

Economic Value of the Poultry Meat Industry: Sydney Region.



Final Report



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NSW Poultry Meat Industry Committee
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Poultry grower survey participants
Red Lea Chickens Pty Ltd
Representatives of poultry meat growers in the Sydney region

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1. Executive Summary

The purpose of this report is to reveal the economic value of the poultry meat farming and processing industries to the Sydney region. Knowing the economic importance of the industries to local regions will provide key regional stakeholders particularly state governments and local councils the opportunity to change policy direction to align with the industries need for sustainable growth in the Sydney region.

The poultry meat industry in NSW remains the largest producer of chicken meat in Australia whether by farm gate numbers or gross value of processed chicken meat products. In 2011-2012, the Sydney region was a major contributor with 110 poultry farmers/growers (94 chicken and 16 turkey) and four processors. Nonetheless, the Sydney region faces increasing competition and reduced market share from other states and other regions of NSW whose growth continues to Sydney's detriment. Baiada's closure of its Pendle Hill processing plant in 2009 (460 jobs lost) and Inghams closure of their Hoxton Park processing plant and Casula hatchery in 2013 (363 jobs lost) are evidence of processors rationalising operations and moving to other pro industry development regions.

The growth of the national poultry industry continues apace. In 2011-2012 total gross value of poultry meat was \$2.078 billion nationally, \$655.8 million in NSW and \$190.2 million for the Sydney region. However, these figures belie the NSW trend. From 2000-2001 to 2011-2012 although NSW chicken meat production increased, in real terms its share of national production fell. Total NSW chicken meat production fell -6.4% from 39.4% to 33%, chickens slaughtered slumped -7.5% from 38% to 30.5% and gross value of chicken meat dropped -6.8% from 38.4% to 31.6%. Contra wise, in real terms QLD and SA share of national production increased. Contradicting NSW's reduced national market share was the performance of the meat poultry industry in the 2010-2011 agricultural census. With a gross value of \$297.5 million (\$190.2 Sydney and \$107.5 million Central Coast) the meat poultry industry was the stellar agricultural performer in the greater Sydney region capturing 39.8% of greater Sydney's total regional agricultural output of \$748.5 million.

The poultry (chickens and turkeys) growers and processors survey results consisted of quantitative and qualitative information. Survey information revealed growers were around 50 years old employed an average of 2.5 people annually, had average annual revenue of \$282,000 (chickens only) and average capital assets of \$1,800,000. They spent an average of \$103,000 on purchases of capital assets and \$102,000 on goods and \$56,500 on services. Of interest was 64% of capital assets came from the Sydney region whereas 97% of goods and services purchased came from businesses in the Sydney region. Overall, the estimated value of Sydney's poultry farming industry was \$55.8 - \$73.3 million although caution applies to this estimate, as growers' response rates were low with only a 13% return rate requiring application of limited confidence levels and margins to analysis.

Of the four processors in the Sydney region, although three provided invaluable economic information it is important to recognise only two operated chicken processing facilities. On aggregate, these processors paid \$59.4 million to growers, purchased \$54.5 million of feed from Sydney region suppliers, spent \$52 million on transport (Sydney and Central Coast), delivered nearly 49 million broilers to grower and company farms and spent \$33.4 million producing broilers. Their processing plants produced 107,000 tonnes of chicken products with \$260 million of sales to the Sydney region. On aggregate, they employed 1183 people (all facilities) with a \$78.7 million wages bill. They spent \$339.5 million on goods and services (for all facilities), all supplied from the Sydney region and their aggregate capital assets were worth \$118 million (sunk costs of \$70.5 million). Discounting capital assets reveals the broiler processing industry was worth \$418.3 million to Sydney's economy. Although the fourth processor did not participate in the survey, estimates of its value to Sydney's economy range from \$300 - \$350 million. In summary and on aggregate, the estimated value to Sydney's regional economy of the poultry farming and processing industries was \$774.1 - \$841.6 million. These figures are substantial portraying an economic magnitude and importance to Sydney's economy that is exemplary.

Whilst the primary objective of the survey was to gather economic evidence of the industries value, qualitative data captured growers and processors responses to questions affecting growth. Growers believed the future for their industry and business relationship with their processor was good. Alternatively, their dealings with local council and state government departments split between few and numerous problems. Growers were also concerned with urban sprawl, imports, disease and supermarket power and their dealings with processors including payments and negotiating contract terms and conditions. Processor concerns focused on the difficulties of getting council approval of development applications for existing farms or for building new ones and their reluctance to ease punitive restrictions on farming operations. Added to this was their concern regarding the cost and availability of suitable farmland, noise, odour and the threat of increasing urban encroachment on farming lands. These issues are not unique most are common to other agricultural industries. In their submission to the NSW government regarding the omission of any plan for the future sustainability of agriculture in the regional plan for Sydney to 2031, the Agricultural Reference Group¹ (ARG) discusses these issues and their detrimental effects on the sustainability of Sydney's agriculture. Even better, the ARG provides recommendations to resolve the issues that align with those in the poultry meat industries.

The industry must work with the state government and convince them of the industries outstanding economic value to the Sydney region and its many communities and the dire consequences of maintaining the status quo. State and local governments must recognise the industries economic value. Poultry farming regulations regarding development approvals and operational restrictions require rationalisation. The right to farm needs precedence over urban encroachment. Allocation of more land suited to chicken meat farming should not be optional but mandatory. Removal of the current impediments is the

only solution to ensure the industry achieves sustainable long-term growth. The draft strategy plan for Sydney 2031 indicates state government support of Sydney's agricultural industries. However, without an action plan the government ignores the importance of agriculture. Hence, this jeopardises the poultry industries future long-term sustainability and productivity as a valuable component of Sydney's' scarce agricultural land resources. For Sydney's chicken meat farming and processing industries the government moving from supporting to implementing a plan for agriculture is not one option, it is the only option. Equally, the industry itself must become proactive in communicating the benefits it provides communities aside from employment and consumption of locally supplied goods and services. One such benefit is chicken products displaying the RSPCA's paw of approval signaling consumers the industry embraces best practice animal welfare standards.

It is incumbent on all stakeholders to apply their best endeavours and ensure the poultry meat farming and processing industries grow sustainably and maintain their economic position as Sydney's most valuable agricultural producer.

Conclusions derived from analysis and findings of the report lead to the following recommendations.

- Achieving consensus between the poultry meat farming and processing industries and local and state governments is the priority. Discounting the Central Coast, state and local governments must recognise the poultry meat industries status as the number one economic contributor to Sydney and NSW. The 2010-2011 census revealed poultry industries gross value of agricultural production in the Sydney region of \$190.2 million was 25.4% of Sydney's total agricultural production. In addition, it was also the biggest contributor to the NSW poultry industry with 27.7% of gross value of production. Add to this the estimated total economic value (\$774.1 - \$841.6 million) to the Sydney region of the poultry farming and processing industries and an irrefutable case presents itself as to the industries economic importance. The NSW PMIC must use this information as the catalyst to inform and educate local and state governments and convince them to act and remove legislative and regulatory impediments currently restricting sustainable growth of the poultry farming and processing industries in the Sydney region.
- The recent release of the Sydney regional plan to 2031 has proved serendipitous. Especially since the Agricultural Reference Group (ARG) has made a submission (June 2013) on behalf of all agricultural industries in the Sydney region to the NSW government. In their submission, the ARG chronicles all the impediments that face all agriculture in the Sydney region including the poultry meat industry. However, most important is the ARG recommends solutions to these impediments that align with those required by the chicken meat farming and processing industries (refer to section 4.10). The opportunity now exists for the Sydney poultry meat industries to move from a lone voice to become part of a group created specifically to advise the

2. Introduction

The purpose of this report is to provide information as to the economic value of the poultry meat grower and processor industries in the Sydney region of NSW. Consequently, this information can be communicated to key regional stakeholders (politicians, communities, state governments and local councils and businesses) to enable them be informed and educated as to the economic value of the poultry meat industry in this region. Therefore, investigation of performance, products, markets, competition or operating conditions regarding the poultry meat processing or farming industries is absent from this report. Also absent is examination of grower-processor contractual agreements², productivity, animal welfare, health and safety or any other operational, community or media related issues. Information of this nature regarding poultry meat processing³ and farming⁴ in Australia is available for purchase from IBISWorld. Alternatively, The Australian Chicken Meat Federation website⁵ provides free access to similar information on their website.

Aside from the thrust of the report being the economic value of the poultry meat industry to local region communities, additional qualitative survey information was gathered. Whilst quantitative economic information provides the financial evidence of the value of the poultry meat farming and processing industries qualitative information is an important adjunct. Qualitative information allows growers and processors provide insights regarding their perceptions and experiences of issues that pose a threat or risk to the ongoing sustainability of their industries. Combining financial evidence and industry commentary of this dimension provides the information required by others to allow them to understand and appreciate the economic value of the poultry meat industry to regional Sydney. In particular, key stakeholders will have an insight into how players feel about the current and future trajectory of their industries.

Once, key stakeholders understand the current circumstances of the poultry industries in consort with their economic value to the Sydney region positive policy prescriptions can be developed and implemented. For example, of greatest concern in this region is the continuing encroachment of urban development on designated poultry meat farming land. Added to this is lifestyle moving adjacent to poultry farms and then complaining about noise and dust. Left unchecked, or more importantly, unchallenged by the poultry meat farming industry Sydney's urban sprawl will burgeon further threatening and ultimately consuming existing poultry meat farms exacerbating the decline of the region's poultry meat farming and processing industries. The subsequent knock on effect of job losses and rising unemployment will cascade to lost economic activity in the Sydney region. Solving these roadblocks, will allow and encourage the Sydney region's poultry meat farming and processing industries to maintain a sustainable growth trajectory. The result will be mutual economic, community and social benefits for the poultry meat industries and Sydney's regional economy.

NSW Department of Planning and Infrastructure on all matters agricultural for Sydney's 2013 planning strategy. As a matter of urgency, the NSW PMIC is to communicate with the ARG to determine how the poultry meat farming and processing industries can gain direct, indirect or other representation on/with the ARG.

- It is one thing being number one it is another thing that others know it. A public relations and communications strategy is required to promote and meld the economic and health benefits of chicken meat production. Demand from consumers for chicken meat is ever increasing, as is consumer awareness of carbon food miles, the need to buy goods from local businesses and to purchase chicken meat produced using chickens raised in accordance with RSPCA animal welfare standards. Melding the product benefits of poultry meat (affordable, healthy, versatile, quality and animal welfare) with the economic benefits to the local region (direct and indirect employment and the purchase of locally supplied goods and services) provides an opportunity to change perceptions but most important behaviour of stakeholders towards the poultry meat industries. Regardless of message content, the NSW PMIC is ideally suited to organise implementation of a communications and public relations strategy.
- Sydney's poultry meat farming and processing industries must form a symbiotic relationship to resolve issues within their industries. Continuing dialog with external stakeholders is another requirement. The PMIC should take a lead role in facilitating these requirements through periodical forums, newsletters or other suitable communications mediums for mutual benefit of grower and processor industries and the regional community.

3. The Project

3.1. Objective

The objective of the research project was to develop, distribute and communicate to the NSW PMIC the results of a survey into the economic value of the poultry meat industry in the Sydney region.

3.2. Management

Doublj Consulting managed the project on behalf of the NSW PMIC. Doublj Consulting and the NSW PMIC acknowledged and agreed to the framework and limitations of the research survey prior to commencement of any grower and processor meetings and distribution to the nominated regions of any grower or processor survey questionnaires.

3.3. Activities

The NSW PMIC and Doublj Consulting agreed to implementation of the following activities,

- Project planning
- Preliminary work
- Development, preparation and distribution of all survey documents
- Analysis of survey results
- Production of a report conveying survey results
- Presentation of the report to the PMIC

3.4. Designing the Survey

3.4.1. Survey Population

The survey population encompassed poultry meat processors and growers in the Western Sydney region that agreed to participate in the survey and operated any type of facility engaged in the production and/or processing of poultry meat sold to consumers.



3.4.2. Gathering Data

Primary data

- Grower and processor surveys explained privacy and information confidentiality was in accordance with appropriate government legislation.
- Gathering financial quantitative data in relation to costs incurred by poultry farmers engaged in operating poultry grow out farms including,
 - Labour
 - Revenue
 - Assets
 - Goods
 - Services
- Included gathering financial quantitative data in relation to costs incurred by processor organisations operating various facilities engaged in the production of poultry meat and associated products sold to consumers.
- Financial quantitative data gathered from the survey was aggregated to include:
 - Employment (types and numbers)
 - Economic value of poultry meat farms
 - Economic value of processor company's operations
- Included non-financial qualitative data of a general nature gathered from processors and growers.

Secondary data

- Includes data accessed from existing sources including the Australian Bureau of Statistics (ABS) and the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) and any other reputable government and/or non-government source.

3.5. Conducting the survey

- The NSW PMIC provided Doublj Consulting with contact information for poultry meat growers and processors operating in the Western Sydney region.
- Promotion of the survey to processor and grower populations would be required to encourage participation by explaining the purpose and benefits of the survey.
- Distribution of poultry meat growers' surveys would be via Australia Post. Any further distribution of grower surveys would use the most appropriate available medium (post, fax or email).
- Processors would receive surveys via email sent to a nominated employee.
- There would be no growers or processors face-to-face interviews for gathering survey information.
- Implement strategies to encourage grower and processor participation.

3.6. Project Variations

- Turkeys were not included in the original project consultancy brief submitted to and accepted by the NSW PMIC. However, at the initial meeting between NSW PMIC representatives and Doublj Consulting the NSW PMIC requested turkeys also be surveyed at no additional cost to the NSW PMIC. Doublj Consulting agreed to this variation.
- The NSW PMIC had requested the grower's survey be limited to include only three to four nominated chicken and turkey meat growers in each of the three nominated regions. Doublj Consulting considered this request prone to sampling and non-sampling bias and selection error. Consequently, to mitigate bias and error, survey distribution would be to all growers based on grower contact information supplied Doublj Consulting by the NSW PMIC.

3.7. Survey Limitations

- The survey only included growers and processors (that agreed to participate) in the Western Sydney region.
- Gathering of grower financial information was limited to:
 - labour
 - revenue
 - assets

- goods
- services
- The gathering of background information regarding the poultry meat farming and processing industries was limited to meetings between Doublj Consulting, the NSW PMIC, the NSW Farmers Federation, growers and processors.
- This research project's focus is on capturing poultry meat industry economic value information relating to the Western Sydney region. Therefore, the following is excluded from this report,
 - Historical analysis of the poultry meat industry
 - Discussion on the future of the poultry meat industry within NSW

3.8. Report Limitations

The survey results, associated analysis and discussion relates solely to the Western Sydney region.

4. The Poultry Industry

4.1. Overview

In 2009, E-generation Marketing released a watershed report⁶ into the economic worth of the chicken meat industry in the Northern Rivers, Tamworth and Hunter regions of NSW. Unlike the 2009 E-generation Marketing report that focused solely on the chicken meat industry, this report includes turkeys and chickens (poultry). Moreover, this report contains no comprehensive macro (external environment) and micro (regional/local environment) analysis of the regional or national poultry meat industry. Other entities including E-generation Marketing and IBISWorld have provided substantive analysis of the poultry meat farming and processing industries. E-Generation's 2009 report revealed the economic value of the chicken meat industry in selected NSW regions. Conversely, IBISWorld's report on Australian poultry meat processing¹ (2013) and poultry meat farming² (2012) provide authoritative market based insights regarding: activities; performance; products; markets; competitive landscape; major companies; operational activities; key statistics. Furthermore, the IBISWorld reports analyse poultry meat processing companies that operate in the Western Sydney region namely Baiada, Cordina, Inghams and Red Lea.

