NSW poultry meat industry overview 2015
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Summary

The NSW poultry meat industry is a large, growing, successful agricultural industry. It has a gross value of $722 million and an estimated retail value of $2.4 billion. Its contribution to the State economy is worth approximately $1.6 billion. It supports 6000 direct jobs and a further 39,000 jobs downstream.

Poultry meat is the fifth largest agricultural commodity in NSW and is the most consumed meat product in Australia. The industry is forecast to continue to grow by between 3% and 4% a year in the medium term.

The industry in NSW is dominated by two large national processing companies, Baiada and Ingham, and by three processing companies based in the Sydney Basin: Cordina Chicken, Red Lea Chicken and Pepe’s Ducks.

NSW is the largest producer of poultry meat in Australia, with a market share of 32.6%, but has lost approximately 7.5% of its market share to other states in the last 10 years.

To meet projected population growth, it is estimated that the NSW poultry industry will need to build an additional 240 sheds to supply an additional 70 million birds by 2021. This represents an estimated capital investment of approximately $156 million. The industry will require access to land, infrastructure and investment confidence if it is to continue to grow in NSW.

The industry is currently undergoing significant structural changes. The most notable of these are the significant growth of free-range production and the associated opportunities and challenges. The industry has adopted higher welfare standards, such as the RSPCA Approved Farming Scheme, in response to retail and consumer demands. The main implications for processors and growers are lower stocking densities and increased costs of production. This is placing pressure on the industry to build new farming complexes and expand existing operations in order to remain financially viable.

Despite the industry’s impressive growth in the last 40 years, it is facing several challenges to growth and investment in NSW. These challenges are typically associated with landuse conflict and with planning and environmental constraints, particularly in relation to odour and noise. The changing rural landscape in poultry meat production areas is constraining the operational and expansion capacity of many farms. This is threatening the future viability of the industry in several regions across NSW. Ingham has largely withdrawn its production capacity from NSW and has built up its business in SA and Queensland. While the interstate relocation will bring production efficiencies, Ingham has stated that the regulatory burden in NSW has contributed to the withdrawal.

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NSW Poultry Meat Industry Overview 2015

Quick Facts

$ $2.4 billion
Retail value in NSW

45,000
People employed

Fifth
Most valuable agricultural commodity

46 kg per person
Most consumed meat in Australia

32.6%
NSW Market Share
Introduction

The poultry meat industry is the fifth largest agricultural commodity in NSW, with an annual gross value of $722.2 million, and is the most valuable agricultural commodity in several regional economies. Poultry meat in NSW has an estimated retail value of $2.4 billion.

It employs approximately 6000 people in NSW, with a further 39,000 employed in industry service and supply, making the poultry meat industry one of the largest employers in the agricultural sector and in several regional communities across NSW.

NSW remains the largest producer of poultry meat in the country, with a market share of 32.6% of national gross value.4

Poultry meat, and in particular chicken, is the most consumed meat in Australia. Australians consume on average 46 kg of chicken meat per person every year. Poultry meat is now consumed in greater quantities than beef and veal (~33 kg), lamb (~9 kg) and pork (~25 kg). This makes Australians among the highest consumers of poultry meat in the world. The main reasons for this are the value, favourable consumer attitudes, product versatility and consistency, and recognised health benefits.

The industry is well developed in NSW, particularly in the regions of the Sydney Basin, Central Coast, Hunter, Tamworth, Southern and Central Tablelands, North Coast and Griffith. Most production is undertaken by a small number of vertically integrated companies. The companies operate breeding farms, hatcheries, feed mills, processing plants, secondary food manufacturing plants and poultry grow-out farms. The majority of poultry meat farms, however, are owned and operated by third-party contract growers of chickens, turkeys and ducks. The majority of contract growers are family farms with an average of four sheds per farm. Two large commercial growing companies also provide contract grow-out services in NSW. Farms operated by these companies are larger than family owned farms and typically have between 8 and 64 sheds.

In NSW, chicken and turkey meat production is dominated by two large national processing companies, Baiada Poultry Pty Ltd and Ingham Pty Ltd, and two smaller chicken meat processors, Cordina Farms and Red Lea Chickens, in the Sydney Basin. A smaller independent operation which grows and processes turkeys is based near Tamworth.

Pepe’s Ducks and Tinder Creek Ducks are the two commercial duck meat processing companies in NSW and are both based in Sydney. Pepe’s Ducks is significantly larger than Tinder Creek Ducks and processes approximately 90,000 ducks a week, with an annual turnover in excess of $60 million.

Purpose and scope

This document provides a high-level overview of the poultry meat industry in NSW to assist policy makers, planners and other industry stakeholders to support the continued development and growth of the industry. It also informs the community of NSW of the value that the industry brings to local regions. The document highlights the economic and strategic importance of the poultry meat industry and identifies some of the opportunities and challenges faced by the industry in NSW. The NSW Government has placed significant emphasis on economic growth and employment, particularly in regional areas. As a significant investor and employer, the poultry meat industry is well placed to assist state and local governments to meet economic and employment targets. However, it faces significant barriers to expansion in NSW. Landuse conflict and planning and development constraints in NSW have seen large sectors of the

3 ABS, 2014. 75030DO002_201213 Value of Agricultural Commodities Produced, Australia, 2012-13
4 ABS, 2014. 75030DO002_201213 Value of Agricultural Commodities Produced, Australia, 2012-13
industry move interstate. This document identifies some of these challenges and proposes potential solutions to maintaining and growing the industry in NSW.

This overview focuses on the large commercial poultry meat industries, namely chicken, turkey and duck. Chicken meat is by far the largest of these. It does not address the important niche markets for game birds, squab and other small poultry meat industries.

Most of the large poultry meat producers are family-owned businesses and are not obliged to provide detailed annual economic reports, as would be expected from publicly listed companies. Therefore, much of the economic data contained in this report is based on Australian Bureau of Statistics (ABS) data, local knowledge and industry-commissioned reports, and should be considered in this context.

Global and national context

Globally, poultry meat, and in particular chicken, has grown from ‘an occasional Sunday roast’ to an ‘everyday meal’ and now makes up about 36% of global meat demand. Rabobank (2011) predict that by 2030, poultry meat will compromise 39% of global meat demand, which will make it the most consumed meat worldwide. Trends for global meat demand are shown in Figure 1.

Figure 1 – Global meat demand and growth estimates.


Thirty years ago the global demand for meat was about 130 million tonnes, of which poultry made up only 19%. Today the annual global demand for meat is close to 311 million tonnes, with poultry now comprising 36%, or 112 million tonnes.

The growth of the poultry meat sector in Australia has been equally impressive. Australia’s production of poultry meat has grown by over 160% in the last 20 years, with consumption doubling from 23.7 kg per person in 1990 to 46 kg in 2014, resulting in poultry meat being the most consumed animal protein in Australia. Australians rank among the highest consumers of poultry meat in the world (Figure 2).

The growth of the poultry meat sector is largely attributed to the efficiency at which commercial poultry birds are able to convert feed inputs into meat. In 1975 it took 64.1 days and 4.66 kg of feed to grow a 2-kg chicken. In 2011 it took just 35 days and as little as 3.4 kg of feed. This has ensured that chicken has become the most cost-competitive meat available in supermarkets and

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other retail outlets. As an example, in 1990 chicken meat cost $5.03/kg, while 20 years later it cost $5.49/kg. In comparison, beef cost $9.62/kg in 1990 and $16.14/kg in 2010.  

NSW is the largest producer of poultry meat in Australia, with a market share of 32.6% of national gross value (Figure 3). Despite its dominance of poultry meat production, NSW has lost approximately 7% of market share to other states over the last 10 years, predominantly to SA and Queensland.

Future growth

In terms of global food security, the poultry meat sector is predicted to play a significant role in providing cheap animal protein to a growing world population. The Organisation for Economic Co-operation and Development and the Food and Agriculture Organization of the United Nations predict that global food production needs to increase by 40% by 2030 and by 70% by 2050 to meet global food demands.

Much of this demand will be based on animal protein with the exponential growth of a wealthy middle class in many developing nations. Of all the animal protein production systems, growth in poultry meat is expected to be the highest at 60%, with poultry expected to make up 39% of worldwide meat demand by 2030 and to become the most consumed meat globally.

Demand in Australia is also predicted to grow. Chicken meat production increased by 3% in 2013–14 to 1.08 million tonnes and by a further 3% to 1.1 million tonnes in 2014–15. By 2018–19, Australian chicken meat production is projected to be around 1.25 million tonnes, with its share of total Australian meat production increasing to 28% (Figure 4).

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8 ABS, 2014. 75030DO002_201213 Value of Agricultural Commodities Produced, Australia, 2012-13
Chicken meat production is projected to grow over the next 5 years, largely in response to an ongoing increase in domestic consumer demand, as retail prices of chicken meat remain well below prices of alternative meats. The domestic market is projected to continue to take around 95% of chicken meat production.

Very little Australian poultry meat is exported. Export volumes are expected to remain around 4% to 5% of total production, primarily because of the lower cost base and government...
subsidies in other countries, especially Brazil and the USA. Exports will comprise primarily low-value cuts, offal and feathers, for which there is little domestic demand.

