favour such trade. No whole chickens or fresh meat are imported.

For quarantine reasons, live birds cannot be imported. Fertile eggs imported for breeding purposes are brought in through quarantine facilities where the birds remain after hatching under constant veterinary control until they are nine weeks of age, whereupon they are moved out of quarantine onto secure breeding farms well removed from any other poultry.

More information: www.biosecurityaustralia.gov.au
5.3 EXPORTS

Very little Australian chicken meat is exported. This is in part due to high local demand, and in part because international demand is largely met by countries which benefit from a lower cost base than Australia’s chicken meat producers and are, in some cases, supported by government subsidies.

Australian chicken meat is exported primarily to South Africa, the Philippines, Hong Kong, Singapore and the South Pacific islands (DAFF, 2011).

Over the five years to 2009–10, poultry production in Australia averaged 857,000 tonnes a year. Over the same period, Australia exported a relatively small share of poultry production to more than 60 countries. Over this period, on average, around 4 per cent of Australia’s chicken meat production was exported, with South Africa accounting for 33 per cent of exports by volume, Hong Kong for 21 per cent, the Philippines for 18 per cent, Papua New Guinea for 6 per cent and Vietnam for 5 per cent (Hogan, 2011).

Increasingly, the bulk of chicken meat exports have been made up of frozen cuts and edible offal (including any other parts of the chicken that are suitable for human consumption such as feet, liver, kidneys etc), reaching over 95 per cent in recent years, with mainly frozen whole chicken making up the rest (ABS customised report for ACMF, 2011).
AUSTRAILIA'S CHICKEN MEAT EXPORTS

2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

30,000
25,000
20,000
15,000
10,000
5,000
0
tonnes

Source: ABS customised report for ADMF, 2011
Key industry drivers
“Food safety is the most important priority for all of us in the food business and is supported by animal health and welfare best practice and continuing advancements in environmental sustainability.”

John Hazeldene
Managing Director, Hazeldene’s Chicken Farm Pty Ltd

6.1 PRODUCTIVITY

Improvements and progress across the chicken meat industry are driven by five key priorities, namely productivity, food safety, animal health, animal welfare and the environment. Increasing productivity remains a key industry focus. The industry’s ability to improve the efficiency of both growing meat chickens and processing meat ready for sale has been critical to its increasing role as a staple of the Australian diet. It has also been important to its improved environmental efficiency, with fewer resources required to produce chicken.

Section 3.5 (Boosting industry productivity) and Section 4 (From production to consumption) of this report give more information on how the industry has improved its productivity and the impact that has had on production and consumption patterns. Section 7 (Research and development) describes some of the research priorities and programs that aim to improve production efficiency in the future.

6.2 FOOD SAFETY

The overriding objective of the chicken meat industry is to provide high quality food to the Australian public, and food safety is paramount to this. All Australian poultry processing plants have either HACCP (Hazard Analysis Critical Control Point) programs or alternative, audited food safety plans in place to manage food safety risks.

Food Standards Australia New Zealand (FSANZ) sets and administers the Australia New Zealand Food Standards Code (the Code) under the FSANZ Act 1991. The processing and marketing of chicken meat is governed by the Code. A new Primary Production and Processing Standard for Poultry Meat was approved by the FSANZ Board in May 2009 for implementation by May 2011. This Standard covers not only the processing but also the production (farming) of chickens for meat.

The extension of food standards to the production of chicken meat recognises that farming practices influence the safety of the final product. Whilst bacterial contamination of carcases can be controlled effectively during processing, if fewer bacteria enter the processing plant, maintaining food safety is made easier. For this reason, reduced contamination of birds leaving the farm with Salmonella or Campylobacter is seen as having potential food safety benefits.

On-farm food safety requirements mirror many of the protocols preventing animal diseases from entering the poultry farm or spreading from one shed to another, generally referred to as biosecurity measures.

The industry must also adhere to the Australian Standard for Construction of Premises and Hygienic Production of Poultry Meat for Human Consumption. This standard mostly covers requirements that will ensure food is safe, but also includes some requirements aimed at animal welfare.
6.3 Animal Health

Endemic diseases
The great majority of meat chickens grown in Australia are grown under a long term contract with a processor. Processors may have from a dozen to well over 100 contract growers. Processors oversee the contract farms and provide day old chicks and feed as well as veterinary supervision and management advice. Appropriate vaccination is carried out where required. Coccidiostats and antibiotics are used to manage common diseases where required to ensure birds remain healthy or to restore the health of sick flocks.

Emergency diseases, including exotic diseases
Australia has been able to maintain a very favourable animal health status largely due to its remote location and its island nature. For the chicken meat industry, this means that a range of quite common diseases that haunt the industry world-wide have not become established in commercial poultry flocks in Australia.