In addition, Cordina Farms has made submissions to the Australian Government's Department of Agriculture, Food and Fisheries (DAFF) as well as to NSW government departments including the Department of Trade and Investment. These submissions emphasise the major role chicken poultry meat farming and processing industries play and the actions required ensuring the long-term viability of these industries in the Western Sydney region. However, this can only happen if governments promote growth for the poultry meat industry leading to more jobs and sustainable local and regional economic growth. Among Cordina Farm's submissions, of particular note is the concise synopsis submitted to the Metropolitan Strategy Review, NSW Department of Planning⁷ (2011) explaining the economic value of the chicken meat industries to the Western Sydney and Central Coast regions. This submission highlights the positive contribution made by the chicken meat industry and the resultant negative economic consequences if the chicken meat industries were to exit these regions. Along with this and subsequent submissions, Cordina expounds major concern for the state government's lack of an integrated agricultural food strategy inclusive of the need to promote and encourage growth of the chicken meat farming and processing industries in the Western Sydney region. The economic consequences of this includes lost competitiveness resulting in reduced production, employment and food security, lost export opportunities, increased logistical costs and increased risk of supply chain interruptions. The result is the decline of Western Sydney's poultry industries. Rounding out the submission Cordina offers a strategy to obviate the continuing deterioration of the chicken meat industries in the Western Sydney region. Aside from this, Cordina Farms has previously submitted the company's response to the NSW Government's proposed "New Planning System for NSW – Green Paper

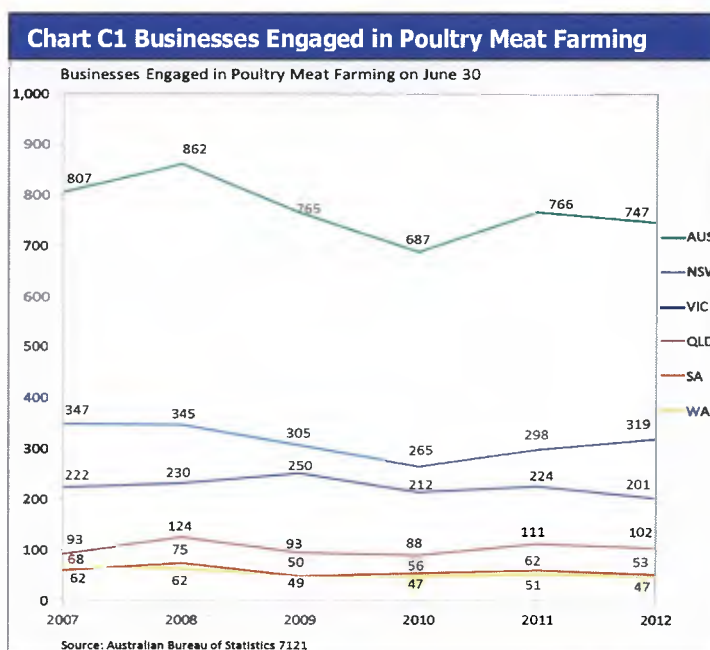
Submission⁸ (2012). This document reiterates the chronic issues proving problematic for the future growth of the poultry meat industry in the Western Sydney region. As evidence of this, the submission provides an example case study detailing the foibles of a chicken grower's application for development approval to build additional infrastructure to increase growing capacity. Considering the foregoing, this report focuses on gathering and exhibiting economic information collected from surveying poultry meat growers and processing companies.

Nonetheless, prior to discussion of the survey results some preparatory examination is required regarding the poultry industry. Unfortunately, whilst the ABS provides detailed information about growing and processing chicken meat confidentiality arrangements prevent the ABS from providing turkey meat information. Discussions with ABS representatives revealed that all turkey production statistics are confidential as are chicken meat production statistics for Tasmania, South Australia (SA) and Western Australia (WA). For this reason, following discussion and analysis focuses primarily on the Australian chicken meat industry in New South Wales (NSW), Victoria (VIC), Queensland (QLD) and where available data SA and WA. However, and although the Hunter and Central Coast regions are included in a separate economic value report, there are occasions where available information allows discussion and analysis of certain aspects of the poultry meat industries in the Hunter and Central Coast regions whose inclusion is considered appropriate as all processors have operations in these regions.

4.2. Businesses

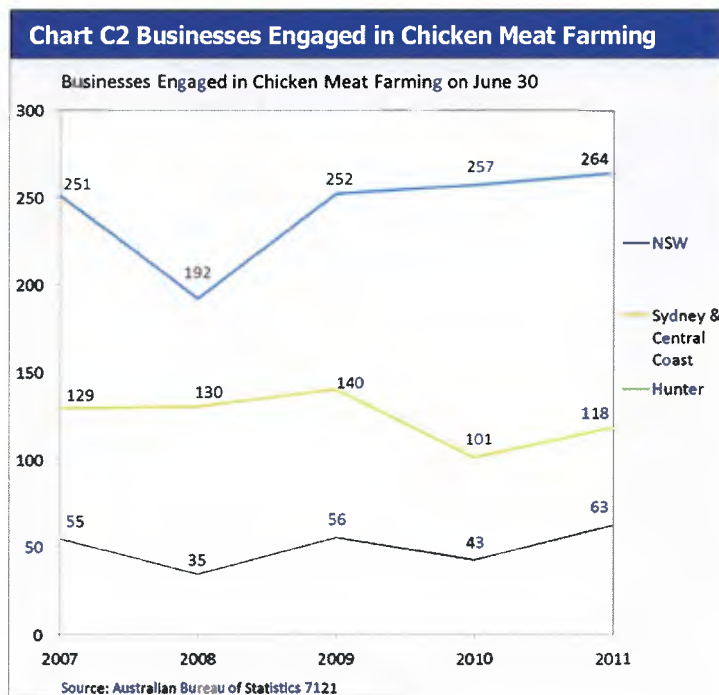
Poultry meat farming includes various breeds of Galliformes (chickens and turkeys), Anseriformes (ducks and geese) and game birds (quail, pheasants, squab). Yet, chicken meat grow-out farms supply the bulk of poultry meat sold in Australia. This is not to say that other poultry meat growers especially turkey meat growers, do not make a valuable contribution to the poultry growing and processing industry. In fact, by comparing charts C1, C2, and table T1 there were

approximately 45 turkey farming businesses in NSW. Nearly 5 million turkeys worth over \$200 million are processed annually. Inghams the largest processor, has up to 65% of the



market and on average processes about 46,000 turkeys per week. Other processors process about 15,000 and 10,000 per week. Nonetheless, due to the lack of existing statistical information regarding production of turkey meat, discussion concentrates on chicken meat.

Chart **C1** presents a snapshot of the number of businesses nominating poultry meat farming in Australia from 30 June 2007 to 30 June 2012 as their primary business. It shows from 2007 to 2012 there was an overall decline in the total number of poultry meat farming businesses in Australia. Comparing 2012 to 2007, the number of poultry meat businesses fell in Australia by -7.4%, in NSW by -8.1%, in VIC by -9.5%, in SA by -14.5% and WA by -30.9%. Conversely, QLD rose by 9.7%. Anecdotal reasons for the declining figures vary including processor consolidation, growers leaving the industry, processor companies increasing numbers of company owned farms and corporate chicken meat grower entities such as Proten and Rural Funds Management (RFM) increasing their industry footprint.



Regardless, chart C2 shows NSW and The Hunter bucking the national downward trend with chicken meat businesses increasing while the Central Coast follows it.

As there were no figures available for the Hunter, Central Coast or Western Sydney regions in the 2011-2012 period the figures in chart C2 are for the period 2007 to 2011. Over this period, the average number of chicken meat farming businesses in the Hunter was just over 50 or 20.7% of all

chicken meat farming businesses in NSW. Likewise, on average there were approximately 123 chicken meat farm businesses in the Western Sydney and Central Coast regions or 50.8% of the total number of NSW chicken meat farming businesses. In other words, 71.5% of all chicken meat farming businesses in NSW was located in the Hunter, Central Coast and Western Sydney regions. This is economically significant. Prior to conducting the economic survey anecdotal information suggested the majority of these businesses supported their regional economies by purchasing goods and services from local suppliers. The purpose of the survey was to attempt to confirm the validity of this anecdotal information.

Contrary to historical information table T1, (derived from processor records) reveals 246 poultry meat grow out farming businesses in the Hunter, Central Coast and Western Sydney regions during 2011/2012. Of these 202 were chicken meat growers and 44 turkey meat growers. Chicken meat growers comprised 82% of farms whose primary business was growing chickens compared to 18% for turkey meat growers. Coincidentally these ratios do not significantly conflict with the percentage of chicken meat businesses versus non-chicken meat businesses calculated from historical sources.

Table T1 Poultry meat Farming Businesses (2011-12)

Region	Processor Contracted to	Poultry Farm Business Type	Farm Business Types per Processor	Total Poultry Farm Businesses per Region
Hunter	Baiada	Chicken	44	75
		Turkey	26	
	Red Lea	Chicken	5	
C.Coast	Baiada	Chicken	12	61
		Turkey	2	
	Cordina	Chicken	20	
	Inghams	Chicken	23	
	Red Lea	Chicken	4	
Sydney	Baiada	Chicken	12	110
		Turkey	1	
	Cordina	Chicken	43	
	Red Lea	Chicken	39	
	Inghams	Turkey	15	
TOTAL				246

4.3. NSW Production 2001-2012

The 2009 economic worth of the chicken meat industry report (Jones & Kriz) revealed that compared to other states NSW production of chicken meat was declining. Subsequent to this section, statistical analysis is referenced on a national versus all state basis from 2006-2007 onwards. However, this timeframe is insufficient in adequately depicting the decline in the NSW poultry meat industries. Henceforth analysis of NSW production over the past decade (2001-2012) in this section provides a longer-term view of the declining production of poultry meat industries in NSW.

Chart C3 Chicken Meat Production in NSW 2001-2012

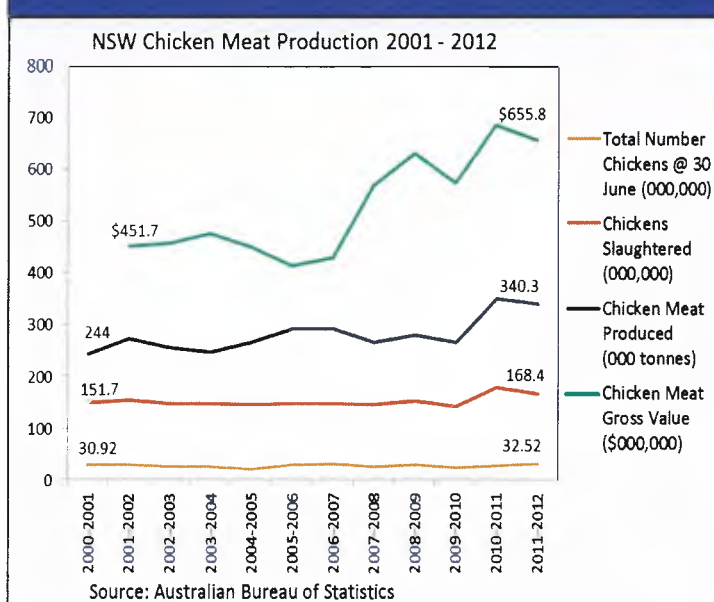
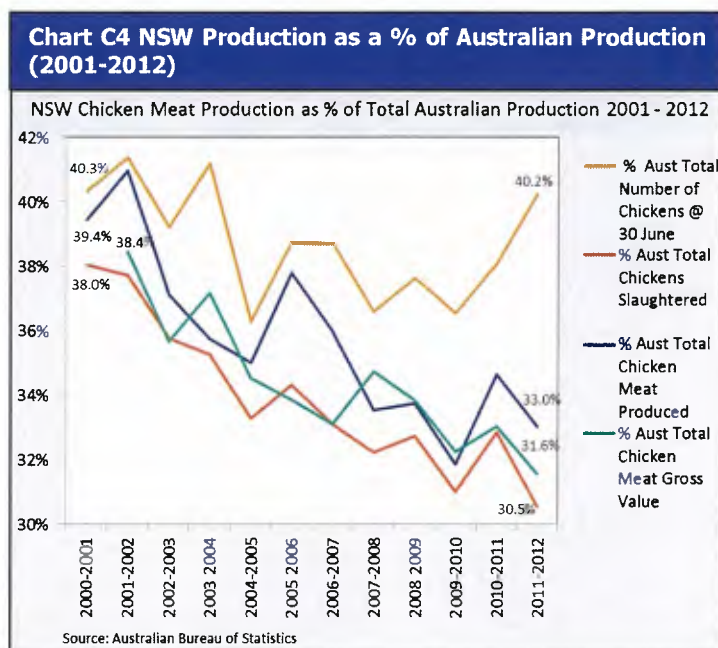
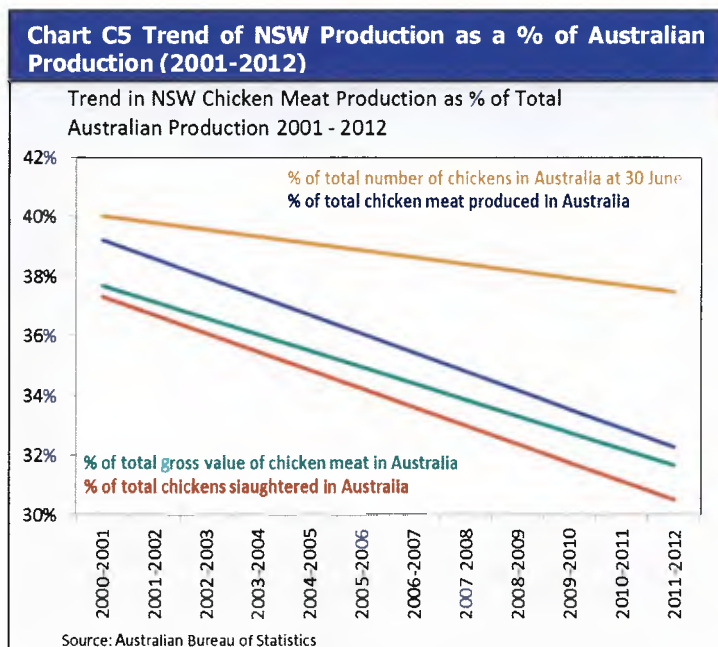


Chart C3 depicts graphs indicating four key measures of production over the period 2000-2001 to 2011-2012 (except total number of chickens - 2001-2002 to 2011-2012). Over this period the four graphs represent, stock take of chicken numbers (on June 30), the number of chickens slaughtered, amount of chicken meat produced; gross value of chicken meat. From June 30 2001 to June 30 2012, the total number of chickens on grow-out farms rose

from 30.92 million to 32.52 million up only 1.6 million (5.2% or .47% p.a.).



Over the same period, chickens slaughtered rose from 151.7 million to 168.4 million up 16.7 million (11% or 1% p.a.). The amount of chicken meat produced was up from 244,000 to 340,300 tonnes up 96,300 tonnes (39.5% or 3.6% p.a.). Improved nutrition, breeding, husbandry and health of flocks would all contribute to this increase. The gross value of chicken meat rose from \$451.7 million to \$655.8 million up \$204.1 million but when inflation adjusted, the increase was approximately \$55.8 million (12.3% or 1.1% p.a.). These figures indicate an industry treading water in NSW showing no appreciable growth. However, these figures do not reflect the real plight of the NSW chicken meat industries. Comparison of the State's production as a share of the total national production should provide a perspective of why the NSW chicken meat is in real terms



declining.