Chicken meat will remain Australia’s most consumed meat over the medium term. Australian chicken meat consumption rose by 1% in 2013–14 to 44.7 kg per person and by a further 1% in 2014–15 to 46 kg per person. Over the medium term, consumption is projected to grow to 47.7 kg per person by 2018–19. Past and projected future growth in Australian chicken meat consumption reflects the competitive pricing of chicken meat relative to pork, beef and lamb. Over the past two decades, the prices of other meats have risen relative to chicken meat. Over the 5 years to 2012–13, chicken meat was on average 21% cheaper than pork, 22% cheaper than beef and 45% cheaper than lamb. Over the medium term, chicken meat is projected to remain substantially cheaper than these competing meats.

Assuming market shares remain static and on the basis of current population growth and projected poultry meat consumption, NSW will require an additional 240 sheds to supply an additional 70 million birds by 2021.

Environment footprint

A recent life-cycle analysis shows that chicken meat production uses less energy and less water and emits less greenhouse gases than beef, sheep and pork meat production systems (Table 1). The low environmental impact of chicken meat production is largely attributed to the efficiency with which chickens convert feed, principally grain, into meat protein. Just 1.7 kg of feed is required to produce 1 kg of chicken meat. In contrast, pork requires 3.6 kg of feed and beef requires 5 to 20 kg of feed, depending on whether it is grain or pasture fed.

In terms of cumulative energy demand, free-range and organic chicken meat production systems are the most efficient, requiring just 17 and 13 MJ/kg of energy respectively to produce 1 kg of chicken meat. Energy use in conventional chicken meat production compares favourably with other meat protein production systems – between 15 and 20 MJ/kg, compared with 20–24 MJ/kg for beef, pork and sheep.

<table>
<thead>
<tr>
<th>Species</th>
<th>Greenhouse gas emissions</th>
<th>Water usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>1.9–2.4 kg CO₂-e/kg</td>
<td>20–22 L/kg</td>
</tr>
<tr>
<td>Pork</td>
<td>3.1–5.5 kg CO₂-e/kg</td>
<td>41–49 L/kg</td>
</tr>
<tr>
<td>Beef</td>
<td>9.9–12 kg CO₂-e/kg</td>
<td>209–540 L/kg</td>
</tr>
</tbody>
</table>

Source: RIRDC, 2012. Note: these values represent whole-of-supply-chain data, that is, from cradle to grave (including feeding, growing and processing the products).

The poultry meat industry in NSW

The NSW poultry meat industry is the largest producer of poultry meat nationally, and poultry meat is the fifth largest agricultural commodity in NSW (Figure 5). It has a gross value of $722 million, with retail sales estimated at $2.4 billion. It supports around 45 000 jobs across NSW.

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12 ABARES Agricultural commodities report: March quarter 2014
In NSW, chicken and turkey meat production is dominated by two large national processing companies, Baiada Poultry Pty Ltd and Ingham Pty Ltd, and two smaller chicken meat processors, Cordina Farms and Red Lea Chickens, in the Sydney Basin.

Pepe’s Ducks and Tinder Creek Ducks are the two commercial duck meat processing companies in NSW. Pepe’s Ducks is significantly larger than Tinder Creek Ducks and processes approximately 90,000 ducks per week, with an annual turnover in excess of $60 million.

**Figure 5 – NSW top 11 agricultural commodities by gross value. Poultry meat is the fifth most valuable agricultural commodity in NSW.**

**Structure**

The commercial poultry meat industry is vertically integrated (Figure 6). Vertical integration means that one company owns and controls multiple stages of production, such as breeder flocks, hatchery, grow-out flocks, processing plant, feed mill, transport and marketing. Vertical integration allows the company to control costs and to better utilise shed space and feed production capacity, gives it better control over product quality and consistency, and allows it to use economies of scale to its advantage. The main cost advantages come from having control of the production capacity, elimination of individual profit centres, and buying feed and supplies in very large volumes.

As part of this model, the poultry industry also uses a contract production system. Under this system, an independent producer (grower) provides the land, buildings, equipment, utilities, and daily care and management of the birds. The company supplies the birds, feed, and any necessary health or technical assistance. The company delivers chicks from the hatchery and provides catching crews and transport at harvest time. The independent producer is paid a fee per bird (~65¢–80¢) or per square metre (~$63–$74) based on efficiency standards. The best producers are rewarded with bonus payments based on their relative performance. Growers that achieve better feed efficiency, lower mortality, and other cost and quality standards earn a premium. The birds always remain the property of the processing company. Some of these companies also operate a few of their own grow-out farms, but most grow-out farms are independently owned.
A poultry meat processing company consists of or controls almost every part of the supply chain:

- **Breeder farms** produce fertile eggs to produce more breeders or to supply the next generations of meat chickens. New genetic stock is generally imported from specialist breeding companies and then hatched to produce further breeding stock. Some of the smaller companies only keep one generation of breeder stock or purchase parent stock from the larger companies.

- **Hatcheries** receive fertile eggs from the breeder farms and incubate them until the chicks hatch. The chicks are then dispatched to other breeder farms or to contract grow-out farms.

- **Contract grow-out farms** receive day-old chicks to raise to slaughter age. The birds are housed and raised under strict protocols stipulated by the processing companies.

- **Processing plants** receive market-ready birds from grow-out farms. The birds are slaughtered and the meat is prepared for sale or for dispatch to further-processing plants. Lower-value products such as heads and feet are packaged for export overseas.

- **Further-processing plants** produce value-added products from raw meat. These products are usually partially or fully cooked and include chicken nuggets and frozen crumbed products.

- **Rendering plants** receive animal by-products from processing plants for the production of tallow, grease, and high-protein meat, bone and feather meal.
• **Feed mills** receive bulk supplies of cereal grains and other ingredients to produce highly specific formulated feed mixes for breeder farms or grow-out farms. Some mills also manufacture feed mixes for the layer industry and other smaller niche markets. Some of the larger companies may also have specialised laboratories and research and development facilities to provide quality control and to ensure food safety, and to improve animal welfare, farm practices and product development.

**Distribution of production**

The location and distribution of the various companies and their associated infrastructure is based partly on the early history of each company and partly on access to resources and markets. All five of the NSW processors grew from early beginnings in Sydney, and as a result the Sydney Basin remains one of the largest poultry meat production regions in NSW.

The poultry meat industry is clustered in eight distinct regions throughout NSW (Figure 7). In the Sydney Basin, it is clustered in western Sydney and on the Central Coast (Mangrove Mountain).

![Figure 7 – Chicken, turkey and duck meat production areas in NSW. Numbers denote the number of farms in each region. LLS = Local Land Service.](image)

Primary and further-processing plants are typically located within or close to large metropolitan and regional cities to ensure proximity to consumer markets, readily available labour and other critical services. Rendering plants are normally located on the same premises or close by.

Poultry meat farms are clustered around processing plants within a maximum 2-hour journey. This usually equates to a maximum of about 200 km. Close proximity to processing plants is important in order to minimise stress to the birds and to reduce loss of condition before slaughter. This is also a requirement of various animal welfare codes and guidelines. Unfortunately, this requirement increases the risk of landuse conflict associated with intensive livestock farming.
Feed mills are typically located near processing plants and with access to railway infrastructure. This placement also ensures that feed mills are close to grow-out farms, thereby reducing transport costs associated with feed deliveries.

Hatcheries are located close to major growing areas to minimise transport distances for day-old chicks to grow-out farms and breeder farms.

Breeder farms tend to be more dispersed than in other parts of the industry. While some breeder farms are located close to production areas, others are located in more isolated areas to protect them from disease. Farms which house great-grandparent stock and grandparent stock tend to be more isolated, as these birds are the most valuable.

**Poultry processing companies**

There are five large poultry meat processing companies in NSW. Baiada and Ingham operate across Australia and are headquartered in NSW. Cordina Chicken and Red Lea Chicken operate only in NSW, principally in the Sydney Basin and on the Central Coast. Pepe’s Ducks is also based only in NSW and is headquartered in western Sydney.

Baiada is the largest processor in NSW, followed by Ingham, Cordina, Red Lea and Pepe’s Ducks (Table 2).

**Table 2 – Number of contract grow-out farms per processor in NSW.**

<table>
<thead>
<tr>
<th>Processor</th>
<th>Species</th>
<th>Approximate number of contract grow-out farms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baiada</td>
<td>Chicken</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td>31</td>
</tr>
<tr>
<td>Ingham</td>
<td>Chicken</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td>20</td>
</tr>
<tr>
<td>Cordina</td>
<td>Chicken</td>
<td>64</td>
</tr>
<tr>
<td>Red Lea</td>
<td>Chicken</td>
<td>49</td>
</tr>
<tr>
<td>Pepe’s Ducks</td>
<td>Duck</td>
<td>25</td>
</tr>
</tbody>
</table>

Most processing companies also own and operate their own breeder farms and own some grow-out farms. These farms have not been accounted for in Table 2.
Poultry meat production farms

Most poultry meat is grown by contract growers who typically enter into agreements with the processing companies to grow birds from 1 day old to slaughter weight. Contract periods range from 1 to 20 years.