To keep these diseases out of the continent, Australia maintains strict quarantine requirements which are administered by the Australian Quarantine and Inspection Service (AQIS). At farm level, a national effort across all livestock sectors to uphold biosecurity measures to keep diseases out of farms is equally important. Disease surveillance is a further element of this defence. Furthermore, a formal arrangement involving federal and state governments and livestock industries has been established to ensure an effective and coordinated response to any outbreak of an exotic disease, such as avian influenza or Newcastle disease.

The industry contributes funding which pays for disease risk mitigation programs, training, disease preparedness and communication programs. The industry also has a formal agreement in place with Federal and State Governments setting out agreed management and cost sharing arrangements that would come into play in any emergency disease outbreak to contribute to funding the cost of managing or eradicating any outbreak.

All this preparatory work means that the industry can deal with any outbreak of an emergency disease in commercial chickens quickly and effectively.

More information: www.animalhealthaustralia.com.au
**6.4 ANIMAL WELFARE**

Meat chicken growers take the welfare of their birds very seriously to ensure their flocks grow well and efficiently, out of respect for the birds and out of recognition of community expectations for the humane treatment of animals.

The industry endorses and abides by the relevant Australian Codes of Practice for the Welfare of Animals (including the Model Codes of Practise for the Welfare of Animals - Domestic Poultry, - Land Transport of Poultry, and - Livestock at Slaughtering Establishments), and relevant State animal welfare legislation.

The ‘National Animal Welfare Standards for the Chicken Meat Industry’, developed in 2008, build on earlier standards to fulfil both the industry’s and community’s expectations of the high levels of welfare in meat chicken farming.

The Standards cover every stage of the chickens’ lives, from the hatchery and chick transport to rearing on-farm, pick-up, transport and the slaughter process. Standards also cover the welfare of breeder flocks. The Standards are supported by guidelines and sample recording sheets, intended to be incorporated into existing company and industry quality assurance programs.

These standards are reviewed regularly to ensure that they continue to meet both community expectations and future advances in understanding of animal welfare.


**6.5 ENVIRONMENT AND SUSTAINABILITY**

The chicken meat industry has a long term focus on measuring and reducing its environmental footprint and use of natural resources.

This encompasses areas such as water management, waste minimisation, reuse and recycling, and reduction of carbon output. The industry’s research priorities include matters such as climate change and resource use efficiency.

International research has already shown that poultry meat is the most environmentally efficient meat – for example, a major carbon footprint study in the UK (Williams et al., 2006), comparing environmental burdens and resource use in production of beef, sheep meat, poultry meat, eggs and milk, showed poultry production to have the least environmental impact, followed by pork, and at some considerable distance, sheep meat and beef. This is due in large part to the efficiency of chickens in converting feed into meat, which reduces the amount of feed and therefore the resources of land and water, required to produce each kilogram of meat.

While it is generally accepted that these findings hold true for meat produced in Australia as well, within Australia industry research is being undertaken to identify the industry’s environmental footprint as a base for continuing improvements and enhanced sustainability. It is also anticipated that information from such research will help consumers to make choices about their purchases based on a more effective understanding of environmental impact.

The location of the industry, often being close to major cities or other urban or peri-urban communities, brings with it the potential for conflict with neighbours and nearby communities through impacts on visual amenity, and dust, odour and noise emissions. The industry is very aware of the need to address these issues and is actively seeking, through research and community based approaches, new ways of minimising the impacts on local communities.

“...Sheep and cattle production is highly vulnerable to the biophysical impacts of climate change, such as water scarcity. This factor, combined with increased costs for methane emissions, could hasten a transition toward greater production and consumption of lower-emissions forms of meat, such as chicken, fish and pork. Demand for these products is projected to remain strong.”

Professor Ross Garnaut AO
The Garnaut Climate Change Review
Research and development
7.1 OVERVIEW

Continuous productivity improvements in the Australian industry have been key to its growth in recent decades, and ongoing research will continue to drive its future growth and sustainability.

All chicken meat processing companies invest significant funds into in-house research and development, focusing on processing technologies, quality control procedures, distribution, packaging, product development and marketing, and market development.

In addition, research of a pre-competitive nature and/or with a significant public good component is being undertaken in a range of public and private organisations. Industry participates actively and provides funding through its Rural Industries R&D Corporation research program and the Poultry CRC which are described below.

“The chicken meat industry is well placed to continue to grow in a carbon constrained environment. Strong industry involvement at the early stages of research projects paves the way for a smooth and timely implementation of the research outcomes.”