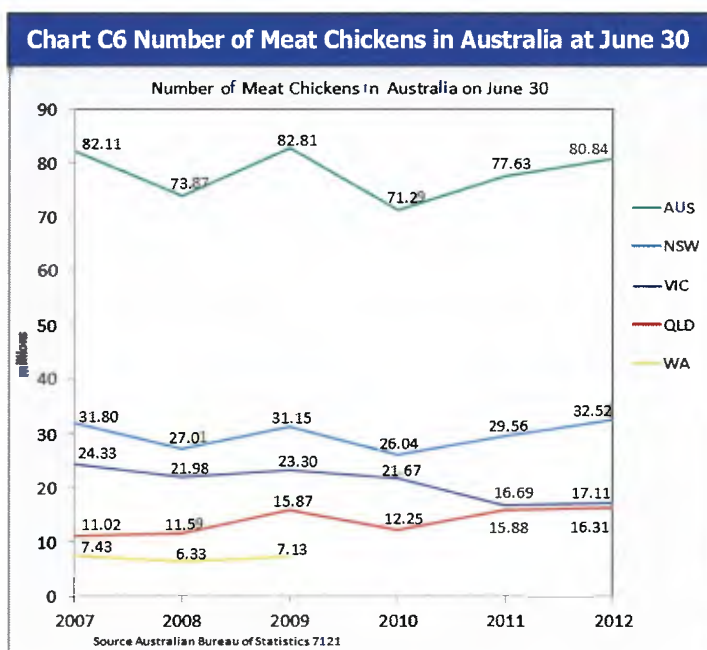
Chart C4 shows the NSW share of national chicken meat production over the period 2000-2001 to 2011-2012. The total number of chickens at June 30 2012 was slightly less (-.1%) than 2001 however, this figure does not reflect the trend over the period (chart C5). In the same period, total chicken meat production fell from 39.4% to 33% (-6.4%). The number of chickens slaughtered fell from 38% to 30.5% (-7.5%) and gross value of chicken meat fell, from 38.4% to 31.6% (-6.8%). Chart C5 represents the data from chart C4 as trends. This chart provides clear evidence of the decline of NSW share of national chicken meat production over the 11 years from 2001 - 2012.

This decline is directly attributable to production growth in competitor states of QLD and SA. Jones and Kriz chronicled this decline over the period 1998 – 2008 in their 2009 economic report into the regional NSW chicken meat industry. Subsequent analysis of ABS information has a reference date of 2006-2007 with analysis of chicken meat production viewed from a national, state and regional (when available) perspective. Although analysis will reveal a slight improvement in NSW production as a share of total Australian production, overall the NSW trend remained negative.

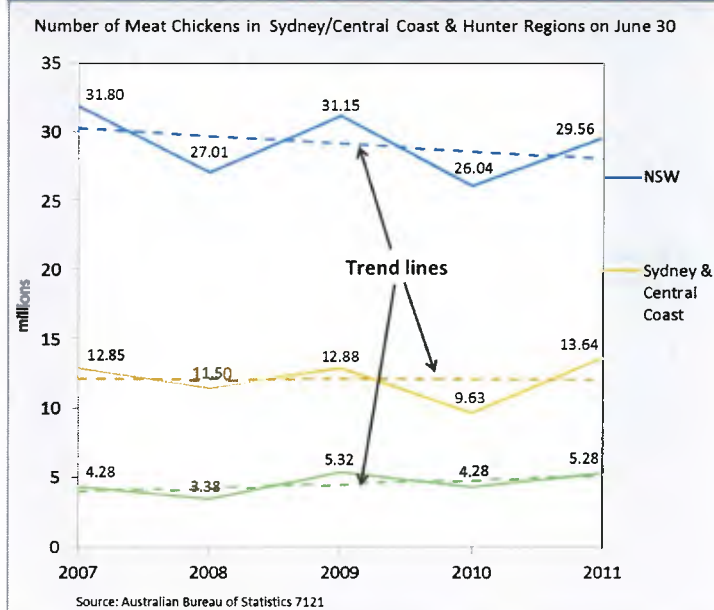
4.4. Numbers

Chart C6 shows the total number of meat chickens held on Australian grow-out farms on 30 June from 2007 to 2012. On 30 June 2012, there were 80.84 million meat chickens on Australian commercial grow-out farms compared to 82.11 million on 30 June 2007, an aggregate fall of 1.27 million or -1.5%.

Of significance over this period was Victoria's substantial fall in its share of the total number of broilers in Australia from 24.33 million (29.6% in 2007)¹ to 17.11 million (21.2% in 2012) down -8.4%. Conversely, QLD increased from 11.02 million (13.4% in 2007) to 16.31 million (20.2% in 2012) up 6.8%. NSW rose slightly from 31.8 million (38.7% in 2007) to 32.52 million (40.2% in 2012) up 1.5%.



¹ Percentages in the format (xx.x% in yyyy) represent a States percentage of the total national number for a given year.

Chart C7 Number of Meat Chickens in Sydney/Central Coast (combined) and Hunter regions

Interestingly and although not shown on chart C6 due to only having records for 2007 and 2012, SA's broiler numbers as a share of the Australian total rose from 6.57 million (8% in 2007) to 8.44 million (10.4% in 2012) up 2.4% nationally but up 28.6% (5.7% p.a.) on its own state based performance. Last, WA's share fell slightly from 7.43 million (9% in 2007) to 7.13 million (8.6% in 2009) down -4.4% but as no figures were available after 2010, these results are problematic.

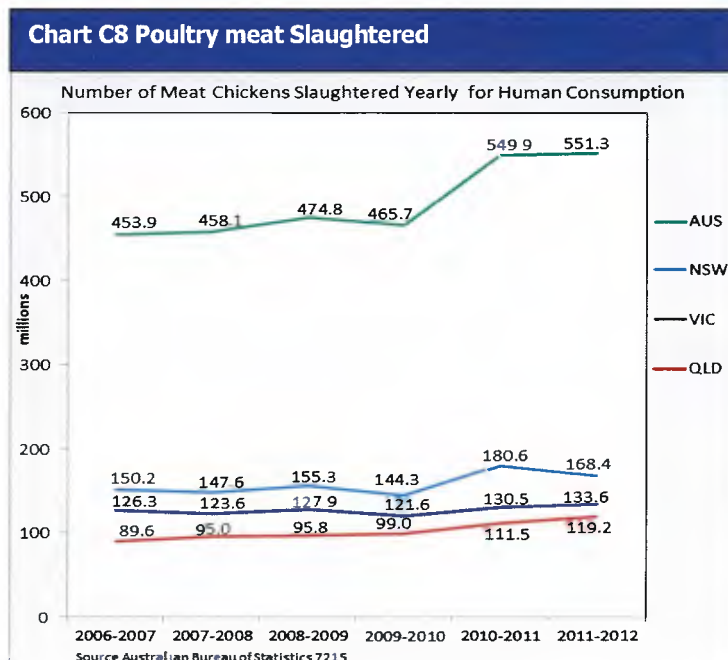
Comparing total on farm broiler numbers on 30 June in 2007 to 2012, QLD was up 48%, SA up 28.6% and NSW up only 2.3% while VIC fell dramatically by -29.7%.

Chart C7 reveals during this period, and as a share of total Australian broiler numbers, NSW broiler numbers fell from 31.8 million (38.7% in 2007) to 29.56 million (38.1% in 2012) down -6%. Contra wise, Sydney and the Central Coast bucked this trend with a combined slight increase in broiler numbers from 12.85 million (15.65% in 2007) to 13.64 million (17.6% in 2011) up 6.2%. Surpassing this was the Hunter region rising from 4.28 million (5.2% in 2007) to 5.28 million (6.8% in 2011) up 23.6% (5.9% p.a.). These figures are significant. They indicate despite various problems facing the poultry industry, chicken meat growers in the Sydney, Central Coast and Hunter regions increased the number of chickens held on farms as opposed to the remainder of NSW where aggregate on farm numbers fell.

4.5. Slaughtered

The previous section provided annual census figures of chicken numbers held on grow-out farms. However, this is not the case when reviewing the number of chickens slaughtered. From 2007-2012, chicken slaughter numbers were only available for Australia NSW, VIC & QLD with the exception of 2006-2007 with slaughter numbers available for Western Sydney and Central Coast (combined) and Hunter regions.

Chart C8 shows over five years Australia's total chicken slaughter rose from 453.9 million (2007) to 551.3 million (2012) up 21.5%. Although NSW numbers rose from 150.2 million (33.1% in 2007) to 168.4 million (30.5% 2012) up 12.1% the share of the Australian total fell -2.6%. Victoria's numbers also rose from 126.3 million (27.8% in 2007) to 133.6 million (24.2% in 2012) up 5.7% but like NSW their national share fell -3.6%.



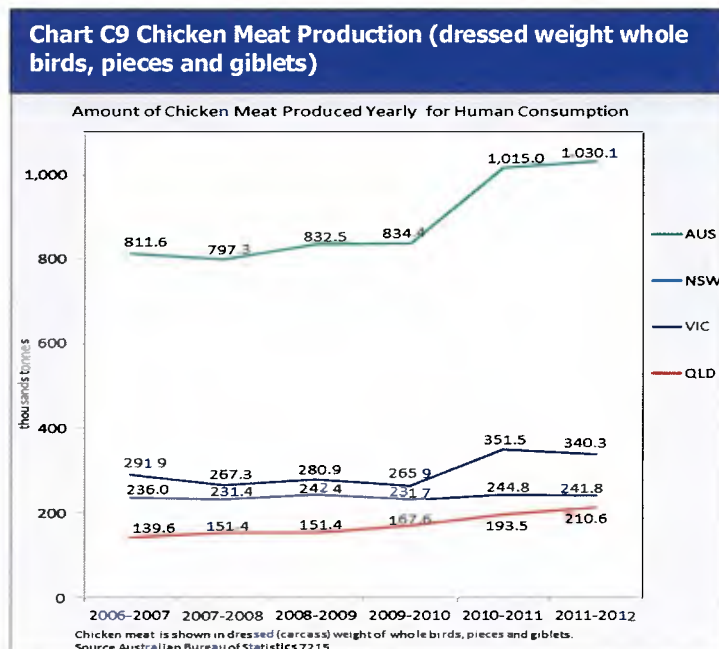
From available figures, QLD was the standout performer having risen from 89.6 million (19.7% in 2007) to 119.2 million (21.6% in 2012), up 33% and national share up 1.9%. The missing link here is the confidential SA and WA numbers. However, the combined SA, WA slaughter can be estimated if the Tasmania slaughter is discounted (on average estimated at 1% of the total Australian annual slaughter over the period). Since no chickens are slaughtered in the ACT or NT the estimated aggregate chicken slaughter figure for SA and WA rose from 87.8 million (19.3% in 2007) to 130.2 million (23.6% in 2012) up 48.3% with the national share up 4.3%. These and QLD figures are substantial, indicating considerable growth of Australian chicken meat farm output in QLD, SA and to a lesser extent WA at the expense of NSW and VIC. Reverting to figures available only for 2006-2007, the Hunter region slaughtered 33.3 million (7.3% in 2007). Western Sydney and Central Coast combined slaughtered 66.4 million broilers (14.6% in 2007). When combined these figures represented 22% of the national slaughter in 2007 more than QLD and more than SA and WA's estimated combined slaughter. Moreover, these three regions represented 66.4% of the total NSW slaughter for 2007.

4.6. Production

At the 2013 Department of Agriculture, Fisheries and Forestry ABARES Outlook 2013 conference ABARES chief economist Dr Harris said:

*"Projected growth in chicken meat production over the medium term is largely in response to increased consumer demand, as retail prices are expected to remain substantially lower than for beef, lamb, and pork. By 2017-18, chicken meat production is projected to be around 1.2 million tonnes compared to an estimated 1 million tonnes for 2012-13."*⁴⁹

If, as prognosticated over the next 5 years chicken meat production increases 20% then which regions are most likely to succeed in taking advantage of this economic opportunity. While, an answer here would be speculative the information contained in chart C9 provides an indication of the current Australian production landscape.



Discounting Tasmania, Australia's total chicken meat production corresponds to the total dressed carcass weight of all chicken meats processed from all grow-out farms in NSW, VIC, QLD, SA and WA. Unfortunately, due to confidentiality turkey and chicken meat production figures for SA and WA were unavailable.

In the five years from 2007 to 2012 Australian total chicken meat production rose from 811,600 to 1,030,100 tonnes

(up 26.9%). Although over the same period NSW production rose 16.6% from 291,900 (36 % in 2007) to 340,300 tonnes (33% in 2012) as a proportion of total national production it fell nearly -3%. Victoria's production rose only 5800 from 236,000 (29.1% in 2007) to 241800 tonnes (23.5% in 2012) up a scant 2.5% with a resultant -5.6% fall in national production. Conversely, QLD production rose from 139,600 (17.2% in 2007) to 210,600 tonnes (20.5%) up 50.9% but more importantly its share of national production was up nearly 3.3%. Confidentiality again prevented recorded figures for SA or WA. Irrespective a combined SA and WA production estimate can be determined using the same discounting methodology used to calculate slaughter numbers resulting in aggregate SA and WA production up 64.8% from 144,100 (17.75% in 2007) to 237,500 tonnes (23.1% in 2012) and their combined share of national production up 5.3% over the period.

The figures for QLD and estimated figures for SAWA are even more interesting after calculating the average dressed weight of a chicken carcass. Despite substantially increasing their chicken slaughter numbers over the five years from 2007 to 2012, the estimated average dressed carcass weight of a chicken produced in QLD is 1.66kg and SAWA 1.7kg. This is less than produced in NSW 1.9kg and VIC 1.87kg. Considering this, if QLD and SAWA had increased the average dressed carcass weight of their chickens they would have had an even greater share of national chicken meat production (as measured by weight) that could have further impinged on NSW production statistics.

4.7. Gross Value

The ABS¹⁰ uses the following ingredients to calculate the gross value of an agricultural commodity by multiplying price and quantity estimates,

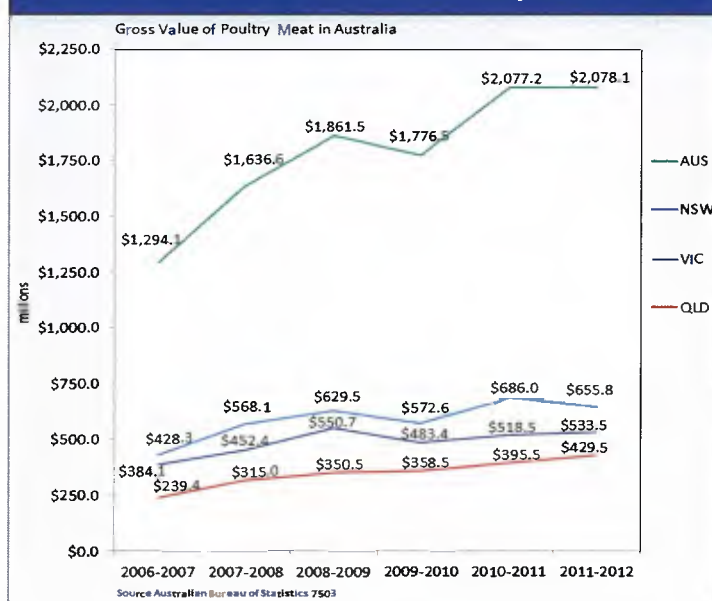
- Poultry price information from Non-ABS sources (marketing authorities and industry).
- Price is the average unit value of a commodity attained in the market.
- ABS provides quantity data.

Chart C10 shows the total gross value of poultry in Australia from 2007 to 2012. In the previous section information available related to chicken meat production whereas here only poultry information was available excepting 2007- 2008 which is chicken meat information.