There are approximately 318 contracted poultry meat growing farms in NSW (see Appendixes 1 and 2). The farms are clustered within 150 to 200 km of the locations shown in Figure 7. Each farm consists of one or more sheds. The median number of sheds in NSW is four, with a range of one to 28. A 72-shed complex is planned for the Tamworth region, and an 80-shed farm is planned near Narrandera. Shed size averages 1487 m², ranging from 557 to 3000 m². Sheds are expensive to build and fit out, at an average cost of $500 000 to $650 000 each, excluding the costs of land and service infrastructure.

Small farms are becoming increasingly economically unviable, and the trend over the last 3 years has been to build six- to eight-shed farms as a minimum. Many of the smaller farms (fewer than four sheds) are under tremendous pressure to expand their operations in order to remain viable. However, this will be extremely difficult, as many of these farms have been enclosed by urban development, particularly in the Sydney Basin and on the Central Coast.

Sheds can be either conventional or tunnel ventilated. Conventional sheds are open sided and naturally ventilated. Some conventional sheds may have side curtains which can be raised or lowered to provide some control over the shed climate (Figure 8). Tunnel-ventilated sheds are fully enclosed, giving operators far greater control of the environment. These sheds typically have fans at one end and a cool pad (evaporation pad) at the other end (Figure 9). Mini vents are spread evenly along the length of the shed. Air is pulled through the shed at a rate depending on the outside environment. This air may be heated or cooled depending on the season and requirements of the birds. Tunnel-ventilated sheds represent a greater capital cost but enable farmers to grow birds more efficiently and at greater densities. They also confer animal welfare benefits by providing birds with optimum temperature and growing conditions.

Figure 8 – Example of a conventional poultry shed.
In addition to tunnel and conventional sheds, production systems can be further classified into barn or free-range production systems. In barn production systems, birds are raised exclusively inside a tunnel or a conventional shed. Barn-raised birds are always raised on the floor.

In free-range production systems, the sheds have been modified to include ‘pop-holes’ along either one or both lengths of the shed and an adjoining outdoor fenced range (Figure 10). The range is grassed and includes shade structures. The outdoor ranges vary in size from 1 to 1½ times the size of the adjoining shed.


Industry trends

Number of farms

The number of chicken meat farms in NSW has been falling since about 2001 but appears to have plateaued in the last 2 to 3 years. This trend also mirrors NSW’s loss of market share to other jurisdictions, particularly Queensland and SA (Figure 11).

Figure 11 – Chicken meat production by jurisdiction as a percentage of national gross value.

The loss of market share in chicken meat production is largely associated with the gradual withdrawal of Ingham’s production facilities from NSW and the expansion of its business in SA and Queensland. The likely reasons for the withdrawal from NSW include:

- the costs and difficulties of doing business in NSW
- enticements and incentives offered by the SA Government to invest there
- the cost of production – it is likely that Ingham is achieving higher feed conversion efficiencies in other jurisdictions, which would have a significant effect on its bottom line
- access to cost-competitive and reliable grain supplies.

Ingham has pointed to the cost of this regulatory burden as among the reasons for its withdrawal from NSW and subsequent investment in other states with less red tape.

The withdrawal of Ingham from NSW has been tempered by the growth and investment of Baiada and Pepe’s Ducks over the same period. Baiada has grown its business in NSW, investing significantly in Tamworth and Griffith. This growth has included the purchase and integration of both the Steggles and Bartter companies. Pepe’s Ducks, based in Windsor, is one of the largest duck meat producers in Australia, with an impressive annual growth rate of between 10% and 12% per year. It has grown from a small backyard operation in 1976 to a large processing company which slaughters approximately 90 000 birds a week. In 2015, Pepe’s

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Ducks will have completed the construction of the largest duck meat farm in the Southern Hemisphere, near Harden, and a new state-of-the-art hatchery in the Sydney Basin.

**Size of farms**

While the number of chicken meat farms has decreased, the number of sheds, and therefore production capacity, has increased. Two- or three-shed farms are no longer economically sustainable, and most new developments consist of eight or more sheds. There is therefore tremendous pressure on smaller farms to expand their operations in order to remain viable. Currently, 105 farms (35%) in NSW consist of three sheds or fewer.

Expansion of smaller farms in the Sydney Basin and on the Central Coast is particularly challenging. Many of these farms were originally built on relatively small acreages in rural production areas of outer Sydney and Gosford. However, most of these farms have now been enclosed by urban or rural residential developments, making expansion impossible in most cases. This is a significant challenge for both the industry and the local economies, which have benefited from the industry.

In contrast to the dwindling number of smaller family-owned and -operated farms, there is a trend towards large farming complexes owned by corporate growing companies. Among the reasons for the development of larger farms are small margins, economies of scale and trends towards lower stocking densities in order to meet animal welfare and retailer demands. In NSW, the two major corporate growers are ProTen Ltd and Rural Funds Management Ltd. Typical farms have 16 to 32 sheds, and 80-shed farms are planned. The typical cost is $25 to $50 million per farm. Large farming complexes are located in both the Tamworth and Griffith regions.

**Consolidation of processing companies**

The number of processing companies in NSW has declined by 44% since 1999. Before the acquisition of Steggles by Bartter, there were nine processors operating throughout NSW. Following the acquisition of Steggles by Bartter and the subsequent acquisition of the Bartter group by Baiada in 2009, there were six processors in NSW. In 2011, Sunnybrand Chickens was purchased by Ingham but subsequently closed in 2014. This leaves just the two large national poultry processors and the three smaller Sydney-based processors described above.

Ingham has gradually been withdrawing the bulk of its chicken meat operations out of NSW and reinvesting predominantly in Queensland and SA. Many of Ingham’s contract farms have now been offered to the other processing companies in NSW. Since 2010, Ingham has closed its Mangrove Mountain further-processing plant, its Hoxton Park processing facility, its Casula and Morisset hatcheries, and its Sunnybrand processing plant at Byron Bay.

In contrast to their chicken meat business, Ingham have announced that they will be consolidating their turkey meat division into NSW with the closure of their turkey processing facility in South Australia.

**Production systems**

Free-range production systems are growing rapidly, at approximately 15% a year, compared with non-free-range systems at around 3% to 4%. Free-range chicken meat production in Australia has grown significantly in the last 10 years and now represents approximately 15% of total national production. This growth is a response to consumer and retailer demands for higher welfare standards across all animal industries.

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Approximately 30 large-scale, intensive, free-range chicken meat farms in 11 local government areas in NSW supply Baiada under its Lilydale brand. The farms are located mainly on the Central Coast and in the Hunter Valley and partly in the Sydney Basin. Free-range production systems are accredited by the Free Range Egg and Poultry Association.

In addition to free-range production systems, major retailers are also demanding the supply of chicken and turkey meat produced under the RSPCA Approved Farming Scheme. The scheme is designed to ensure that birds are grown under higher welfare standards than conventional production systems. The main consequence for the industry is that bird densities are lower, which means a reduction in bird numbers per shed and additional pressure to expand grow-out operations in order to maintain throughput levels.

Regional growth ‘hotspots’

In spite of the consolidation of processors in NSW, the reduction in the number of farms over the last 10 years and constraints imposed by urbanisation and rural residential developments, three regions in NSW have realised the economic and employment benefits of the poultry meat industry and have actively supported industry development: the Tamworth and Griffith regions, and the Harden region, construction of the largest duck meat farm in the Southern Hemisphere is a response to constraints on the expansion of operations in the Sydney Basin.

Economic worth in NSW

The poultry industry in NSW has a gross value of $722 million and supports about 6000 jobs directly and a further 39 000 jobs downstream. The value of the industry to local and regional economies, however, is far greater. In 2013, the former Poultry Meat Industry Committee commissioned several economic worth studies to determine the value of the chicken and turkey meat industries in selected regions across NSW. The results are summarised in Table 3.

Table 3 – Economic value of the poultry meat industry in several regions of NSW.

<table>
<thead>
<tr>
<th>Region</th>
<th>Gross value (million)</th>
<th>Regional value (million)</th>
<th>Employment&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Sydney</td>
<td>$190.2</td>
<td>$774.1–$841.6</td>
<td>1250 (6200)</td>
</tr>
<tr>
<td>Central Coast (Gosford and Wyong)</td>
<td>$107.3</td>
<td>$131.5–$187</td>
<td>450 (2000)</td>
</tr>
<tr>
<td>Hunter</td>
<td>$93.3</td>
<td>$412–$461</td>
<td>850 (4250)</td>
</tr>
<tr>
<td>Tamworth</td>
<td>$131</td>
<td>$160</td>
<td>750 (3500)</td>
</tr>
</tbody>
</table>


a: Employment numbers in parentheses represent estimated non-direct employment figures by goods and service providers to the poultry meat industry.

It is useful to note that western Sydney remains the largest poultry meat production region in NSW. Poultry meat is also the largest agribusiness in western Sydney and is a significant contributor the local regional economy.

Aside from Griffith, Tamworth and Harden, expansion in other regions is highly constrained by changes in landuse, urban and rural residential developments, and associated landuse conflicts.