Gary Sansom AM
President, Australian Chicken Meat Federation
THE AUSTRALIAN CHICKEN MEAT INDUSTRY: AN INDUSTRY IN PROFILE

7.2 RURAL INDUSTRIES RESEARCH AND DEVELOPMENT CORPORATION (RIRDC) CHICKEN MEAT PROGRAM

The RIRDC Chicken Meat Program coordinates, funds and manages research, development and extension activities provided by public and private research organisations including universities, CSIRO and state departments, as well as by industry itself.

The chicken meat industry has long recognised the value of research and development, and in 1969 was one of the first of Australia’s agricultural industries to establish an industry levy for research. This levy, originally established under the Chicken Meat Research Act 1969, is matched with research funding provided by the Australian Government. Today, the RIRDC Chicken Meat Program allocates over $3 million in research funding each year.

Distribution of funding for research projects is guided by a five year R&D plan which is developed with significant input from a range of stakeholders and is managed with the assistance of a largely industry-based advisory committee.

THE PROGRAM’S KEY GOALS FOR 2009–14 ARE:

- Production efficiency for profit, climate change response and food security outcomes
- Animal welfare – a proactive response that includes objective standards and training
- Food safety – for enhanced consumer confidence and industry returns
- Addressing climate change, delivering resource use efficiency and environmental outcomes
- Market research and intelligence gathering to inform industry decision making
- Collaboration to deliver human capital formation and extension outcomes

As research priorities also reflect the intentions behind the investment of the Australian government, it is also important that the research undertaken contributes to the public good and is in the broad interest of the Australian population.

More information: www.rirdc.gov.au
7.3 POULTRY CRC

The Poultry CRC, part of the Australian Government’s Cooperative Research Centres program, brings together 28 organisations from academia, industry and government to focus on research and education programs in sectors of economic and social benefit. The Poultry CRC covers all poultry industries, including the egg industry.

The chicken meat industry strongly supports the Poultry CRC, both through direct membership of the CRC and through the RIRDC Chicken Meat Program. This support has been ongoing: following its initial establishment in 2003, the Poultry CRC was renewed for a further seven and a half years in 2010 with funding of $87 million from its participating organisations, including a $27 million cash grant from the Commonwealth Government.

The Poultry CRC aims to help achieve sustainable, ethical poultry production in the face of population growth and climate change. To do this, it conducts research and drives education and training, focusing around three key research programs.

THREE KEY RESEARCH PROGRAMS:

- Maintaining poultry health and enhancing bird welfare
- Bird nutrition and environmental research, to improving resource utilisation and reduce the environmental impact of poultry production
- Research to control food safety issues and quality issues.

The CRC aims to develop alternative systems to produce healthy chicken products in the face of reduced reliance on antibiotics and chemicals. It endeavours to improve preparedness against emerging diseases and ensure greater responsiveness to more discerning and demanding consumers. This activity reflects the expectation that continuing public demand for a cleaner and greener environment, world trade agreements, and tightened controls over food safety and quality will continue to have significant impacts on the chicken meat industry.

The Poultry CRC is governed by a skills-based board and is based at the University of New England in Armidale, NSW.

More information: www.poultrycrc.com.au
Forecasts
Healthy ongoing growth in poultry meat production and consumption is forecast over the short and medium term (e.g. ABARES, 2011a). The increase in demand for chicken meat forecasted reflects anticipated price increases for red meat. At the same time, prices for chicken meat are expected to be contained by productivity improvements and anticipated easing of feed prices, allowing it to retain its position as the most affordable and popular meat.

In terms of demand for free range chicken, based on trends overseas and in the Australian table egg market, it is expected that free range will grow to become between 20 per cent and 25 per cent of the total market.

In March 2011, ABARES forecast poultry consumption to increase from 38kg in 2009–10 to 39.6kg in 2015–16 (ABARES, 2011a). However given the most recent ABS statistics for 2010–11 (ABS, 2011) it appears that per capita consumption of chicken meat has already reached 43.9kg in 2010–11.

On the basis of these most recent statistics, the industry forecasts chicken meat consumption to increase to 46kg by 2015–2016 and exceed total red meat consumption before 2020.

As previously noted, global demand for meat is increasing and poultry’s growth rate is forecast to exceed that of all other meats. In Australia, significant changes in export volumes are not anticipated, with the industry expected to continue to focus on meeting domestic demand. It is anticipated that chicken meat’s recently acquired position as Australia’s most-consumed will be maintained and indeed strengthened significantly in the coming years, with growth in consumption forecast to continue.

“As the world’s population continues to rise, only by drastically increasing the proportion of chicken relative to other meats will we be able to meet the growing demand for meat over the next twenty years, particularly in developing countries.”

Dr Andreas Dubs
Executive Director, Australian Chicken Meat Federation
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