From 2007 to 2012, Australia's total gross value of poultry meat rose from \$1,294.1 million to \$2,078.1 million (up 60.6%). In NSW gross value was up substantially at 53.1% from \$428.3 million (33.1 % in 2007) to \$655.8 million (31.6% in 2012) but its proportion of the national gross value still fell -1.5%. VIC gross value was also up 38.9% from \$384.1 million (29.7 % in 2007) to \$533.5 million (25.7% in 2012). Nonetheless, this translated to an overall -4% decline in its share of national gross value. If the gross value of poultry products increased markedly in NSW and VIC from 2007 to 2012, yet both states still suffered falls in their national share then what states benefitted. Yet again, it was QLD and SAWA. The gross value of QLD poultry rose appreciably from \$239.4 million (18.5% in 2007) to \$429.5 million (20.7% in 2012) up 79.4% with its share of gross value nationally up just under 2.2%, a dynamic performance. Again, the gross value figures for SA and WA was unavailable except for SA in 2012 with a gross value of \$289.2 million representing 13.9% of the national gross value. Despite this, previous methodology can be used to estimate the combined gross value of SA and WA which rose from \$242.3 million (18.7% in 2007) to \$459.3 million in 2012 (22.1%) up 89.6% representing a 3.4% increase in their combined share of Australia's total gross value of poultry meat. Once again, while NSW and VIC share of national gross value decreased QLD and SAWA (estimated) increased.

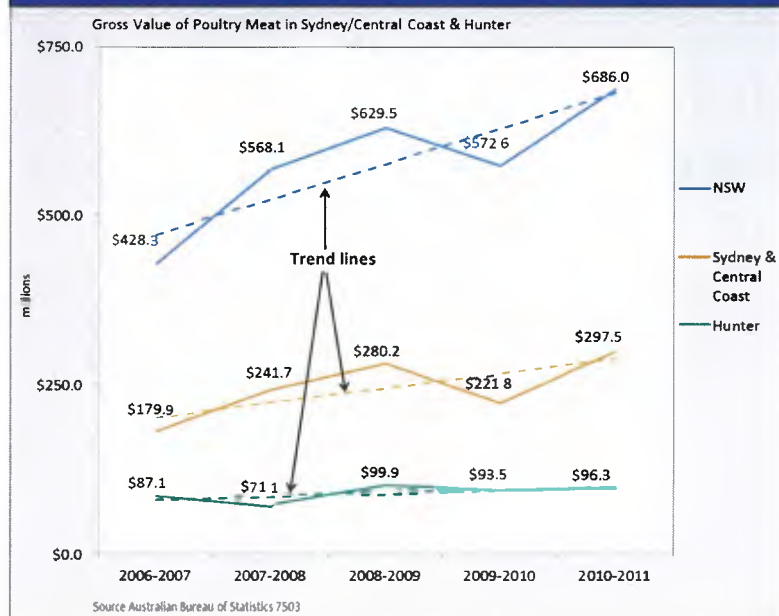
In light of the continued decline in NSW gross value of poultry meat, it is important to review the performance of the Hunter, Central Coast and Western Sydney regions

Chart C10 Gross Value of Australian Poultry meat



depicted in chart C11. Recent regional poultry output figures further consolidate the importance of these three regions to the NSW poultry industry as depicted in the trend

Chart C11 Gross Value of Poultry meat in Sydney/Central Coast & Hunter regions



lines. According to ABARES, in 2010-2011 the poultry meat industry was a stellar performer regarding total agricultural output for the Newcastle and Lake Macquarie region and the Hunter Valley region. In the Newcastle and Lake Macquarie region, poultry meat was the best performer with total gross production value of \$13 million¹¹ (45% of total agricultural output for Newcastle and Lake Macquarie region). In

support was a commendable second place to cattle and calves for the poultry meat industry in the Hunter valley region with total gross value production of \$83 million¹² (25% of total agricultural output for the Hunter Valley region). In aggregate, these two regions produced poultry meat with a gross value of \$96 million representing approximately 35% of all agricultural production for the two regions combined.

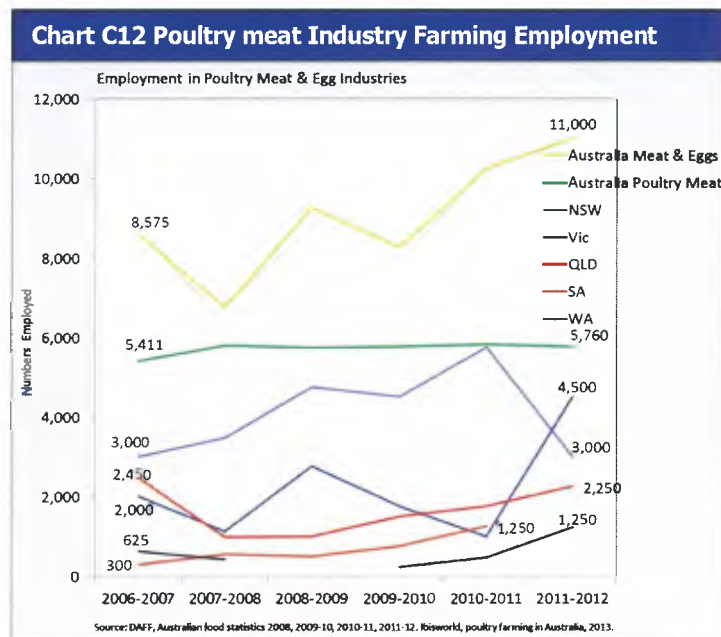
Chart C11 also shows poultry meat production in the Greater Sydney region (includes the Central Coast) was no less of a performer in 2010-2011. In fact, according to ABARES it was the leader with total gross value of agricultural output of \$297.5 million¹³. This represented 40% of the total gross value of agricultural output for the Greater Sydney region (\$749 million). According to ABS figures, Central Coast poultry meat had a gross value of \$107.3 million representing 14.4% of greater Sydney's total agricultural gross output and 15.6% of NSW total poultry gross output. Subsequently Sydney region's poultry farming gross value of production was \$190.2 million or 25.5% of greater Sydney's total agricultural output by gross value and 27.7 % of total NSW gross value of poultry meat production. Using ABARE 2010-2011 figures it is estimated the Hunter, Central Coast and Sydney poultry regions produced 57.4% (\$394 million) of the total gross value of NSW poultry meat. Although this figure is significant, it includes all poultry not just turkeys and chickens. Nonetheless, chicken and to a lesser extent turkey meat comprised the great majority of this production. These figures provide evidence as to the poultry industry's economic value to these three regional economies.

When considering the future need to promote and grow the poultry meat industry this economic information could prove invaluable in prosecuting a case for supporting and growing the industry in the three regions. Supporting the industry in the Hunter, Central Coast and Western Sydney regions is vital to abating the ongoing threat posed by competitor states especially QLD and SA whose expanding poultry industries provide their local regions continuing economic growth at the expense of the Hunter, Central Coast and Western Sydney regions of NSW.

4.8. Employment – Poultry Farming

Employment information for the poultry meat industry at a state level was unavailable excepting for national figures provided by IBISWorld. Chart C12 indicates total employment rose from 5411 (2006-2007) to 5760 (2011-2012) up about 6.5%.

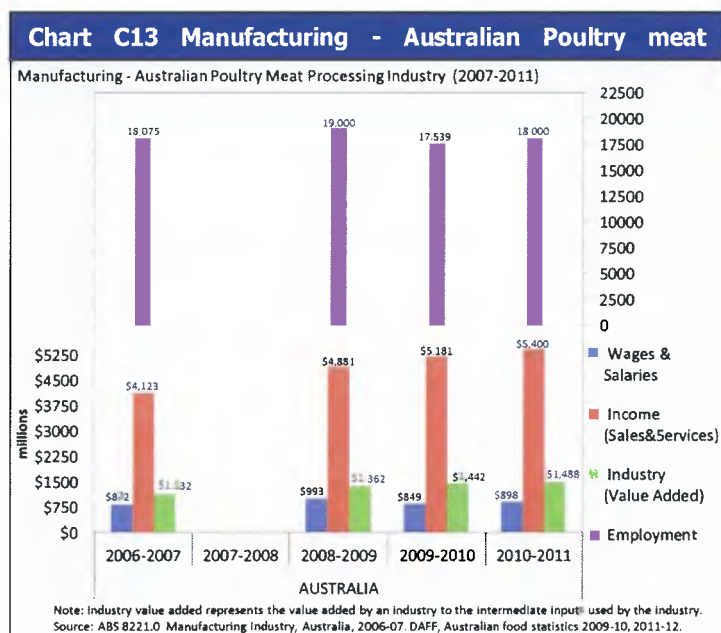
The remaining information in the chart contains total employment for both the poultry meat and egg industries. This chart has been included for information purposes only.



4.9. Manufacturing – Poultry Processing Inputs - Outputs

Chart C13 represents inputs (employment, wages and salaries) and outputs (revenue from sales and services and industry value added production) for the manufacturing sector of the Australian poultry meat industry.

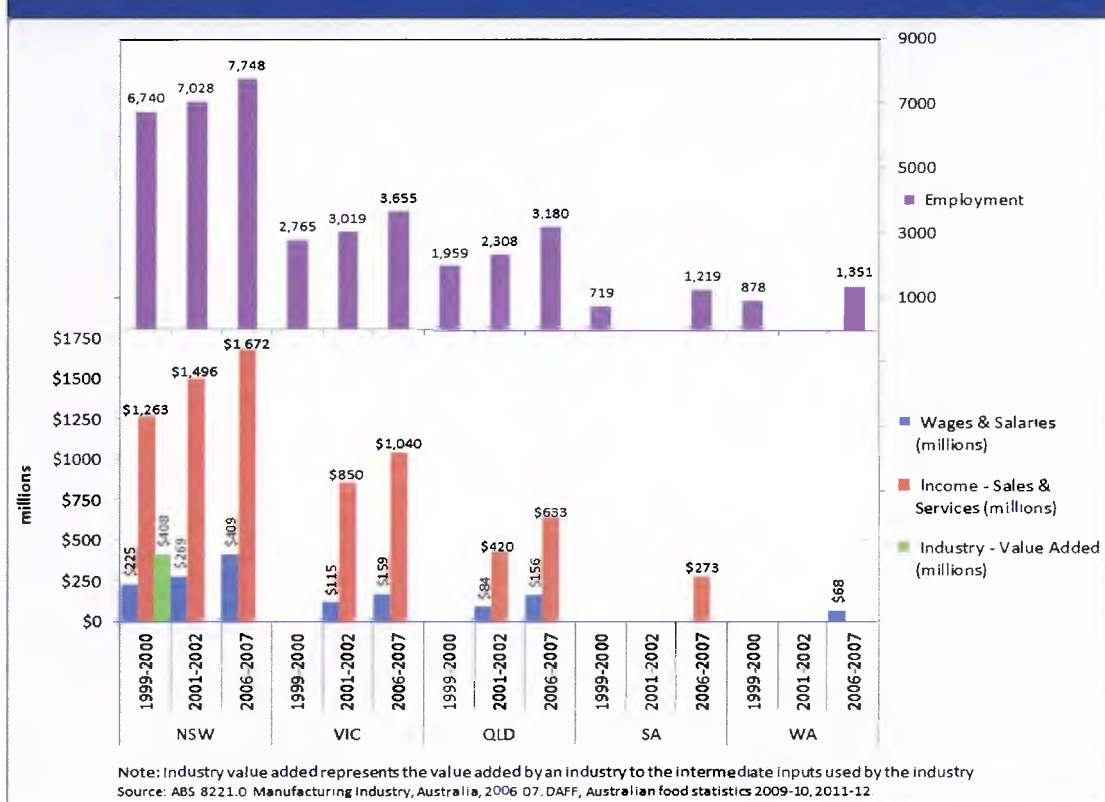
Over the period 2006-2007 to 2010-2011, employment in the poultry processing industry fluctuated. By mid 2007, 18,075 people were employed. This



number rose by 5.6% to approximately 19,000 (2008–2009) before falling 5.3% to 17,539 (2009–2010) then rising again by 2.6% to 18000 (2010–2011). On aggregate over four years, employment was flat. Wages and salaries followed a similar trajectory. Total wages and salaries rose from \$822 million (2006–2007) to \$993 million (2008–2009) up \$171 million (20.8%) only to fall to \$849 million (2009–2010) down \$144 million (-14.5%) then rise again to \$898 million (2010–2011) up \$49 million (5.8%) resulting in a 12.1% aggregate increase in total wages and salaries. Opposing this trend was processor revenue from sales and service. Over two years, processor revenue rose from \$4,123 million (2006–2007) to \$4,881 million (2008–2009) up \$758 million (18.4%). The following year saw a reduced annual rise to \$5,181 million (2009–2010) up \$300 million (6.2%) then another rise to \$5,400 million (2010–2011) up 4.2%. This translates into cumulative processor revenue of 30.9% over four years. Finally, processor added value. In 2006–2007 processor value added output was \$1,132 million rising to \$1,362 million (2008–2009) up \$230 million (20.8%) over two years. This upward trend continued reaching \$1,442 million (2009–2010) up \$80 million (5.9%) and \$1,488 million (2010–2011) up \$46 million (3.2%). Over four years processor value was up 31.5%. Over the four years, employment, wages and salaries (inputs) were virtually flat. Conversely, outputs trended up albeit industry value added production only marginally compared to revenue from sales and services.

The foregoing information over the period 2006–2007 to 2011–2012 provides an

Chart C14 Economic Value of the States Poultry meat Processing (manufacturing) Industry



encouraging overview of the Australian poultry processing industry. Outputs are increasing while inputs are stable indicating increased productivity and efficiency.

Previously, analysis of state centric information has balanced analysis of national poultry meat data. The problem here is that the ABS only conducts agricultural census every five years. Thus, the most recent state based statistical information available appears in chart C14. Unfortunately, this information does not correlate with that depicted in chart C13. Nonetheless, as the most recent state based information available it is worthy of discussion.

Table T2 Manufacturing - State Poultry Processing				
Performance Poultry Processed Food Industry (Selected States)				
	INPUTS		OUTPUTS	
	Wages & Salaries (% Variation) (2001-2002 to 2006-2007)	Employment (% Variation) (1999-2000 to 2006-2007)	Income - Sales & Services (% Variation) (2001-2002 to 2006-2007)	Industry - Value Added (% Variation)
NSW	52.0%	15.0%	11.8%	N/A
VIC	38.3%	32.2%	22.4%	N/A
QLD	85.7%	62.3%	50.7%	N/A
SA	N/A	69.5%	N/A	N/A
WA	N/A	53.9%	N/A	N/A

Table T2 (derived from chart C14) provides a brief state based analysis of the poultry food manufacturing industry from 2001-2002 to 2006-2007. Employment, wages and salaries input trends are up significantly as is the trend for output revenue from sales and services. Unfortunately, the absence of figures for industry value added production outputs prevents comparative analysis of all

state inputs and outputs. However, a limited comparison is considered.

Over six years SA leads employment growth at 69.5% closely followed by QLD at 62.3% then WA at 53.9% while NSW employment increased 32.2% and VIC 15%. This could simply mean employment as an input to production versus outputs of sales and valued added was contained in NSW and VIC allowing for efficiencies in outputs of sales and valued added. Alternatively, these figures indicate increased production in QLD, SA and WA at the expense of NSW and VIC. This latter scenario correlates and validates information presented previously in charts C4 and C5. Although table T2 shows similar trends for wages and salaries and revenue from sales and services this data is only available for NSW, VIC and QLD making further comparison problematic. For this reason table T2 provides a guide to the performance of the states regarding manufacturing of poultry meat products. Current state centric poultry meat manufacturing information would have enabled detailed comparison to determine the better performing states. Therefore, further research is required into the productivity of each state's poultry meat manufacturing once the ABS releases the results of the next agricultural census. This will greatly assist in further prosecuting the case involving the economic value of the poultry meat industry in the Hunter, Central Coast and Western Sydney regions.