Industry opportunities

The vast majority of poultry meat produced in NSW is sold on the domestic market throughout Australia. Only 4% is exported, as Australia has traditionally struggled to compete with large exporters such as Brazil and the USA, with their large production volumes and lower costs both before and after the farm gate. Over the medium term, Australia’s chicken meat exports are
projected to remain at around 5% of production, increasing to 45 000 tonnes by 2018–19.\textsuperscript{17} Frozen cuts and offal are likely to make up most of these.

Opportunities in the domestic market, however, continue to be promising. Per-capita poultry meat consumption is projected to continue to rise, and combined with population growth this means that NSW will require an additional 240 sheds by 2021 to grow an additional 70 million birds. This will require an investment of approximately $156 million.

The fastest growing segment of the poultry meat market is free-range. On the basis of local and international trends and signals from large retailers, free-range production is projected to reach 20% to 25% of the total production.

For NSW to maintain and build its market share of poultry meat production and associated regional investment, it may need to compete with SA and Queensland by offering a commercial advantage for investing in NSW. For example, it could identify regions for development and support the service and infrastructure requirements for industry to operate.

In terms of the broader animal protein market, poultry meat has several competitive advantages over its rivals, including:

- value, product versatility and affordability
- lower energy and water use and lower greenhouse gas emissions
- lower risk to production from the expected impacts of climate change
- high consumption rates in the Australian market
- a global rise as the animal protein of choice.

To secure the projected market growth, NSW will need to provide the industry with the confidence and security to invest here by providing a supportive policy environment.

**Industry challenges**

Projections for the growth of poultry meat production both globally and nationally give cause for optimism. However, the industry and the NSW and local governments face a number of challenges which will need to be addressed to ensure that NSW grows its share of the market and associated regional investment and employment opportunities.

**Landuse conflict**

The intensive nature of modern poultry production is intractably associated with a number of real and perceived environmental and social impacts. While the industry has successfully mitigated most of these impacts, the changing rural landscape places significant constraints on farming operations in urban, peri-urban and regional areas. Many farms which were previously located in relatively isolated areas have been enclosed by urban and rural residential developments. This constraint is further compounded by the requirement for farms to be close to processing plants, which are located in major metropolitan and regional centres.

The most significant challenges associated with poultry meat farms are odour and noise, which are the greatest source of complaints to local councils and other regulators. This conflict results in significant stress on communities, industry and local government.

From a broader industry perspective, farms in the Sydney Basin and on the Central Coast face the greatest risk associated with landuse conflict. Poultry meat production is a low-margin, high-volume business. Many farms, particularly small ones, are under pressure to expand to remain economically viable. Unfortunately, this will not be feasible for many farms in the Sydney Basin.

\textsuperscript{17} ABARES, 2014. Agricultural commodities: March quarter 2014
and on the Central Coast because of planning and environmental restrictions associated with odour and noise. This constraint represents a potentially significant risk to the industry in NSW, as 67% of farms have four sheds or fewer. Some of these farms will need to relocate to regional areas if they wish to expand. However, if local economies in western Sydney wish to continue to benefit from the economic investment of the poultry meat industry, they will need to identify zones that protect and support the growth of intensive agricultural production.

Land use conflict is not restricted to urban and peri-urban environments. The vast majority of poultry meat production areas in NSW also coincide with significant growth in rural residential and ‘lifestyle’ landholdings. This change in the rural landscape, particularly in primary production zones, is making it increasingly difficult and expensive to find suitable landholdings for poultry meat production or for existing farms to expand. In these instances, conflicts are largely associated with odour, noise and traffic movements along rural roads and through villages.

Actions and initiatives that industry has identified to address land use conflict and to support growth and investment in NSW.

- Identify suitable regions and zones in NSW for poultry meat production which meet industry requirements and have low environmental and social risks
- Establish poultry precincts which are protected from urban encroachment and rural residential developments
- Consider introducing land zones which are committed to and prioritised for intensive agriculture
- Work with local communities to create awareness of the food security and investment and employment benefits created by poultry industry investment
- Provide incentives and support for poultry operations to relocate in instances where residential encroachment is constraining expansion and economic sustainability
- Work with local government to create awareness of the investment and employment potential of the industry and to identify opportunities for co-investment and support
- Prioritise food security as a state-significant issue and specifically consider intensive livestock industries in future planning and land allocation

Activities and initiatives that the NSW Government is supporting to address land use conflict and to support growth and investment in the poultry meat industry in NSW.

- Employing an industry development officer to provide technical support and liaison between industry & government
- Providing technical comment and support for development applications and liaison with development consent authorities to ensure fair and reasonable consent conditions
- Engaging with local government and communities to profile the economic and employment benefits of the industry
- Supporting the development of best management practice guidelines through collaboration between industry, local government, NSW DPI, the Environment Protection Authority, the Office of Environment and Heritage, and the Department of Planning and Environment
- Engaging with industry to update best practice guidelines in order to address changes to the industry and to reflect the particular requirements of free-range production systems
- Collaborating with Tamworth, Gunnedah and Liverpool regional councils to develop a strategic plan for future industry growth and investment
- Collaborating with industry to develop and deliver training and support to mitigate environmental and social impacts of poultry meat farming, such as the Poultry Litter Best Practices project in Tamworth
Supporting industry by profiling successes and achievements in order to support a social ‘licence to operate’

Ensuring that industry is represented and engaged in strategic landuse planning at both regional and state levels

Environmental and planning constraints

As in most intensive livestock industries, the poultry meat industry is regulated by multiple agencies within federal, state and local governments. While many regulations are designed to protect local environments and communities, some can create barriers to future growth and investment. This is particularly relevant in a dynamically changing rural landscape in NSW.

Further, the lack of familiarity of many policy makers and regulators with the operation of poultry meat enterprises creates a risk of overly conservative and onerous development and operational consent conditions and inconsistencies in development assessments across local councils. Ingham has pointed to the cost of this regulatory burden as among the reasons for its withdrawal from NSW and subsequent investment in other states with less red tape.18

Actions and initiatives that industry has identified to address environmental and planning constraints.

Conduct a full review of current planning and environmental regulations to:
- assess their relevance and legitimacy to modern poultry production
- assess and review the regulatory burden on the industry
- identify opportunities to cut red tape so as to encourage investment certainty in NSW

Create a ‘one-stop shop’ to facilitate ease of access and consistency of information from multiple government agencies

Establish poultry precincts which are protected from urban encroachment and rural residential developments

Protect existing landuse rights, including the right to expand farming operations in response to retailer-driven production systems with lowered stocking densities

Protect land zoned for primary production from subdivision and urban and rural residential development

Develop policies which prioritise, protect and support food production in NSW

Activities and initiatives that the NSW Government is supporting to address environmental and planning constraints.

Supporting the development, publication and distribution of best management practice guidelines to local councils across NSW, and promoting them in several strategic poultry-meat-growing regions

Commissioning the Agriculture Industry Action Plan which, while not specific to poultry meat, is designed to ensure the continued growth of the State’s $12 billion primary industries sector

Reviewing agricultural landuse planning policies with a view to developing a similar policy to Queensland’s State Planning Policy for Agriculture (Office of Agricultural Sustainability and Food Security)

Ensuring that the unique needs and issues associated with intensive livestock production are considered in current and future landuse policies and strategic plans (NSW DPI and Department of Planning and Environment)

Providing support to development applicants and consent authorities to ensure that consent conditions are fair and reasonable (NSW DPI Landuse Planning Unit and Industry Development Officer, Poultry Meat)

Biosecurity

Emergency animal diseases pose a significant threat to poultry meat and egg production in NSW. The outbreak of highly contagious diseases such as Newcastle disease and avian influenza in a high-density poultry growing region could significantly damage or destroy the industry. In addition to the loss of production and costs associated with quarantine and the destruction of birds, the entire industry would be affected by subsequent trade embargoes on poultry products from Australia. Such embargoes typically remain in place for 6 months, but may last longer depending on the scale and timeframe of the response. While poultry meat exports are relatively small, Australia has a growing poultry meat breeder and genetics business which exports genetic material to several parts of Asia and elsewhere. This business would be particularly affected by trade embargoes, as the export of genetic material would also banned, and millions of dollars of breeder stock might have to be destroyed.

The recent growth of free-range production systems also increases disease risk. Diseases such as avian influenza are typically carried by wild birds, and in particular waterfowl. While conventional production systems are typically bird proof and at lower disease risk, free-range birds in Australia have ready outdoor access. This access poses a heightened risk of the incursion of an emergency animal disease, with potential consequences for both free-range and conventional production systems. Notably, the last two outbreaks of avian influenza in NSW were associated with free-range farms. Further, all five outbreaks of highly pathogenic avian influenza so far recorded in Australia were associated with wild waterfowl or free-range ducks.

In addition to loss of production, the impact on consumer confidence is also at risk. The term ‘bird flu’ has become synonymous with outbreaks of avian influenza in Asia and the risks of human illness and deaths. While none of the outbreaks in Australia have been transferable to humans, the perception of human illness and pandemics associated with ‘bird flu’ could significantly compound the costs of an emergency animal disease.

From a planning and strategic landuse perspective, the risk of co-locating different types of poultry production systems has not been adequately addressed. This failure may result in the co-location of incompatible production systems and increased risks of disease incursions. This significant concern will need to be addressed as soon as possible as the free-range industry continues to expand and as the availability of suitable land for new developments becomes scarcer. This will require a response from multiple agencies, including NSW DPI, the Department of Planning and Environment and local government.