4.10. Exports

The Australian Government Department of Agriculture, Fisheries and Forestry (DAFF) ABARES¹⁴ forecast poultry exports will be \$46.5 million in 2013-2014 and reach \$53.6 million by 2017-2018.

Chart C15 displays the total value of Australian poultry (includes all types of fowl and game birds) exports to APEC and ASEAN trading blocs and individual countries.

Chart C16 displays the total value of each states contribution to Australia's total exports of poultry meat. Analysis of this information is absent, as the purpose is not to dwell on how much Australia has exported in the past or may in the future. Rather, it illustrates the opportunity for the poultry industry (that should exist) to grow outside Australia's border at a rate greater than historical figures represent.

ABARES's projection of poultry meat exports by volume indicates an increase from 33,600 tonnes (2011-2012) worth \$39.7 million to 42,500 tonnes (2017-2018) worth \$53.6 million seems conservative, representing aggregate annual growth in export value of \$2.32 million.

Chart C15 Processed Poultry Exports – Australia - Asia

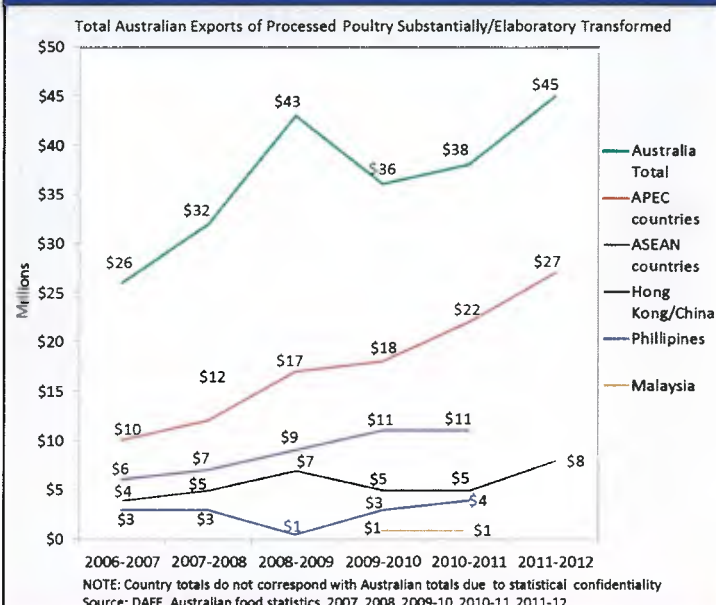
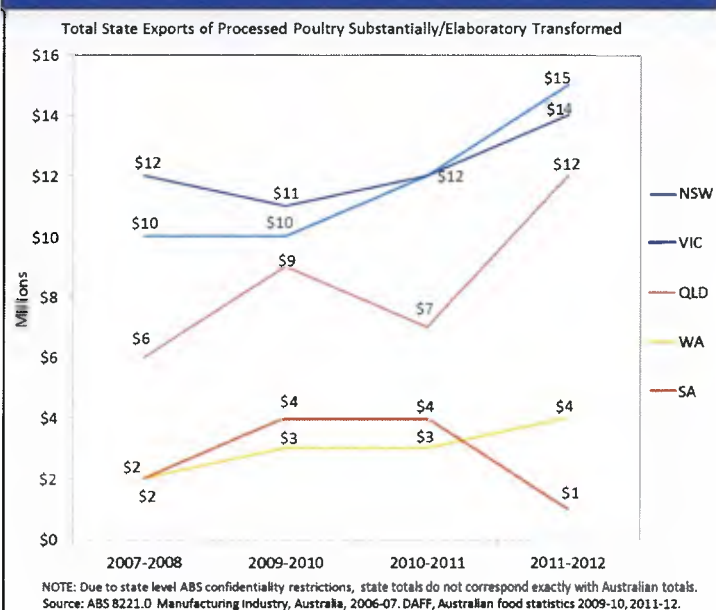


Chart C16 Processed Poultry Exports – All Australian Sates

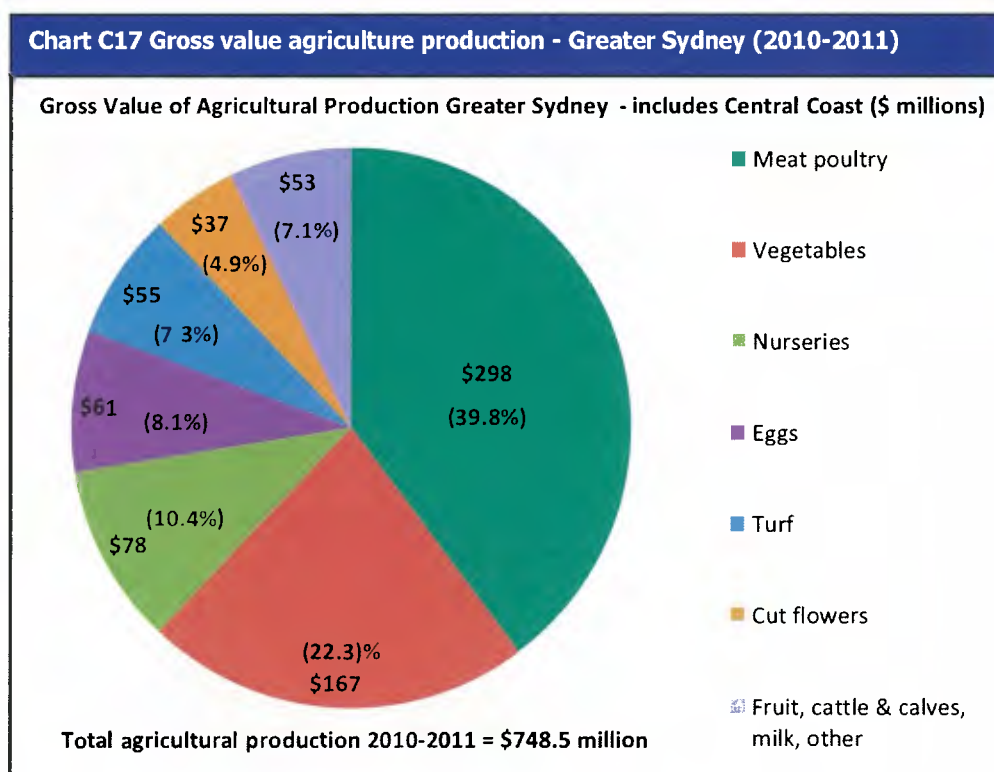


Already one of the Western Sydney region processor companies exports value added products. The geographical proximity of existing poultry meat processors to the Sydney and Newcastle shipping terminals provides these regions a competitive advantage over other poultry meat regions from reduced logistical costs (mainly transport). Regardless, as

global populations increase so does demand for high protein nutrition. This provides the poultry meat farming and processing industries in the Western Sydney, Hunter and Central Coast regions the opportunity to increase export sales of value added poultry meat products. However, squandering this opportunity is inevitable without government support and encouragement.

4.11.Regional Perspective

Although the recent release of the Sydney 2031 metropolitan strategy by the NSW government identified the importance of Sydney's agricultural industries it failed to provide a plan as to how the agricultural industry would benefit. This omission must have been an oversight as chart C17 clearly shows the importance of agricultural production to the greater Sydney region. In particular the meat poultry industry was the standout agricultural performer at the last agricultural census in 2010-2011 with 39.8% of gross value of production in the greater Sydney region worth \$297.5 million (Sydney \$190.2 million and Central Coast \$107.3 million) out of a total \$748.5 million.



As Sydney's 2031 planning strategy is a consultative document, it requested submissions from interested parties. One submission came from the ARG². The ARG's review of Sydney's 2031 planning document identified issues affecting Western Sydney's

² The Agricultural Reference Group (ARG) is an agriculture industry, local government and local food interest group formed to assist the NSW Department of Planning and Infrastructure (DP&I) to obtain advice on agricultural issues regarding the development of a *Metropolitan Strategy* for Sydney

agricultural industries omitted from the planning proposal. This table identifies arguments the ARG raised in their submission as supporting evidence to the importance of agricultural industries production to Sydney's regional economy. These arguments relate directly to Sydney's poultry farming industry.

Issue raised by ARG affecting Sydney's agricultural industries	Issues Apply to Sydney's poultry farming industry
Amongst others, the chicken meat farming industry was the leading agricultural industry in the Sydney region for farm-gate production value.	Yes. <i>Sydney's poultry meat farming industry is the best agricultural performer by gross value.</i>
Maintaining agricultural land for economic development, food security, production of healthy agricultural products (poultry meat) and importantly bio-security should be a priority.	Yes. <i>Sydney's south-west is a suitable agricultural area for poultry farms.</i>
The threat from urban sprawl is such that agriculture (hence poultry production) would cease resulting in negative effects including, <ul style="list-style-type: none"> • Increased food prices and reduced quality. • Jobs lost in the poultry food processing industry and businesses that supply goods and services to this industry. 	Yes. <i>Urban sprawl and lifestyle neighbours concerns Sydney poultry farmers.</i>
Recommendations by ARG to improve Sydney's agricultural industries	Recommendations Apply to Sydney poultry farming
Keep existing farms	Yes. <i>All these recommendations apply.</i>
Local councils need to remove impediments to development approvals allowing farm expansion hence increased production capacity.	
Standardise development application procedures across government regimes	
Review excessive regulations currently stifling productivity	
Replacement of land already lost to urban encroachment with allocation and zoning of more agricultural land providing the opportunity for new participants to enter the industry	
Permit farm land to be utilized to maximum capacity	

The ARG's submission is timely as the recommendations fit with the requirements of the poultry meat farming and processing industries namely increased productivity and cost efficiency. This can only happen if all stakeholders are supportive of the poultry meat farming and processing industries.

5. The Survey

5.1. Previous Surveys

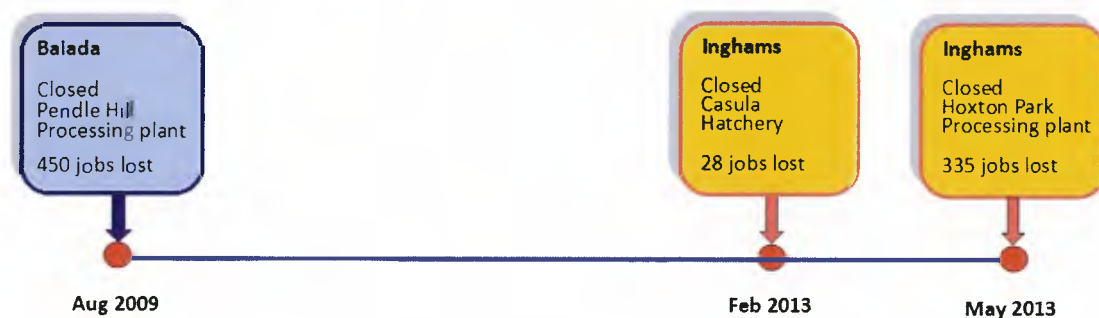
The 2009 E-Generation Marketing report into the economic worth of the NSW Chicken Meat Industry surveyed the chicken meat growing and processing industries in the Northern Rivers, Tamworth and Hunter regions. Economic information from this 2009 report formed the basis of a follow up communications strategy¹⁵ aimed at developing working relationships between the chicken meat industries and key regional stakeholders (government, business, community and political representatives). Achieving this was contingent upon developing a communication strategy. This strategy would facilitate key regional stakeholders be informed of the benefits afforded communities in promoting and developing their regions poultry meat industries. The objectives of the communications strategy were to create,

- An industry peak body of key regional stakeholders and poultry meat industry representatives.
- An incorporated poultry meat grower's body.
- A Central North Poultry Innovation website.

The Tamworth region implemented the strategy that subsequently (from available anecdotal evidence) proved successful.

5.2. Regional Issues

Although the success of the Tamworth economic study was a factor in the NSW PMIC's decision to conduct another economic survey, of significance were various issues of concern in metropolitan Sydney. Of greatest concern in the Sydney region was lack of support attended the industry by government entities. Poultry meat farmers were having difficulties getting councils' approval for development applications for on farm infrastructure. Conversely, councils were not only allowing urban and small lifestyle developments that encroach on or near poultry meat farm land but were also imposing restrictions on poultry farming operations resulting from complaints by farmers 'new' neighbours. These anomalies prevented growers from building new infrastructure to improve efficiencies and offset rising costs. In turn, the inability of poultry meat farmers to grow their businesses hampered growth of processors facilities. If left unresolved the cumulative effect of these issues threatens the viability of the poultry farming industry in the Sydney region. The spectre of the exit from the Sydney region of the poultry meat farming and processing industries is of concern. Over the past few years, processors have closed large production facilities in the Sydney region migrating production to other states and NSW regions. This timeline shows these closures.



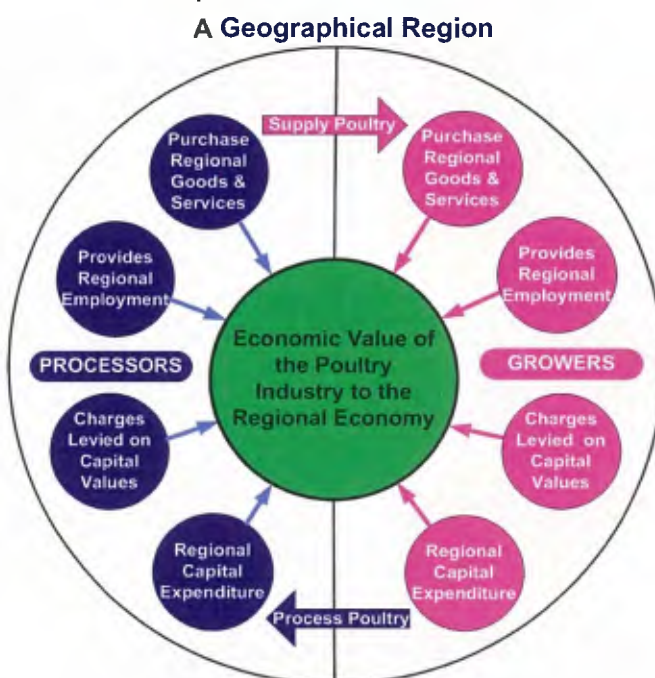
This ongoing threat to the future survival of the poultry meat farming and processing industries in the Sydney region proved crucial to the PMIC's decision to proceed with a survey to gather and a report to exhibit evidence of the economic value of these industries to the Sydney's regional economy.

5.3. Development

A mandatory requirement specified by the NSW PMIC was the industry level aggregation of economic information gathered from poultry meat farmers that grow broilers and turkeys subsequently harvested by processors who in turn manufacture poultry meat products for sale to consumers. Achieving this outcome required development of a model (appendix 1) representing the goods and services consumed by growers and processors in the poultry meat value chain. The model depicted here formed the basis for development of grower and processor survey instruments.

The grower's survey consisted mainly of questions designed to capture financial information regarding the costs involved in operating a commercial poultry meat farm. This would require growers to access their business records that may not be readily available. This posed a problem as to the most appropriate method to distribute the survey. A telephone survey would be time consuming and violate grower anonymity. Web and email distribution options were not viable due to varying levels of grower computer knowledge and skills. Faxing the survey was unsuitable as many growers had legacy fax equipment making distribution unreliable. Direct mail out was the only viable survey distribution and return option.