**Actions and initiatives that industry has identified to protect itself from biosecurity threats.**

- Developing or incorporating strategic landuse planning policies which consider the biosecurity risks associated with co-locating incompatible poultry industries, such as free-range layers and conventional poultry meat production
- Facilitating an industry review of free-range production systems and implementing models adopted elsewhere that provide fully enclosed free ranges to reduce contact between poultry and wild birds
- Developing best-practice guidelines for free-range production systems which include biosecurity protocols and evidence-based practices contextualised to the free-range industry

**Activities and initiatives that NSW Government is supporting to address biosecurity threats to the industry.**

- Successfully responding to two recent avian influenza outbreaks in NSW. In addition, updating and enhancing disease monitoring, surveillance and response protocols following reviews of these responses
- Operating nationally accredited laboratories and diagnostic services to ensure early detection and response to emergency and endemic animal diseases
Drafting new legislation and launching the NSW Biosecurity Strategy 2013–2021. The strategy addresses not only primary industries, but also the broader biosecurity spectrum in terms of biodiversity and the natural environment, infrastructure, service industries, lifestyle, recreation, sport and social amenity. It outlines how the NSW Government will partner with other levels of government, industry and the community to identify and manage biosecurity risks.

Regularly auditing poultry meat operations and assessing biosecurity risks (NSW Food Authority)

Global competition and importation

The success of the domestic poultry meat industry is based in part on its efficiency of production in a competitive animal protein market, and in part on the current importation restrictions placed on global poultry meat producers. While the Australian industry efficiently produces a high-quality and affordable product, it would not be able to compete with imports of fresh poultry meat from large producing countries such as Brazil, the USA and China, with their significant economies of scale and more competitive cost structures. Importation of fresh poultry meat would have devastating economic implications for the Australian industry and for rural and regional economies. It is uncertain whether recent free trade agreements with several large trading partners may result in a relaxation of current import restrictions of poultry meat.

Actions that industry has identified to support a growing export market.

Secure Australia’s competitive advantage – overseas recognition of Australia’s high quality and disease-free status – that underpins the chicken meat industry’s potential to expand into export markets, by strengthening biosecurity measures which reduce the risk of incursions of infectious diseases or other agents that would undermine the industry’s health and quality status

Activities of the NSW Government which support the local domestic market.

Supporting Federal restrictions on the importation of fresh poultry meat products to protect the industry from an incursion of emergency animal diseases

Animal welfare and consumer attitudes

The poultry meat industry recognises the importance of animal welfare, in terms of both productivity benefits and consumer attitudes and requirements. It continues to invest millions of dollars in research to improve the welfare of birds. However, the welfare debate has recently been highly politicised by extreme animal rights groups, which are well funded and which run orchestrated campaigns to close down intensive animal production systems. This aim is evidenced by regular trespasses onto production facilities to capture footage for strategic use in social and other media to promote the groups’ cause. While some footage is concerning and must be investigated and prosecuted, the failings of a few are not representative of the entire industry. Further, many of the claims and campaigns are emotively and ideologically driven, with little scientific evidence to support the arguments.

Activities and initiatives that the NSW Government is supporting to ensure that animal welfare standards meet community expectations.

The NSW Government takes animal welfare very seriously and has adopted a zero-tolerance approach to animal cruelty and the unnecessary suffering of animals

NSW DPI continues to engage with and support the poultry meat industry to improve animal welfare and to provide technical support to industry to adopt practices that support both improved animal welfare and productivity

NSW DPI’s animal welfare branch provides technical and policy support to industry and to regulators to ensure acceptable animal welfare outcomes

The NSW Food Authority regularly audits poultry meat production facilities and reports on any animal welfare breaches
NSW DPI collaborates on reviews of the Model Code of Practice for the Welfare of Animals – Domestic Poultry to ensure that animal welfare guidelines are adequate and are based on sound research and evidence

Environmental sustainability and natural resource management
The poultry meat industry recognises the importance of managing the broader farm environment and has developed robust environmental management guidelines to support improved practices. However, the adoption of these plans is not mandatory, and the implementation of environmental management plans and practices is likely to be inconsistent across the industry. This poses an opportunity for government agencies to support the industry to achieve improved environmental practices which may have significant environmental and social benefits.

Government may be able to support and improve several industry practices:

Water supply and quality
Water quality is critically important for poultry production and biosecurity. Water sources vary from town water supplies and rain water to dams and bores. Government agencies such as Local Land Services may be able to provide extension services and water quality monitoring to ensure that adequate biosecurity and industry-specific water quality standards are met.

Pest management
Pests increase the risk of disease on farm and can also kill livestock and damage shedding and equipment. Pest animals of particular importance include wild aquatic birds, rodents, foxes, feral pigs and wild dogs. The threats posed will depend on whether the production system is fully enclosed or free-range.

Inappropriate or inadequate disposal of dead birds on poultry farms contributes to pest animal problems.

Local Land Services are well placed to help poultry growers develop effective pest management plans, such as developing pest monitoring and surveillance and control strategies. They may also provide growers with ways to manage and discourage wild birds from primary production areas. Poultry growers should be engaged in strategic pest control programs.

Managing odour, dust, noise and visual amenity
Odour, dust, noise and visual amenity are the primary issues which lead to landuse conflict with neighbours and communities. While Local Land Services do not have a primary responsibility for managing these issues, they do have the expertise and experience in assisting the industry to adopt one of the most effective strategies to mitigate the impacts of these conflicts, namely vegetative screening. Appropriately selected and located trees and shrubs can be very effective in managing all four problems. However, care needs to be taken in selecting and siting trees and shrubs to ensure they do not attract birds and pests which may pose a biosecurity risk. Local Land Services may be able to assist the industry through extension and possibly funding to promote effective use of vegetative buffers and screens on poultry farms.

Managing wastes and resource recovery
Waste generation and management on poultry farms includes:

- shed cleanout with removal of poultry litter (bedding plus poultry manure)
- productive reuse
- storage and reuse of manure on the farm as fertiliser
- storage and disposal of dead birds
- prevention of contaminated runoff.
**Spent poultry litter**

Poultry litter is rich in nutrients and carbon and is a highly valuable fertiliser. It is widely used on grazing and cropping enterprises. However, if stored or used inappropriately, it also poses potential risks to water and air quality and biosecurity. Importantly, it is illegal for ruminants to have access to poultry litter.

NSW DPI has partnered with Fertcare to develop best management practices for poultry litter management, together with a training and accreditation program, to ensure that poultry litter is used productively and to prevent environmental risks associated with inappropriate use. There is considerable scope for Local Land Services to collaborate with NSW DPI, Fertcare and the poultry industry to assist in the delivery and support of this initiative. Local Land Services have extensive expertise in agronomy and natural resource management that may assist in the adoption of sustainable nutrient management practices and the prevention of water pollution through effective nutrient use and riparian management.

**Dead bird disposal**

Bird mortality during production is typically around 5%. Thus, a 150 000-bird farm growing 5.6 batches a year could generate around 42 000 bird carcasses per year. Dead birds may be stored and disposed of by:

- freezing and then disposal at an authorised waste management facility or rendering plant
- composting in purpose-built composting bins or in designated areas of the farm
- incineration
- burial
- rendering.

Anecdotal evidence suggests that dead bird disposal on some farms does not meet current best practice guidelines. Inappropriate storage and disposal could contaminate ground or surface waters or cause odour nuisance or land contamination. Poor management of dead birds can also increase biosecurity risks and pest animal problems.

Local Land Services may be able to assist the industry to develop and adopt best management practices for the storage and disposal of dead birds. This may include advice on storage, composting techniques and resource recovery options that can turn waste into a resource.

**Protecting surface water, groundwater and soils**

The main risk for impacts on water sources is the management of poultry litter, as addressed above. Other risks include sediment and erosion control and the maintenance of adequate ground cover to limit nutrient, sediment and pathogen flows into water courses. Local Land Services are well placed to encourage the industry to adopt practices which will limit impacts on water quality and soil health.

**Free-range poultry production systems**

Free-range poultry production is growing at an average rate of 15% a year, compared with conventional closed-shed systems at 3% to 4%. Free-range systems pose some unique environmental challenges. Of particular concern is the potential for nutrient loading, especially of nitrogen and phosphorus. However, this has not been verified through empirical evidence.

Local Land Services can play a significant role in supporting industry to develop projects to improve knowledge and understanding of nutrient management in free-range systems.

**Conclusion**

Poultry meat is the fastest growing animal protein production system in the world and has become the most consumed meat in Australia. This growth poses tremendous opportunities for state and regional economies to both support and benefit from investment by the industry.
However, the largest poultry processors are nationally based and will likely invest in jurisdictions which offer them a competitive advantage. The withdrawal of one of the major processors from NSW suggests that NSW is not currently attractive enough to secure significant future investment. This may be due to several factors, including cost of production, feed conversion efficiencies, legislative burden, cost of compliance and constraints on expansion. While some of these factors are outside the control of government, others can and should be addressed if NSW wishes to benefit from the investment dollars the industry is currently committing to its expansion throughout Australia.