NSW PMIC Poultry Meat Survey 2013
Proposed Economic Value Model



The design and development of the processor surveys was problematic. Value chains varied between processors with some processors organisations being vertically integrated and others not. This required a different approach to development of unique processor surveys albeit ones that still maintained the basic tenet of the economic value model. Regardless, all processor surveys developed were in accordance with the economic model. Surveys were distributed and returned via email on the proviso that all processors financial information was in strict confidence.

5.4. Content

All grower and processor surveys included explanation of the following,

- On whose behalf the survey was being conducted (NSW PMIC)
- The purpose of the survey
- What information would be gathered
- How this information would be used
- The importance of the information provided
- Maintenance of participant confidentiality
- Instructions as to completing and returning the survey

All grower surveys required information be provided solely for the 2011/2012 financial year based upon questions in relation to,

- Grower details
- Farm and grow out statistics
- Labour consumed
- Revenue generated
- Value of capital assets
- Value of goods and services purchased
- Grower comments

This report primarily provides an economic insight into the poultry meat industry. Financial information is the focus of discussion and where relevant, quantified by estimates.

5.5. Promotion

The following list outlines steps to promote the benefits afforded grower participation in the survey,

- On farm meetings with grower representatives designed to garner support and enable them communicate the purpose, outcomes and benefits afforded growers from survey participation.
- Introductory letters distributed to the grower population in the Sydney region.
- All survey questionnaires contained an introduction section explaining the purpose and benefits of survey participation.

- Follow up requests to grower representatives enlisting their support by communicating to their members the importance to them of completing and returning the survey.
- The support of the NSW Farmers Federation by promoting the survey during,
 - Ad hoc visits to growers farms
 - Grower and grower representative meetings
- Enlisting processor representatives to encourage growers to participate in the survey
- Distribution to growers of post survey letters reiterating confidentiality of grower financial information along with various other reasons why growers should complete and return their surveys.

5.6. Distribution

Table T3 Economic Value Survey Distribution and Return Statistics (Sydney region)							
Region	Grower Type	Surveys Distributed	Total Surveys Distributed	Surveys Returned	% Surveys Returned per Poultry Type	Total Surveys Returned	% Total Surveys Returned
Sydney	Chicken	85	100	9	10.59%	13	13.0%
	Turkey	16		4	25.00%		

Table T3³ lists grower type, distribution and return rates of the survey in the Sydney region. Distribution of the survey questionnaire to chicken and turkey growers in the Sydney region was by Australia Post in accordance with grower contact information provided to Doublj Consulting by the NSW PMIC. As communication of the survey's importance permeated the region growers that did not receive or had lost or disposed of their survey contacted Doublj Consulting requesting dispatch of another survey.

³ Of the 16 turkey growers 15 had their turkeys processed in the Sydney region while one had theirs processed in the Hunter region.

6. The Results

6.1. Sydney Region – Poultry Meat Farming

6.1.1. Growers Response Rates

From a population of 100 (85 broiler and 16 turkey growers), 13 surveys were returned with one incomplete leaving an effective survey return rate of 12.1%. Of the 85 broiler growers 9 (10.6%) returned completed surveys while 16 (25%) turkey growers returned completed surveys. The low survey response rate made statistical analysis of the survey information problematic as the number of responses was outside the required minimum statistical 90% confidence level with an accuracy of $\pm 20\%$. Therefore, unless otherwise stated poultry grower information presented in this section provides a guide to the economic value of the Sydney region's poultry farming industry.

6.1.2. The Growers

Grower profiles were included in the survey questionnaire in order to provide a context to the survey's objective of collecting economic data. Table T4 provides this information. Although the average age of chicken growers was older than turkey growers the difference was only 2.3 years resulting in an average age of 49.4 years. This aging profile is impaired further as only 23% of poultry growers plan to pass the farm on to family members while 15% plan to sell whereas 56% of chicken and 75% of turkey (61.5 % of poultry) growers have no planned future for their business.

Table T4 Grower Profiles				
Sydney Poultry Grower Details				
Description		Totals		
		Chicken	Turkey	Poultry
Growers role	Owner grower	7	4	11
	Farm Manager	2	0	2
	Authorised rep	0	0	0
	Other	0	0	0
Growers average age		50.6	48.3	49.4
Succession plan	YES	2	1	3
	NO	7	3	10
Succeeded by	Family members	2	1	3
	Non Family members	0	0	0
	Sell	2	0	2
	Unknown	5	3	8

6.1.3. The Farms

Table T5 Farm Profiles				
Sydney Region Poultry Farm Details				
Description	Chicken Farms		Turkey Farms	Poultry Farms
	Tunnel	Conv	Conv	All Types
Number of farms owned/managed	2	9	4	15
Average number of sheds per farm	3.5	3.0	5.5	3.7
Average area of sheds per farm (m ²)	5497	4092	7616	5219
Average number of batches per year per farm	5.3	5.2	2.4	4.5
Average number of birds per batch	106825	65795	43500	65320
Average number birds per m ² per farm	19.0	16.0	5.2	N/A
Average mortality rate per farm	4.5%	5.2%	9.9%	6.4%

Although Table T5 combines aggregate and average grower survey data it has limitations due to the low number of poultry grower survey respondents. Discounting mortality rates, more accurate information is available in section 6.3.3 regarding chicken meat owner grower farm capacity and production levels. However, as the processor that contracts all Sydney region turkey growers did not participate in the survey, the only turkey farming production information available comes from the growers survey and is presented in table T5.

Table T5 contains discernible differences between chicken and turkey meat farms. Compared to broiler growers on average the turkey growers surveyed have more sheds per farm providing greater total floor area thus grow out capacity. However, there are reasons for this. On average the annual number of batches turkey farmers receives is less than half that received by broiler farmers due to the longer grow out period required for turkeys. Comparing conventional grow out shed capacity of turkeys versus broilers indicates turkeys require at least three times the floor space of their broiler cousins. Another factor is turkey mortality rates are approximately twice that of broilers (refer table T5) due to them being more difficult to rear than broilers.

6.1.4. Employment

Table T6 Employment			
	Chicken	Turkey	Poultry
Average weekly hours worked (grower & family)	89	77	86
% of growers surveyed that employed non contract (full time, part time or casual) OR contract labour	66.7%	75.0%	69.2%
% of growers surveyed that employed non contract (full time, part time or casual) AND contract labour	11.1%	0.0%	7.7%
% of growers who employed non contract labour (full time, part time or casual)	66.7%	25.0%	53.8%
Average number engaged as non contract labour (full time, part time or casual) (Applies only to those growers that engaged employees)	2.0	4.0	2.3
% of growers who employed contract labour	11.1%	50.0%	23.1%
Average number engaged as contract labour (Applies only to those growers that engaged contract labour)	6.0	3.0	4.0
Total cost of all labour	\$365,643	\$30,000	\$395,643
Average cost of all labour	\$60,941	\$15,000	\$49,455

Table T6 indicates of the 13 poultry meat growers (9 chicken and 4 turkey) that returned surveys six chicken (66.7%) and three turkey (75%) growers (69.2% of poultry growers) employed either non-contract or contract labour⁴. Conversely, only one chicken (11.1%) and no turkey growers, employed non-contract and contract labour. In addition, six chicken growers (66.7%) and one turkey grower (25%) representing 53.8% of poultry growers employed 12 and four people respectively as non-contract labour. Employment on a contract basis resulted in one (11.1%) chicken and two (50%) turkey growers, employing six and six people respectively (12 total).

Averages reveal six (66.7%) chicken growers each used two non-contract labour employees but only one turkey grower averaged using four contract labour employees. Conversely, one (11.1%) chicken grower averaged six contract employees while two (50%) turkey growers averaged three between them.

Chicken growers total labour costs for 2011/2012 were \$365,643 over twelve times the \$30,000 turkey farmers spent on labour, a significant difference. Calculating a range for total employment numbers and labour costs for turkey growers is problematic. Estimated turkey growers labour costs were \$120,000 - \$360,000 while estimated chicken meat growers labour costs were \$2.5 - \$5.2 million. However, apply caution to these figures.

⁴ Non contract and contract labour includes anyone who was paid wages, salary or fee for services including growers and their family members.

6.1.5. Revenue

Table T7 Gross Revenue		
Description	Chicken	Turkey
Estimated average gross annual revenue	\$282,324	\$ 614,000

It would appear from table T7 compared to growing chickens growing turkeys is lucrative except that one of the turkey grower's

annual revenue was statistically classified an outlier. In this case, the assumption is the turkey grower revenue is valid. Nonetheless, the value has biased (distorted) the average of both turkey grower's revenues and poultry growers given only three of the four turkey growers provided revenues as opposed to revenues provided by all chicken growers (9). Caution should apply when considering these figures.

Processor survey results later in this report provide accurate broiler growers revenues identified as grow out fees paid to broiler growers only. Alternatively, the processor that contracted 94% of all Sydney region turkey growers did not participate in the survey. Thus, as no processor provided turkey grow-out fees for this cluster it is estimated turkey growers revenue is \$3.7 - \$6.1 million. Again, apply caution to this estimate.

6.1.6. Capital Assets

Table T8 Capital Assets			
Description	Chicken	Turkey	Poultry
% of growers that purchased capital assets from Sydney region	66.7%	N/A	58.3%
Total cost of capital assets purchased from Sydney region	\$270,650	N/A	\$720,650
Average value of capital assets purchased from Sydney region	\$45,108	N/A	\$102,950
Total value of on farm capital assets used solely for growing poultry	\$14,850,000	\$3,260,000	\$18,110,000
Average value of on farm capital assets used solely for growing poultry	\$2,121,429	\$1,086,667	\$1,811,000

Poultry meat growers must invest in capital assets as required by their processor. Poultry farm capital assets (sheds, water, feed, electrical systems and other machinery and equipment) represent sunk costs and as such are not readily sold or disposed. Capturing capital asset values provides an insight into the major investment growers make in their farms. Just as important is capturing the cost to supply, build and/or install capital assets. Table T8 indicates the total value for those growers that provided capital asset values at just over \$18 million. Using the average of capital asset values per farm (\$1.8 million) it can be estimated the total value of all capital assets on poultry meat farms in the Sydney region as being in the range of \$139 - \$259 million ($\pm 30\%$). The bottom value in the range may be conservative although caution is advised applying the high range value.

Regardless of type, capital asset items must be supplied/built/installed/commissioned by business entities external to the poultry meat farming industry. Table T8 indicates 58.3% of poultry growers purchased capital assets from Sydney region suppliers at an average value of \$102,950 per grower (note: as only one turkey grower purchased capital items confidentiality excluded this value being included in the table). It can be estimated that the total value of capital assets purchased from the Sydney region across all growers surveyed falls in the range \$4.6 million to \$8.6 ($\pm 30\%$). Conversely, the estimated amount of capital goods purchased from other regions was \$3.3 - \$6.1 million. It is advisable to apply caution to these figures.

6.1.7. Goods and Services

Grower purchases of goods and services were the main thrust of the survey. As opposed to the one off (usually) large expense of capital assets the costs of goods and services purchased is ongoing to ensure production of poultry meat continues successfully on a daily basis.

Compared to average capital asset purchases of 63.7% from the Sydney region poultry growers purchases of goods (96.3%, table T9) and services (98.6%, table T10) were over 50% greater from

Table T9 Goods Purchased			
Description	Chicken	Turkey	Poultry
Growers total cost of goods purchased	\$745,716	\$480,000	\$1,225,716
Average cost of goods purchased	\$82,857	\$160,000	\$102,143
Average % of goods purchased from Sydney region	96.1%	96.7%	96.3%

Table T10 Services Purchased			
Description	Chicken	Turkey	Poultry
Growers total cost of services purchased	\$456,282	\$165,000	\$621,282
Average cost of services purchased	\$50,698	\$82,500	\$56,480
Average % of services purchased from Sydney region	99.4%	95.0%	98.6%

the same region. This figure is a marker of the Sydney region's ability to supply nearly all poultry grower's capital goods and services requirements as opposed to only supplying about two thirds of grower's capital asset requirements.

All broiler growers that returned surveys and 75% of turkey growers that returned surveys provided information on goods and services expenditure. Applying a 90% level of confidence at $\pm 30\%$ margin it is estimated that total goods and services purchased by Sydney region poultry growers from Sydney suppliers was \$7.6 million - \$14 million and \$4.3 million - \$7 million respectively. The purchase of goods and services from outside the Sydney region was \$291,000 - \$540,000 and \$61,000 - \$113,000 respectively. It is advisable to apply caution to these figures.

In summary, the estimated total value of the poultry farming industry to the Sydney regional economy is at \$55.8 - \$73.3 million. Apply caution to these figures.

6.1.8. General Comments

Table T11 General Comments Q1 - 4				
Statement	Description	Response	Totals	%
1	The chicken/turkey meat industry in the Sydney region has a good future.	Agree	12	92.3%
		Disagree	1	7.7%
2	In the past year, I have had few problems dealing with regional shire/local council/s regarding chicken/turkey related issues.	Agree	7	53.8%
		Disagree	6	46.2%
3	In the past year, I have had few problems dealing with state government departments regarding chicken/turkey related issues.	Agree	6	46.2%
		Disagree	7	53.8%
4	I have a good business relationship with the processor company that supplies my chickens.	Agree	12	92.3%
		Disagree	1	7.7%

In this last section, survey participants responded to four statements and three questions. Table T11 indicates to what degree they agreed or disagreed with each of the four statements. Respondents indicated their degree of belief in each statement by selecting from a modified six point Likert scale consisting of these descriptors 'definitely agree', 'generally agree', 'slightly agree', 'slightly disagree', 'generally disagree' and 'definitely disagree'. Responses were aggregated providing results as shown in table T11. For statement one 92.3% of responses identified the future for their industry in the Sydney region as being good while responses to statements two and three were uniformly split between few or numerous problems with councils and state government departments. The responses to statement four overwhelmingly indicated good business relationships between growers and their processors. Growers' responses to questions five, six and seven offer an insight regarding reasons for negative responses.

Question five (table T12) revealed (unsurprisingly) 32% of responses nominated urban encroachment on poultry meat farms as the primary risk. Another 32% thought industry related risks such as the power of supermarket chains over processors, the threat of imports and disease from bio security failures were of greatest risk. Notably 18.2% of responses indicated grower processor contractual issues as being problematic. Surprisingly, only 9% of responses identified rising input production costs as impinging on profit margins. Of the remainder, only 4.5% mentioned council related regulations/restrictions and another 4.5% noted neighbour complaints as problematic.

Table T12 General Comments Q5**Q5. What do you consider as being the main threats/risks to the sustainability of your chicken meat business in the Sydney region?**

Processors	
Contract terms & conditions (e.g grow fees, labour requirements, grower tenure), growing chickens on processor owned farms	4
Business restrictions	
Reduced profitability due to increasing input costs of capital & other goods & services including: utilities (water, gas) - development costs (e.g shed construction, capital works) - energy (electricity, fuels) - Litter, repair & maintenance of infrastructure	2
Government	
Local council - rules & regulations (e.g planning/operational/reporting requirements/restrictions)	1
Social/Community/Media	
Neighbour complaints	1
Demographics	
Geographic (urban development/encroachment)	7
The Industry	
Power of major supermarket chains over processors, imports, disease (bio-security)	7
Total Responses	22

Question six (table T13) asked growers to nominate issues affecting their business. This resulted in a majority of responses (62.5%) indicating grower processor contractual issues of greatest concern to their businesses. However, this contradicts responses given for statement four where previously 92% of responses indicated grower-processor business relationships were good. The remaining 32.5% of responses indicated odour, adverse media coverage resulting in bad publicity for the poultry meat farming industry and animal welfare were issues of concern.