It is therefore imperative that if NSW wishes to be competitive, it develop legislation and policies which protect primary food production and processing. This can be achieved only by working with the poultry meat industry to identify barriers to growth and investment, and addressing these barriers while also considering communities and environments.

Effective landuse planning is the key to protecting and promoting future investment of the poultry meat industry. Current planning legislation is inadequate to protect the industry from landuse conflict associated with urban and rural residential developments. A whole-of-government approach is required to identify regions for intensive livestock production to keep the industry separated from conflicting land uses.

The Queensland Government has recognised this risk and has responded with a State Planning Policy for Agriculture. This policy supports the classification of important agricultural areas (IAAs). It recognises that ‘agricultural development and future investment in IAAs is dependent on effective land use planning. Promoting appropriate agricultural development in IAAs will leverage the economies of scale and infrastructure benefits provided by IAAs, and enable increased agricultural production. Development within IAAs that is incompatible with agricultural land uses may adversely affect the long-term viability of agriculture in these areas.’

Further, the Queensland Government requires that development applications for poultry meat farms be assessed by regulators from the Queensland Department of Agriculture and Fisheries who have a technical and operational understanding of poultry meat farming. This ensures that assessments of development applications are consistent and that consent conditions are fair, reasonable and relevant to the industry.

The Queensland Government promotes the concept of identifying an agricultural precinct where larger or specialised intensive agricultural uses, or a cluster of compatible agricultural uses, may be encouraged to locate to the exclusion of incompatible non-rural activities. To manage land use conflict, guidelines recommend that new developments for sensitive uses include minimum distances from existing intensive agriculture operations.

A similar approach may need to be considered in NSW if it wants to compete with other jurisdictions that are adopting planning regimes to attract, support and protect intensive agricultural production systems.
### Appendix 1. Basic industry statistics

<table>
<thead>
<tr>
<th>Industry statistics</th>
<th>Number or value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross value</td>
<td>$722 million</td>
</tr>
<tr>
<td>Number of birds slaughtered in NSW annually</td>
<td>182 million</td>
</tr>
<tr>
<td>NSW poultry meat industry market share</td>
<td>32.6% (gross value)</td>
</tr>
<tr>
<td>Number of direct jobs</td>
<td>6000</td>
</tr>
<tr>
<td>Number of indirect jobs</td>
<td>39,000</td>
</tr>
<tr>
<td>Number of regional economies supported</td>
<td>8</td>
</tr>
<tr>
<td>Number of contract grow-out farms in NSW</td>
<td>~318</td>
</tr>
<tr>
<td>Number of chicken meat farms</td>
<td>240</td>
</tr>
<tr>
<td>Number of turkey meat farms</td>
<td>53</td>
</tr>
<tr>
<td>Number of duck meat farms</td>
<td>25</td>
</tr>
<tr>
<td>Average capital investment per farm (excluding land value)</td>
<td>$3.25 million (range $1.5–$52 million)</td>
</tr>
<tr>
<td>Number of processors</td>
<td>5</td>
</tr>
<tr>
<td>Number of primary processing plants</td>
<td>9</td>
</tr>
<tr>
<td>Number of further-processing plants</td>
<td>6</td>
</tr>
<tr>
<td>Number of feed mills</td>
<td>~9</td>
</tr>
<tr>
<td>Average dressed weight</td>
<td>1.9 kg</td>
</tr>
<tr>
<td>Age to slaughter</td>
<td>35–49 days</td>
</tr>
</tbody>
</table>
Appendix 2. Regional distribution

There are eight main production areas for chicken and turkeys throughout NSW. The main production area for ducks is currently the Sydney Basin, but construction of a large duck meat farming complex is nearing completion at Harden.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of chicken meat farms</th>
<th>Number of turkey meat farms</th>
<th>Number of duck meat farms</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney Basin</td>
<td>90</td>
<td>16</td>
<td>24</td>
<td>130</td>
</tr>
<tr>
<td>Central Coast</td>
<td>61</td>
<td>1</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td>Hunter</td>
<td>49</td>
<td>26</td>
<td>0</td>
<td>75</td>
</tr>
<tr>
<td>Tamworth</td>
<td>15</td>
<td>1</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Goulburn, Southern Tablelands</td>
<td>3</td>
<td>7</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Griffith</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>North Coast</td>
<td>15</td>
<td>0</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Young and Harden</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
## Appendix 3. Key industry contacts

<table>
<thead>
<tr>
<th>Business or enterprise</th>
<th>Business principal</th>
<th>Contact details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baiada Poultry</td>
<td>Simon Camilleri</td>
<td>Phone: 1300 137 372</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 1300 137 126</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:info@baiada.com.au">info@baiada.com.au</a></td>
</tr>
<tr>
<td>Ingham Enterprises</td>
<td>Andrew Clarke (CEO)</td>
<td>Phone: 02 9602 8744</td>
</tr>
<tr>
<td></td>
<td>Mick McMahon (Executive Chairman)</td>
<td></td>
</tr>
<tr>
<td>Cordina Chicken</td>
<td>John Cordina</td>
<td>Phone: 02 9912 1700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 02 9631 8613</td>
</tr>
<tr>
<td>Red Lea</td>
<td>John Velcich</td>
<td>Phone: 02 9831 0777</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 02 9831 0799</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:info@redlea.com.au">info@redlea.com.au</a></td>
</tr>
<tr>
<td>ProTen</td>
<td>Daniel Bryant</td>
<td>Phone: 02 9458 1700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 02 9929 7968</td>
</tr>
<tr>
<td>Pepe’s Ducks</td>
<td>John Houston</td>
<td>Phone: 02 4574 6000</td>
</tr>
<tr>
<td>Rural Funds Management</td>
<td>David Bryant</td>
<td>Phone: 02 6203 9700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 02 6281 5077</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:management@ruralfunds.com.au">management@ruralfunds.com.au</a></td>
</tr>
<tr>
<td>NSW Farmers</td>
<td>James Mifsud (Chairman)</td>
<td>Phone: 0428 882 178</td>
</tr>
<tr>
<td></td>
<td>Ray Lee (Poultry Meat Manager)</td>
<td>E-mail: <a href="mailto:leer@nswfarmers.org.au">leer@nswfarmers.org.au</a></td>
</tr>
</tbody>
</table>
NSW DPI industry development officers

NSW DPI employs two poultry industry development officers, one responsible for supporting the poultry meat industry and one supporting the egg industry. These officers are responsible for engaging with their respective poultry sectors to support and promote industry growth and investment in NSW. The officers have developed close working relationships with key stakeholders in the industry and participate in industry forums and committees. A key function is to gather and develop research and industry knowledge into a format that can be easily disseminated and used by the industry. They also gather useful industry intelligence to support both the industry and government policy.

The officers are well placed to facilitate engagement between Local Land Services and the poultry industry and to provide support to initiatives by Local Land Services and the poultry industry in NSW.

Industry Development Officer, Poultry Meat
Byron Stein
Dairy and Intensive Livestock Industries Unit, NSW DPI
Government Offices | 159 Auburn Street | PO Box 389 |
Goulburn NSW 2580
Phone: +61 2 48286618 | Fax: +61 2 4822 3261 | M: 0428 259 628
E-mail: byron.stein@dpi.nsw.gov.au
W: www.dpi.nsw.gov.au

Industry Development Officer, Poultry Eggs
Joanna Blunden
Dairy and Intensive Livestock Industries Unit, NSW DPI
Tocal College, Paterson, NSW 2421
Phone: 02 4939 8954 | Mobile: 0427 408 465
E-mail: joanna.blunden@dpi.nsw.gov.au
Appendix 4: Relevant legislation with agencies responsible

Major relevant legislation

The operation of new and existing poultry farms is regulated through legislation, the terms and conditions attached to development consents, and any associated licences or approvals. (Non-compliance with these terms and conditions will result in liability to prosecution under the relevant legislation.) The major pieces of legislation that all poultry farms must follow are described below.

<table>
<thead>
<tr>
<th>Legislation</th>
<th>Administering authority</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Planning and Assessment Act (1979)</td>
<td>Department of Planning and Environment</td>
<td>Provides for a hierarchy of environmental planning instruments, which include State Environmental Planning Policies and Local Environmental Plans. It also provides the framework for local government zoning, assessment requirements, development control plans, and development consent provisions for operating poultry farms. It is the major legislation governing the development of poultry farms and the first port of call for potential developers.</td>
</tr>
<tr>
<td>Exotic Diseases of Animals Act (1991)</td>
<td>NSW Department of Primary Industries (DPI)</td>
<td>Aims to protect Australian livestock industries from exotic (foreign) diseases. It requires anyone who suspects exotic disease in livestock to immediately notify NSW DPI. It allows for quarantine, testing and control measures for elimination of the disease. Notifiable exotic diseases for chickens include avian influenza (highly pathogenic), Newcastle disease, infectious bursal disease (hyper-virulent form) and screw worm fly. Poultry can be carriers of other notifiable diseases.</td>
</tr>
<tr>
<td>Local Government Act (1993)</td>
<td>Local councils</td>
<td>Lets local councils provide for the current and future needs of local communities and manage local resources. It also requires them to use the principles of ecologically sustainable development. Under the Act, councils may abate a public nuisance. A public nuisance is one that materially interferes with public health, safety, property, enjoyment or comfort. In some instances, odour from existing operations has been dealt with as a public nuisance.</td>
</tr>
<tr>
<td>National Parks and Wildlife Act (1974)</td>
<td>Office of Environment and Heritage (OEH)</td>
<td>Specifies that consent is required from OEH to destroy Aboriginal artefacts, relics or places. It also addresses protection of native fauna and native plants.</td>
</tr>
<tr>
<td>Occupational Health and Safety Act (2000) (OHS Act)</td>
<td>NSW WorkCover Authority</td>
<td>Aims to protect workers in the workplace. There are many regulations under this Act, including the Occupational Health and Safety Regulation 2001. The Regulation consolidates regulations relating to specific hazards, including plant and machinery, hazardous substances and noise, and lays down requirements for consultation with workers relating to meeting OHS obligations.</td>
</tr>
<tr>
<td>Legislation</td>
<td>Administering authority</td>
<td>Purpose</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td><strong>Pesticides Act (1999)</strong></td>
<td>NSW Environment Protection Authority (EPA)</td>
<td>Aims to reduce the risks associated with the use of pesticides to human health, the environment, property, industry and trade by controlling and regulating the use of pesticides in NSW. It empowers the EPA to enforce the proper use of all pesticides in NSW after the point of sale. It also provides regulation-making powers. The Pesticides Regulation 2009 sets out the requirements for record-keeping of pesticide use. It also establishes training standards that people using pesticides in certain circumstances must meet. These requirements apply to commercial users of pesticides (including farmers). For further information contact the EPA. Chemical and pesticides storage is regulated by WorkCover.</td>
</tr>
<tr>
<td><strong>Prevention of Cruelty to Animals Act (1979)</strong></td>
<td>NSW DPI</td>
<td>Regulates the care and welfare of animals, including chickens. The Model Code of Practice for the Welfare of Animals – Domestic Poultry (ARMCANZ 2002) is a guide for people responsible for the welfare and husbandry of domestic poultry and is prescribed under the Act. The RSPCA and the Animal Welfare League have inspectors empowered under the Act.</td>
</tr>
<tr>
<td><strong>Protection of the Environment Operations Act (1997) (POEO Act)</strong></td>
<td>NSW EPA</td>
<td>Aims to protect, enhance and restore the environment, having regard to the need to maintain ecologically sustainable development. It also aims to reduce risks to human health and prevent degradation of the environment. It controls the environmental impact of existing and future human activities through a system of licences and environment protection notices. The EPA administers this Act at sites that are required to hold an Environment Protection Licence (as defined in Schedule 1 of the Act). Local councils are also empowered under the Act to control the environmental impacts at sites that are not required to hold an Environment Protection Licence.</td>
</tr>
<tr>
<td><strong>Public Health Act (1991)</strong></td>
<td>NSW Department of Health</td>
<td>Provides power to make certain orders and give directions during a state of emergency and at other times in regard to the disinfection or destruction of items and the closure of water supplies and premises. The Act and advice on issues relating to public health and protection of the safety of food, water and air are administered by Environmental Health Officers located in Public Health Units of Local Area Health Services.</td>
</tr>
<tr>
<td><strong>Road and Rail Transport (Dangerous Goods) Act (1997)</strong></td>
<td>NSW EPA</td>
<td>Sets out requirements for the transport of Dangerous Goods (including pesticides and other chemicals) on roads. WorkCover NSW regulates the off-road handling and storage of Dangerous Goods.</td>
</tr>
<tr>
<td><strong>Road Transport (General) Act (2005)</strong></td>
<td>Roads and Maritime Services (RMS)</td>
<td>Provides for the administration and enforcement of road transport legislation. It provides for the review of decisions made under the legislation and makes provision for the use of vehicles on roads and related areas.</td>
</tr>
<tr>
<td><strong>Road Transport (Safety and Traffic Management) Act 1999</strong></td>
<td>RMS</td>
<td>Makes provision for safety and traffic management on roads and related areas.</td>
</tr>
<tr>
<td><strong>Stock (Chemical Residues) Act (1975)</strong></td>
<td>NSW DPI</td>
<td>Aims to prevent contamination of human food with pesticides, drugs and chemicals. It allows for the setting of maximum residue limits for various chemicals. Contaminated stock may be placed in detention to prevent them or their products from entering the human food supply. The stock or products may be destroyed, and action may be taken to prevent the use of contaminated land or buildings for livestock.</td>
</tr>
<tr>
<td>Legislation</td>
<td>Administering authority</td>
<td>Purpose</td>
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<tr>
<td><strong>Stock Diseases Act (1923)</strong></td>
<td>NSW DPI</td>
<td>Places an obligation on owners of stock to notify the presence of any notifiable disease to an inspector. Noticeable diseases for chickens include egg drop syndrome, infectious laryngotracheitis, <em>Salmonella pullorum</em> disease, chlamydiosis, <em>Salmonella enteritidis</em>, avian tuberculosis and Newcastle disease. The Act enables inspectors to quarantine stock that they suspect are infected with disease and to order testing, treatment or slaughter, as appropriate, to control the disease.</td>
</tr>
<tr>
<td><strong>Stock Foods Act (1940)</strong></td>
<td>NSW DPI</td>
<td>Stipulates the requirements for production and labelling of stock feeds. Feeds not meeting requirements may be withdrawn from supply.</td>
</tr>
<tr>
<td><strong>Stock Medicines Act (1989)</strong></td>
<td>NSW DPI</td>
<td>Legislates the registration, supply, labelling and use of stock medicines. Because of the significance of residues in food products, chickens should be treated only with registered products, according to the label instructions (unless authorised otherwise by a veterinarian), and the withholding period should always be adhered to. Under the Act, poultry producers may not: be in possession of unregistered stock medicines; use unregistered stock medicine (unless approved by a permit or order); use stock medicine that is not for use in food-producing animals (unless approved by permit or order); or use stock medicine contrary to label directions (unless authorised in writing by a veterinarian).</td>
</tr>
<tr>
<td><strong>Threatened Species Conservation Act (1995)</strong></td>
<td>OEH</td>
<td>Aims to conserve threatened species, populations and ecological communities. It requires a licence to be obtained from the OEH to pick or harm a threatened species, population or ecological community. The Act may also require, through the <em>Environmental Planning and Assessment Act</em>, an assessment of the potential impacts on threatened species for development approval.</td>
</tr>
<tr>
<td><strong>Water Management Act (2000) and Water Act (1912)</strong></td>
<td>NSW Office of Water</td>
<td>A water licence or other approval from the NSW Office of Water is generally required to extract water from rivers or aquifers to use for commercial purposes. NSW is currently operating two pieces of legislation relevant to water licences and water trading (the buying and selling of water licences or annual allocation water): <em>The Water Management Act 2000</em> governs the issue of new water licences and the trade of water licences and allocations for those water sources (rivers, lakes and groundwater) in NSW where water sharing plans have commenced. For more information go to <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a> <em>The Water Act 1912</em> governs the issue of water licences in other areas. For more information go to <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a> Under the <em>Water Management Act</em>, water licences are fully separated from the land title when a water sharing plan commences. This facilitates water trading. For information on this process and the timing of the separation of water licences from land in NSW, go to <a href="http://www.water.nsw.gov.au">www.water.nsw.gov.au</a>.</td>
</tr>
</tbody>
</table>
## Administering authorities