Table T13 General Comments Q6**Q6. What issues (if any) affected your chicken meat business?**

Environmental	
Odour	1
Processors	
Contract terms & conditions (e.g grow fees, labour requirements, grower tenure), negotiating power over grower fees, not paying growers on time	5
Social/Community/Media	
Bad publicity (Adverse media coverage)	1
The Industry	
Animal Welfare (RSPCA, other groups)	1
Total Responses	8

The final question (table T14) invited growers to provide comments on any other issues. As for question 5 of greatest concern to 37.5% of respondents was government related issues including local council regulations and production restrictions, poor grower/council relationships and a request for state government to provide industry subsidies. A further 25% thought grower-processor contract issues were problematic and another 25% believed supermarket power over processors was an issue. Only 12.5% believed rising production input costs were of concern.

Table T14 General Comments Q7	
Q7. Do you have any other comments?	
Processors	
Contract terms & conditions (e.g grow fees, labour requirements, grower tenure)	2
Business restrictions	
Reduced profitability due to increasing input costs of capital & other goods & services including - Utilities (water, gas) - Development costs (e.g shed construction, capital works) - Energy (Electricity, fuels) - Litter - Repair & Maintenance of infrastructure	1
Government	
Local Council - Good relationship between grower & Council Rules & regulations (e.g planning/operational/reporting requirements/restrictions) State/Federal Government - should provide subsidies to the processors to assist in reducing production costs	3
The Industry	
Power of major supermarket chains over processors	2
Total Responses	8

The overarching matter of grower concern repeated in each of questions five, six and seven were grower-processor relationships mainly in relation to contractual issues. Of next concern and reoccurring in all three questions were industry related issues related to supermarket power, imports, animal welfare and disease (bio security). Government issues came third regarding (among other things) council regulations/restrictions and grower council relationships. Last, urban development was encroaching on farming land.

6.1.9. Summary of General Comments

Table T15 Summary of General Comments Q5,Q6,Q7					
Issue Category	Q5	Q6	Q7	Issues per category	% Issues per category
Processors	4	5	2	11	27.5%
The Industry	7	1	2	10	25.0%
Demographics (urban development, neighbours)	7	1	2	10	25.0%
Government (state, local)	1	0	3	4	10.0%
Business restrictions	2	0	1	3	7.5%
Social/Community/Media	1	1	0	2	5.0%
Total issues per question	22	8	10	40	100.0%
% of growers that provided responses per question	100.0%	46.2%	53.8%		

Table T15 summarises growers comments for questions 5 – 7 on issues they regarded significant. Of most concern to Sydney region growers, were processor grower relationships. Any perceived or real grower-processor relationship issues require resolution. The NSW PMIC can play an important role in facilitating the processor-grower dyad relationship is mutually inclusive to the benefit of both poultry farming and processing industries. Of next importance were industry related issues (imports, disease, animal welfare groups and power of major supermarket chains over processors). Imports and disease are ongoing issues between governments and poultry industry peak bodies while market power of major supermarkets is an ongoing issue between processors, their customers and consumer regulators. However, animal welfare is a community issue that processors have acknowledged by placing the RSPCA's paw of approval logo on particular product lines. Next were issues regarding urban encroachment on poultry farming land, lifestyle neighbour complaints and adverse local government application of legislation obstructing development applications and restricting on farm production. These last issues are ongoing and need resolving by governments needing to recognise the economic value of the poultry farming industry to their local regions by taking actions to remove the regulatory, operational and land development hurdles restricting poultry farming industry growth. The last issue discussed here relates to rising input production costs eroding profit margins due mainly to rising energy, utilities, fuels and capital costs resulting in reduced profit margins for poultry meat growers businesses. Resolving all these issues is critical to the future long-term sustainability of the poultry meat farming industry requiring the attention of the NSW PMIC to facilitate a communications strategy within its charter to address poultry meat industry issues.

This completes the survey results of the poultry meat growers in the Sydney region.

6.2. Sydney Region – Poultry meat Processing

6.2.1. Processors Response Rates

Onsite meetings were conducted with Baiada, Cordina (Cordina Farms and Summertime) and Red Lea executives prior to survey distribution by the PMIC and Doublj Consulting. Explanation of the surveys purpose, benefits and distribution methodology were successful in getting agreement from all three processors to participate. It was not possible to organise a meeting with the fourth processor, Inghams Enterprises, due to its recent sale to TPG Capital plus animal welfare issues arising at one of its processing plants. Despite this, Inghams initially agreed to participate in the survey only to later reverse their decision. Inghams non-participation was regrettable given anecdotal estimates put the value of their Sydney region operations between \$360 million to \$440 million. Regardless, the survey proceeded resulting in the gathering of invaluable economic information from participating processors. However, this information came with the caveats of financial confidentiality and anonymity. Aggregation of all financial survey information provided confidentiality and assigning each processor substitute identities (processor A, B or C) provided business anonymity. Thus, the only instance in this report where processor business names appear is in Table T15.

6.2.2. Processor Facilities – Sydney Region

Table T16 Processor Facilities

		
Head Office 421-427 Flushcombe Road Blacktown NSW 2148 (PO Box 882 Blacktown NSW 2148)	Head Office Cordina Farms 55 Mandoon Road Girraween NSW 2145	Head Office 642 Great Western Highway Pendle Hill NSW 2145
Primary & further processing facility (address same as Red Lea head office)	Primary & further processing facility (address same as Cordina head office)	Company Broiler Free Range Farm
Company breeder farm 285 Finns Road Menangle NSW 2568	Hatchery 30 Cumberland Road Greystanes NSW 2145	Factory Outlet Shop 13-15 Amax Ave Girraween NSW 2145
		Birling Avian Laboratories 975 The Northern Rd Bringelly NSW 2171
Head Office 203-209 Northumberland St. Liverpool NSW 2170	Head Office Summertime 26 - 28 Crosslands Road Galston NSW 2159	Hatchery 1 Luddenham Farm 2907 The Northern Rd Luddenham NSW 2745
Broiler further processing facility Lot 64, Benson Rd Ingleburn, NSW. 2565	Primary & further processing facility (address same as Summertime head office)	Hatchery 2 Marsden Park Hatchery 54 Vine St Marsden Park NSW 2765
Broiler breeder farm 475 Badgerys Creek Rd Badgerys Creek NSW 2171	<p>Table T16 lists the various facilities operated in the Sydney region by each processor organisation during the 2011/2012 financial year. Although Inghams did not participate in the survey, their facilities are listed to indicate the diversity and importance of their operations especially to the economy of the south-west area of the Sydney region. Since the only company that processed turkeys in the Sydney region was Inghams, their non-participation in the survey meant no processor related turkey information was gathered. Farm production of turkey meat in the Sydney region has been discussed.</p>	
Appin broiler complex 345 Appin Rd. Appin NSW 2560		
Turkey primary processing plant Rockford Rd Tahmoor NSW 2573		
Turkey breeder farm Remembrance Dr Bargo NSW 2574		
Broiler distribution centres Lurnea & Hoxton Park		
Product development & weigh label facilities Hoxton Park		

Of the three processors that participated in the survey all operated chicken meat production facilities in the Sydney region but only two operated chicken meat processing facilities. Subsequent sections provides information regarding processor operations in relation to,

- Broiler Production
- Breeder farms
- Feed (purchase and manufacture)
- Transport
- Hatcheries
- Processing (chicken meat production)
- Employment
- Goods and services (consumption of)
- Capital assets
- Processor comments

6.2.3. Broiler Production

Table T17 Broiler Production	
Broiler farm production - Owner/growers and processors (chicken meat only) All processors combined in the Sydney region	
Description	Totals
Total payments to all broiler owner/growers	\$30,428,198
Total number of broiler growers	94
Total number of day old broilers delivered to all owner/grower and processor farms	48,552,205
% of broilers delivered to owner/grower tunnel farms	28.3%
% of broilers delivered to owner/grower conventional farms	6.8%
% of broilers delivered to owner/grower free range farms	64.8%
Total number of all types of owner grower and processor sheds	399
Total floor area for all owner/grower shed types (m2)	520,684

Table T17 shows processor payments to all broiler growers represented 51.2% of total payments to broiler meat growers in all three regions surveyed. In other words, Sydney region grower payments exceeded total payments to the Hunter and Central Coast combined.

On average, each grower received approximately \$323,700 while the total number of sheds in the Sydney region represents 23.6% of the NSW total (all turkey/broiler contract grower farms, processor broiler farms and independent contract broiler farms). Applying a mortality rate of 5.2% (calculated from the Sydney region grower's survey) to the

48,552,205 day old broilers delivered to all farms and assuming all broilers harvested reach the processing plant alive, leaves 46,027,490 to be processed. Since these figures are for the 2011-2012 financial year, a direct comparison can be made with the total number of broilers (168,400,000 refer Chart C8) slaughtered in NSW over the same period. The result is the Sydney region provides 27.3% of NSW's total production, a significant number.

6.2.4. Breeder Farms

Table T18 Breeder Farms	
BREEDER FARMS In the Sydney region	
Description	Totals
Total cost to produce all broiler eggs	\$2,864,651
Total number of broiler eggs produced	5,558,112

Table T18 represents the production costs and eggs produced for a processor breeder farm in the Sydney region. The total cost represents the amount paid by the processor to Sydney region suppliers of goods, services and labour.

In turn, suppliers would most likely have spent the majority of this revenue in the Sydney region. However, processors can have their own broiler breeder farms and hatcheries spread across various NSW regions or only have hatcheries and no breeder farms. Processors can also buy in day old broilers if demand exceeds hatchery production. Processors use a mixture of these strategies to ensure the chicken meat market and consumers have reliability of supply and quality of product.

6.2.5. Feed (purchase and manufacture)

Table T19 Feed – Purchased and Manufactured	
FEED - Supplied from Sydney, Hunter and other NSW regions. Consumed by owner/growers or processor owned broiler and breeder farms in the Sydney region	
Description	Totals
Total cost to purchase and manufacture all broiler and breeder feeds	\$109,525,198
% of all broiler feed purchased and manufactured for consumption by all owner/grower and company broiler and breeder farms	77.5%
% of broiler feed purchased from a competitor processor company from other regions in NSW	39.8%
% of broiler feed purchased from independent suppliers within the Sydney region	49.8%
% of broiler feed manufactured by a competitor processor company/s in another region	10.4%
Total weight of all meat chicken broiler and breeder feeds purchased and manufactured (tonnes)	283,635

Of all inputs consumed in growing chicken meat, feed is critical. Without consistency in feed quality and timely delivery to broiler grow out farms, chicken meat farmers would not maintain the growth rate and production quality required by processors.

Table T19 reveals all three processors combined spent \$109.5 million on chicken feed in 2011/2012. Of interest is 77.5% (\$84.9 million) of all feed consumed in the Sydney region was supplied by an independent Sydney manufacturer and a processor manufacturing feed in their own mills in another region. In addition, 39.8% (\$43.6 million) of all feed purchased was supplied by a competitor processor not surveyed with feed mills located outside the Sydney region. In this case, processors purchasing feed from any region outside of Sydney would incur increased transport costs. Processors that purchased 49.8% (\$54.5million) of their total requirements from Sydney's independent feed suppliers would incur less transport costs and a smaller carbon footprint. This figure is important, as this is the total amount spent by two processors on feed supplied from the Sydney region. The remaining 10.4% of feed consumed was by a surveyed processor supplying its own Sydney region owner growers and company broiler farm from its own feed mill in the Hunter region.

6.2.6. Transport

Table T20 Transport	
TRANSPORT Aggregated for all three processors in the Sydney region	
Description	Totals
Estimated range of total transport costs for the Sydney region	\$38,000,000 - \$43,800,000
% of contractor transport used by processor A & C	100.0%
% of contractor transport used by processor B	97.2%
% of own company transport used by processor B	2.8%
Total weight of all poultry feeds transported to owner/grower and company broiler farms in the Sydney region (tonnes)	224,526

Only two processors separated their transport costs into individual regions. The other processor aggregated Sydney and Central Coast transport costs. Therefore, table T20 contains actual aggregated transport costs for two processors and estimated transport costs for the third processor in the Sydney

region. Of the two processors that did provide individual region transport costs, one attributed 78% of transport costs to the Sydney region and the other 75%. Another item of note in table T20 is two processors each contracted out 100% of their transport requirements while the other 97.2%. Consequently, private businesses provided virtually all transport services accredited to the chicken meat farming and processing industries. Discounting one processor's own fleet transport costs (2.8%) the economic value to the Sydney region of private contract transport services used by the chicken farming and processing industries in the Sydney region \$38 - \$43.9 million, a significant amount.

6.2.7. Hatcheries

Table T21 Hatcheries	
HATCHERIES Aggregated for all three processors in the Sydney region	
Description	Totals
Total number of day old broilers supplied to all owner/grower and own company farms	48,552,205
Total cost to produce and/or supply day old broilers to owner/grower and company farms	\$33,442,835

Between them, processors operated four hatcheries in the Sydney region. However, the total number of day old broilers supplied to all Sydney region grow out farms shown in table T21

does not represent the total number of day old broilers produced at all Sydney hatcheries which could not be calculated as some processors hatcheries have reached production capacity. Hence, grow out farms demand for day old broilers, exceeds the capacity of some Sydney hatcheries to supply. Processors obviate this demand shortfall by purchasing day old broilers from other processors or supply day old broilers from their other hatcheries outside the Sydney region. Nonetheless, at 64% the Sydney region consumes the majority of day old broilers supplied to grow out farms with the remaining 36% distributed between the Hunter and Central Coast regions. When all is considered, the total cost of \$33.4 million to produce day old broilers is a significant injection into Sydney's regional economy allowing local businesses to sell their goods and services to the industry but just as important providing residents' employment opportunities.

6.2.8. Processing

Table T22 Processing Plants	
PROCESSING PLANTS Aggregated for those processors in the Sydney region	
Description	Totals
Total sales of chicken meat in NSW	\$317,615,916
Total operating costs for all processing plants	\$144,670,047
Number of broilers processed per annum (calculated from total average weekly production)	49,816,000
Amount of chicken meat processed per annum (tonnes) (calculated from total average weekly production)	107,432
% of total NSW broiler production sold to all customers (Sydney region)	82.5%
% of total NSW broiler production sold to all major and minor grocery chains (Sydney region)	15.5%
% of total NSW broiler production sold to all other retail outlets (Sydney region)	26.9%
% of total NSW broiler production sold to all wholesalers (Sydney region)	40.1%

As their name implies, processors process poultry. Of the three processors surveyed, only two operate processing facilities in Sydney. Inghams decision to not participate in the survey was regrettable as even though the company had recently closed its Casula hatchery (Feb 2013) and its Hoxton Park processing plant (May 2013) Inghams still operates a value added chicken meat processing plant at Ingleburn and a turkey processing plant at Tahmoor. The combined economic value of these plants would have added considerable economic evidence to the value of the poultry industry in the Sydney region especially with regard to the gross value of turkey production.

Despite this setback, participating processors have provided information as to the value of the industry especially in Sydney's west and south-west regions. Table T22 contains some headline numbers of which the gross value of production is notable. Just two Sydney based processors managed to convert 49.8 million broilers (29.6 % of total NSW slaughter production and 9% of total Australian slaughter production) into \$317.6 million of gross value added chicken meat product (48.4% of total NSW gross value added poultry meat and 15.3% of total Australian gross value added poultry meat) at an average carcass weight of 2.16kg. This is even more notable given the NSW and Australian figures are for all poultry meat not just chickens. An added bonus was an increase of 6.8% over the gross value of poultry meat recorded for the Sydney/Central Coast in 2011/2012 (one Sydney based processor surveyed obtained all their chickens from the Sydney and Central Coast regions while the other obtained the majority from Sydney, less from the Central Coast and some free range from the Hunter). From the figures it appears production efficiency is keeping pace with consumption having increased over 400%¹⁶ from 10.5kg per capita (1969-1970) to 43.9kg per capita (2010-2011). Unlike other industries in Australia that are in decline despite government subsidies, Sydney's chicken meat industry is growing in spite of minimal support from governments of all persuasions.