<table>
<thead>
<tr>
<th>Administering authority</th>
<th>Function</th>
<th>Contact details</th>
</tr>
</thead>
</table>
| Department of Planning and Environment | Responsible for:  
- sustainable growth in the right locations  
- improved investor and community confidence  
- effective management of natural and cultural resources  
- diverse, equitable and pleasant neighbourhoods that reflect community needs and aspirations  
- integrated delivery of regional infrastructure and government activities. | 23–33 Bridge Street, Sydney NSW 2000  
GPO Box 39, Sydney NSW 2001  
Phone: 02 9228 6333  
Fax: 02 9228 6555  
E-mail: information@planning.nsw.gov.au  
Web: www.planning.nsw.gov.au |
| Local councils | Responsible for management, improvement and development of the resources in their areas and for administering some regulatory systems. Local councils are also regulatory authorities under the Protection of the Environment Operations Act. Local council planning systems operate under Department of Planning and Environment systems. The local council is a valuable first point of contact for both new and existing poultry farm operations. Councils can provide information on:  
- any planning controls that apply to a particular parcel of land  
- any additional information that may need to be supplied with the development application development consent conditions. | Contact your local council |
| NSW Ministry of Health | Responsible for the administration of the Public Health Act 1991, ‘an Act relating to the maintenance of proper standards of health for the public and for other purposes’. The Act provides power to make certain orders and give directions during a state of emergency and at other times in regard to the disinfection or destruction of items and the closure of water supplies and premises. The Act and advice on issues relating to public health and protection of the safety of food, water and air are administered by Environmental Health Officers located in Public Health Units of the Local Area Health Service. | Phone: 02 9391 9000  
Web: www.health.nsw.gov.au  
To contact your local Public Health Unit, go to the website and look under ‘Find your Local Health Service’ |
<table>
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<tr>
<th>Administering authority</th>
<th>Function</th>
<th>Contact details</th>
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</table>
| **NSW Department of Primary Industries (NSW DPI)**  | Delivers agricultural research, extension, education and regulation and is responsible for administering a number of Acts affecting poultry producers. NSW DPI has agricultural environment officers located around the state who can provide advice on the development assessment process, convene planning focus meetings, and provide advice on how to manage environmental regulations associated with poultry farming. A poultry advisory officer is also available to provide advice on poultry farming and development. For poultry health issues, the DPI provides veterinary diagnostic services and is the lead agency in the event of an exotic disease outbreak in NSW. A poultry health technical specialist is employed to manage statewide poultry health issues. | General enquiries:  
Agriculture-related matters  
Phone: 1800 808 095  
E-mail: nsw.agriculture@dpi.nsw.gov.au  
Post: NSW DPI, Locked Bag 21  
Orange NSW 2800  
Emergency Animal Disease Hotline for reporting unusual disease signs, abnormal behaviour, or unexplained deaths in livestock  
Phone: 1800 675 888 |
| **Department of Primary Industries Water (DPI Water)** | DPI Water is responsible for the management of the state's surface water and groundwater resources. DPI Water administers key water management legislation, including the *Water Management Act 2000*, *Water Act 1912* and *Hawkesbury–Nepean River Act 2009*. Key responsibilities and functions include:  
- surface water and groundwater management  
- water licensing and compliance  
- water information and modelling  
- policy and regulation of local water utilities. | Level 10, Macquarie Tower  
Locked Bag 5123  
Parramatta NSW 2124  
Phone: 1800 353 104  
E-mail: water.enquiries@dpi.nsw.gov.au  
Web: www.water.nsw.gov.au/home |
| **NSW WorkCover Authority**                         | Responsible for ensuring occupational health, safety and welfare in the workplace and for administration of, and advice on, the NSW Workers Compensation scheme and injury management requirements. | WorkCover NSW  
Tel: 02 4321 5000  
Fax: 02 4325 4145  
For address, telephone or fax details of all WorkCover offices: www.workcover.nsw.gov.au/ContactUs/default.htm |
| **NSW Environment Protection Authority (EPA)**      | Responsible for protecting the environment and administering a number of Acts to control waste, pollution of the environment, pesticide use, dangerous goods transport, contaminated land management and radiation. Responsible for administering environment protection licences and notices under the *Protection of the Environment Operations Act*. | EPA, 59–61 Goulburn Street  
PO Box A290, Sydney South NSW 1232  
Phone: 02 9995 5000 (switchboard)  
Phone: 131 555 (info. & publications)  
Fax: 02 9995 5999  
E-mail: info@environment.nsw.gov.au (or regional offices)  
Web: www.environment.nsw.gov.au |
| **Office of Environment and Heritage (OEH)**        | Responsible for the protection of cultural heritage and of fauna and flora, particularly threatened species. OEH can provide advice on these issues and related legislation. | OEH, 59–61 Goulburn Street  
PO Box A290, Sydney South 1232  
Phone: 02 9995 5000 (switchboard)  
Phone: 131 555 (info. & publications)  
Fax: 02 9995 5999  
E-mail: info@environment.nsw.gov.au (or regional offices)  
Web: www.environment.nsw.gov.au |
### Administering authority

<table>
<thead>
<tr>
<th></th>
<th>Function</th>
<th>Contact details</th>
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<tbody>
<tr>
<td>Roads and Maritime Services</td>
<td>Responsible for:</td>
<td>Phone: 132 213</td>
</tr>
<tr>
<td></td>
<td>• improving road safety</td>
<td>To contact the local Service Centre, go to the website <a href="http://www.service.nsw.gov.au">www.service.nsw.gov.au</a> and</td>
</tr>
<tr>
<td></td>
<td>• testing and licensing drivers</td>
<td>click on ‘Locate us’</td>
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<tr>
<td></td>
<td>• registering and inspecting vehicles</td>
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<tr>
<td></td>
<td>• managing the road network</td>
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<td></td>
<td>RMS provides financial assistance to local councils to manage 18 474 km of</td>
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<tr>
<td></td>
<td>regional roads and provides some funding and support to the 144 750 km</td>
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<td></td>
<td>of council-managed local access roads, which are funded by local ratepayers</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Federal road assistance grants.</td>
<td></td>
</tr>
<tr>
<td>Water NSW</td>
<td>Responsible for supplying raw water and for</td>
<td>Water NSW</td>
</tr>
<tr>
<td></td>
<td>protection of the environment.</td>
<td>Level 4, 2–6 Station Street, Penrith</td>
</tr>
<tr>
<td></td>
<td>Also has an administrative and concurrence role in</td>
<td>NSW 2750</td>
</tr>
<tr>
<td></td>
<td>accordance with the State Environmental Planning Policy (Sydney Drinking</td>
<td>PO Box 323, Penrith NSW 2751</td>
</tr>
<tr>
<td></td>
<td>Water Catchment) 2011.</td>
<td>Phone: 02 4724 2200</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fax: 02 4725 2599</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E-mail: <a href="mailto:info@sca.nsw.gov.au">info@sca.nsw.gov.au</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web: <a href="http://www.sca.nsw.gov.au">www.sca.nsw.gov.au</a></td>
</tr>
<tr>
<td>Commonwealth Department of Sustainability, Environment, Water, Population and Communities</td>
<td>This Commonwealth Department develops and implements national policy, programs and legislation to protect and conserve Australia’s environment and heritage.</td>
<td>John Gorton Building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>King Edward Terrace</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parkes ACT 2600</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phone: 1800 803 772</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Switch: 02 6274 1111</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web: <a href="http://www.environment.gov.au">www.environment.gov.au</a></td>
</tr>
</tbody>
</table>
## Appendix 5. Resources and references

A number of publications and resources provide information about the poultry meat industry, including opportunities for industry service, support and collaboration. Below are some of the key industry reference documents and websites which may prove useful. Each reference has been hyperlinked to provide easy access to the publications or websites.

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>The Australian Chicken Meat Industry: An Industry in Profile</td>
<td>Compiled by the Australian Chicken Meat Federation to bring the most up-to-date information together in one single document. It is available in a web-friendly format, accessible by clicking on the chapter and section headings on the left. It can also be downloaded as a colour PDF.</td>
</tr>
<tr>
<td>Best Practice Management for Meat Chicken Production in NSW, Manuals 1 &amp; 2</td>
<td>Provide guidance for the planning, design, construction and management of chicken meat farms in NSW, with a focus on minimising environmental impacts.</td>
</tr>
<tr>
<td>National Environmental Management System for the Meat Chicken Industry</td>
<td>Guidelines to enable growers to identify and manage environmental risks associated with poultry meat production.</td>
</tr>
<tr>
<td>National Farm Biosecurity Manual – Poultry Production</td>
<td>The aim is to establish a minimum set of biosecurity standards, applicable to all poultry producers (including ratites). While the manual was produced with commercial producers in mind, the principles of good biosecurity apply to any poultry or bird-raising operation.</td>
</tr>
<tr>
<td>National Water Biosecurity Manual – Poultry Production</td>
<td>Describes the water sources most commonly used by the Australian poultry industry, and water sanitation systems usable on commercial poultry farms.</td>
</tr>
<tr>
<td>Farm Biosecurity Manual for the Duck Meat Industry</td>
<td>The Australian Duck Meat Association has developed this biosecurity manual, as part of its commitment to the Emergency Animal Disease Response Agreement, for its members to implement.</td>
</tr>
<tr>
<td>Structure and Dynamics of Australia’s Commercial Poultry and Ratite Industries</td>
<td>Provides the Department of Agriculture, Fisheries and Forestry with information on the structure, husbandry and movement patterns associated with the Australian commercial poultry industry. This information is important for the management of emergency animal disease incursions and can be used in computer modelling to project the potential rate and extent of disease spread.</td>
</tr>
<tr>
<td>NSW DPI Poultry website</td>
<td>Range of information and resources dealing with poultry production.</td>
</tr>
<tr>
<td>The Drumstick</td>
<td>A free quarterly newsletter produced by NSW DPI providing information and updates for the poultry industry.</td>
</tr>
<tr>
<td>Rural Industries Research and Development Corporation’s Chicken Meat Program</td>
<td>A source of excellent publications and resources addressing a range of industry issues and practices. Click on the publications link for access to dozens of documents and publications.</td>
</tr>
<tr>
<td>Poultry Cooperative Research Centre (CRC) and Poultry Hub</td>
<td>The Poultry CRC’s major challenge is to help Australia achieve sustainable, ethical poultry production in the face of population growth and climate change. The Poultry CRC conducts research and drives education and training to help Australia’s poultry industries to produce more from less, sustainably.</td>
</tr>
<tr>
<td>Australian Chicken Meat Federation</td>
<td>The peak coordinating body for participants in the chicken meat industry in Australia, recognised as the industry representative by the Australian Government.</td>
</tr>
<tr>
<td>NSW Farmers Contract Poultry Group</td>
<td>Contact details and further information about this group.</td>
</tr>
</tbody>
</table>