Previous sections analysed various components of the chicken farming and processing industries value chains. Discussion followed as to the economic value of these various components. While their combined value to the Sydney regional economy is appreciable, table T22 provides evidence of just how valuable. Combined operational costs of \$144.7 million provided a sizeable fillip to Sydney's economy. Doubling this figure may have been possible if Inghams Ingleburn chicken processing plant and their Tahmoor turkey processing plant had been included in the study.

Investigation thus far has revolved around the importance of the chicken meat industry to the Sydney region. Countervailing this is the importance of the Sydney region to the chicken meat farming and processing industries. Evidence of this comes from table 22 indicating all customer types in the Sydney region were responsible for 82.5% of total combined sales. This figure is further dissected to show 15.5% of customers are major and minor grocery chains, 26.9% are all manner of retail outlets (fast food chains, small goods chains, restaurants, delicatessens, caterers, others) and the largest customer group are wholesale meat suppliers (butchers, small goods, distributors, direct to consumer online).

6.2.9. Employment

Table T23 Employment	
EMPLOYMENT	
Aggregated for all three processors in the Sydney region	
Description	Totals
Total wages and salaries	\$78,770,657
Total number of employees	1,183
% of total employees processor A	34.8%
% of total employees processor B	54.2%
% of total employees processor C	11.0%
% of total employees female	44.3%
% of total employees male	55.7%

As opposed to processors requiring various goods and services supplied to the industry by private, government or semi government firms, processors need employees. Table T23 provides details of the total number of people employed by all three processors in all the facilities they operate in the Sydney region. In particular, the table

depicts processor B as the largest employer with 54.2 % (641 employees) followed by processor B with 34.8% (412 employees) then processor C 11% (130 employees). Although processors provided numbers by employment type this information is not provided here. Some gender bias appears in the results with males (55.7%) outnumbering females (44.3%). Aside from this, the \$78.8 million paid employees, as wages and salaries is a significant figure as the majority of employee wages and salaries are subsequently spent in the local economy. The loss of any of these processors as major employers especially during the current uncertain economic climate would have grave economic effects on Sydney's south-west region.

6.2.10. Goods and Services Consumed

Table T24 Goods and Services Consumed		
GOODS and SERVICES CONSUMED Aggregated for all three processors in all their facilities in the Sydney region		
ANZSIC DIVISION	Standard Industry Categories	Goods & Services Expenditure
C	Manufacturing.	\$119,045,702
D	Electricity, Gas, Water, Waste.	\$8,855,214
E	Construction	\$9,776,268
F	Wholesale Trade	\$3,746,026
G	Retail Trade	\$2,087,053
I	Transport, Postal, Warehousing	\$39,233,907
J	Information Media, Telecommunications	\$416,057
K	Financial and Insurance	\$6,450,191
L	Rental, Hiring, Real Estate	\$6,831,248
M	Professional, Scientific Technical	\$3,862,120
N	Administrative and Support Services	\$43,313,955
O	Public Administration & Safety	\$2,284,398
P	Education, Training	\$1,005,887
S	Other Goods/Services	\$92,656,283
TOTAL		\$339,564,309

Thus far, uncovering the economic value of the chicken meat industry in the Sydney region has involved dissecting processor operation facility by facility. Whilst this allows detailed analysis, an overarching view of the industry provides a succinct summary of just how valuable to a regional economy an industry is. Table T24 provides this snap shot of the chicken meat processing industry.

Each row in table T24 represents a division of the Australian and New Zealand Standard Industrial Classification (ANZSIC)¹⁷. Using ANZSIC divisions allows classification of information concerning how businesses in various industries operate, for example division

D electricity, gas, water and waste. ANZSIC's structure of division, subdivision, group, class codes and titles groups together different types of activities a business (a business unit in ANZSIC) engages in at an industry level allowing the ABS to standardise the gathering, evaluation and distribution of industry economic data. Analysis of industry economic data then reveals industries structures and performance for comparison against other businesses grouped under the same broad economic umbrella (for the poultry meat processing industry this is manufacturing). While the ABS uses this approach to produce and report data about Australian businesses, here it reveals the aggregate expenditure of all three processors on goods and services supplied by other industries businesses. These goods and services are inputs consumed by processors in the production of value added chicken meat products.

The intention here is not to drill down to the base level of what business type supplies which good or product rather it is to provide aggregated economic evidence of the value to Sydney's regional economy provided by the poultry (chicken) meat industry. Put simply (leaving aside other poultry type producers/processors not included), if the processors that provided the economic information in table T24 were to vanish from the Sydney region then \$339.5 million would be lost to the region's economy plus \$78.7 million dollars of wages and salaries (table T23). This would also mean the demise of Sydney's poultry farming industry if not immediately then shortly after. Applying input/output analysis would show lost economic activity (especially jobs) would be amplified as the 'knock on' effect cascaded down the value chain affecting businesses in all industries that supply the suppliers of goods and services to the chicken meat industry. One need only use the motor vehicle industry in Australia as an example of the ramifications of such an outcome for Sydney's poultry farming and poultry processing industries.

In summary, the estimated value to the Hunter region's economy for those processors surveyed during 2011/2012 was \$418.3 million. In addition, the estimated value of the processor that did not participate in the survey is \$300 - \$350 million (apply caution to the high range figure). On aggregate, the estimated total value of the poultry processing industry to Sydney's regional economy is \$718.3 - \$768.3 million.

6.2.11. Capital assets

As part of the survey questionnaire processors provided information as to the value of their capital assets. Due to each processor using variations in their

accounting procedures, it was not possible to separate capital asset values into individual components. Nonetheless, the sunk costs of buildings, plant and major equipment

Table T25 Capital Assets	
CAPITAL ASSETS Aggregated for all three processors in the Sydney region	
Description	Totals
Capital assets includes all: Property (land values), buildings, plant and major equipment.	\$118,047,955

outweighs the land values that processors facilities inhabit. Leaving aside the processor that does not operate a processing plant in Sydney if the two remaining processors vacated their current processing facilities it is estimated they would only get market value prices for the land their facilities of \$37.4 million, insufficient to cover their sunk costs of \$48.4 million.

6.2.12. Processor comments

The final section of the questionnaire required participants provide comments to questions regarding their relationships with government and growers. Their responses (table T26) indicate that dealings with local councils were cordial providing few problems. Relationships with the state government departments however varied. One processor indicated having problems when dealing with state government departments the others had none. Responses to the next question indicated processors had good business relationships with growers which is at odds with a number of grower responses that suggesting the opposite.

Table T26 General Comments Q1-3						
GENERAL COMMENTS Q 1 - 3						
Description	Definitely Agree	Generally Agree	Slightly Agree	Slightly Disagree	Generally Disagree	Definitely Disagree
Q1. In the past year, our company has had minimal problems dealing with local council/s.	1	2	-	-	-	-
Q2. In the past year, our company has had some problems when dealing with state government departments	-	1	-	-	-	2
Q3. Overall, our company has good business relationships with our contract growers.	1	2	-	-	-	-

The next set of questions required processors answer questions pertinent to the Sydney, region (Table T27 displays responses). First, a question invited comments relating to threats and risks facing the poultry industry. While one processor responded that aside from normal market forces, they had no issues. Against this, others noted threats to future

Table T27 General Comments Q4-6	
GENERAL COMMENTS Q 4 - 6	
Description	Aggregated Responses
Q4. What do you consider as being the main threats/risks related to the ongoing success of your broiler meat businesses in the Sydney, Hunter and Central Coast regions?	<ol style="list-style-type: none"> 1. Councils placing restrictions on existing growers, for live bird pickup, noise and expansion which in turns restricts our growth in business. 2. Further, new farms are near impossible to build due to the many restrictions and red tape, again restricting the growth of our business as compared to other states. 3. Expansion of new farms to replace farms lost through urban expansion and to provide for business growth into the future. 4. No specific issues outside of market conditions
Q5. In particular, in the Sydney, Hunter and Central Coast regions what problems have you had that have prevented or restricted you from growing your businesses in order to maintain competitiveness in the broiler meat industry?	<ol style="list-style-type: none"> 1. New shedding and expansion of existing farms 2. High cost of farm land 3. Obtaining development approvals from local and state governments 4. Obtaining appropriate land for chicken farms 5. Loss of farming capacity due to Urban encroachment 6. Conflict from the Urban encroachments such as noise and odour issues 7. No matters have prevented or restricted
Q6. Are there any other issues directly related to your broiler meat businesses in the Sydney, Hunter and Central Coast regions?	Same as for responses 2 - 6 in question 5.

growth due to councils enforcing environmental and development restrictions plus the unavailability of suitable land to replace that lost from urban growth. Responses to the next question related to problems restricting business growth and hence competitiveness. Answers included costs of new sheds, availability of suitable farm land and the cost to purchase same, difficulty obtaining development approvals, urban growth and the ongoing odour and noise issues.

The last question was open ended with only one processor reiterating their responses to the previous question.

Of particular interest is the failure by any processor or previously any grower to identify the new RSPCA¹⁸ approved farming standards for chicken meat farming and processing as an issue. This new standard, designed to improve the health and welfare of broilers, outlines procedures and requirements that growers and processors need comply with before the RSPCA will give approval for their RSPCA approved chicken logo be affixed to chicken meat products sold in supermarkets. The RSPCA paw of approval logo on chicken meat products signals consumers that chickens raised involved in the production of the good was raised in accordance with the RSPCA's high standards and procedures. For growers in particular compliance will be costly as amongst a raft of other animal husbandry requirements there will be fewer broilers per shed.

6.2.13. Summary of Survey Responses

Response to the grower survey was poor despite,

- Sydney growers receiving survey introductory and post distribution letters explaining the benefits of the survey and encouraging their participation.
- On farm and formal meetings with grower representatives as well as additional request to grower representatives enlisting their support to communicate to their members the importance of the survey.
- The support of the NSW Farmers Federation by promoting the survey during:
 - Ad hoc visits to growers farms
 - Organised grower meetings
 - Organised grower representative meetings
- Enlisting processor representatives to encourage growers to participate in the survey.

The low response rate resulted in a paucity of grower economic information. This made confidence levels and accuracy of cost estimates regarding the value of the poultry meat farming industry to the Sydney region problematic. Therefore, caution should apply when considering Sydney region grower economic information herein.

Processors however, provided a wealth of valuable economic information without the need for rendering. Analysis of this information provided invaluable insights into the economic value of the poultry meat industry. Especially the economic value adding provided the region's economy from ongoing operational activities of processors and likewise the ongoing economic importance of the Sydney region to the industry.

7. Conclusion

The objective of the research was to determine the economic value of the poultry meat farming and processing industries to the Sydney region. Discussion of research methodologies and associated strategies led to exploration of survey results that delivered primary grower and processor economic and other industry related information. Meanwhile secondary research provided an industry context regarding the overall decline of poultry meat production in NSW compared to competitor states. Even though NSW remained the largest manufacturer of chicken products by quantity and gross value, the NSW chicken processing industry was in relative performance terms lagging competitor states (QLD and SA). Contrary to the NSW trend, in 2010-2011 the poultry meat industry was Sydney's stellar agricultural performer worth \$190.2 million or 25.4% of Sydney's total agricultural production (\$748.5 million), as recognised by the state government Agricultural Reference Group. Enhancing the poultry industries status further is its value to Sydney's regional economy. Although analysis of poultry grower economic results limited confidence levels and margins, the estimated value of poultry farming was \$55.8 - \$73.3 million while the value of the surveyed processors was \$418.3 million. Considering the \$300 - \$350 million estimated value of the non-surveyed processor then on aggregate, it is estimated the poultry farming and processing industries are worth \$774.1 - \$841.6 million to Sydney's regional economy. If this economic stimulus were to be lost, the economic shock to the region would be considerable. The deleterious effect to businesses supplying goods and services to the poultry meat processing industry would be substantial. Lost revenues and jobs would subsequently lead to reduced regional economic activity as consumer spending contracts along the processing industry's value chain. Avoiding this scenario must be the priority of all industry stakeholders.

The results section also uncovered other processor/grower multi-layered issues some unique to growers and others mutual. Grower issues focused on processor relationships including payments and various contractual concerns. Mutually shared issues concerned government and community conflicts that at best stymie growth and at worst threaten poultry farming and processing industries economic survival. Issues such as urban encroachment, lifestyle settlers, government/s restrictions, scarcity and cost of suitable farming land and development application problems remain unresolved impediments to industry growth. Inghams recent closure of its Hoxton Park processing plant and Casula hatchery provides a portent of the industry's future if these issues are not resolved. The ongoing threat of industry exit from the Sydney region should compel all key stakeholders to make a concerted and meaningful effort to find common grounds and resolve the challenges facing the industry. Only when resolutions have been effected will the poultry meat farming and processing industries become sustainable with associated economic benefits flowing not only to the industries, but most important to Sydney's regional economy.

8. Recommendations

Conclusions derived from analysis and findings of the report lead to the following recommendations.

- Achieving consensus between the poultry meat farming and processing industries and local and state governments is the priority. Discounting the Central Coast, state and local governments must recognise the poultry meat industries status as the number one economic contributor to Sydney and NSW. The 2010-2011 census revealed poultry industries gross value of agricultural production in the Sydney region of \$190.2 million was 25.4% of Sydney's total agricultural production. In addition, it was also the biggest contributor to the NSW poultry industry with 27.7% of gross value of production. Add to this the estimated total economic value (\$774.1 - \$841.6 million) to the Sydney region of the poultry farming and processing industries and an irrefutable case presents itself as to the industries economic importance. The NSW PMIC must use this information as the catalyst to inform and educate local and state governments and convince them to act and remove legislative and regulatory impediments currently restricting sustainable growth of the poultry farming and processing industries in the Sydney region.
- The recent release of the Sydney regional plan to 2031 has proved serendipitous. Especially since the Agricultural Reference Group (ARG) has made a submission (June 2013) on behalf of all agricultural industries in the Sydney region to the NSW government. In their submission, the ARG chronicles all the impediments that face all agriculture in the Sydney region including the poultry meat industry. However, most important is the ARG recommends solutions to these impediments that align with those required by the chicken meat farming and processing industries (refer to section 4.10). The opportunity now exists for the Sydney poultry meat industries to move from a lone voice to become part of a group created specifically to advise the NSW Department of Planning and Infrastructure on all matters agricultural for Sydney's 2013 planning strategy. As a matter of urgency, the NSW PMIC is to communicate with the ARG to determine how the poultry meat farming and processing industries can gain direct, indirect or other representation on/with the ARG.
- It is one thing being number one it is another thing that others know it. A public relations and communications strategy is required to promote and meld the economic and health benefits of chicken meat production. Demand from consumers for chicken meat is ever increasing, as is consumer awareness of carbon food miles, the need to buy goods from local businesses and to purchase chicken meat produced using chickens raised in accordance with RSPCA animal welfare standards. Melding the product benefits of poultry meat (affordable, healthy, versatile, quality and animal welfare) with the economic benefits to the

local region (direct and indirect employment and the purchase of locally supplied goods and services) provides an opportunity to change perceptions but most important behaviour of stakeholders towards the poultry meat industries. Regardless of message content, the NSW PMIC is ideally suited to organise implementation of a communications and public relations strategy.

- Sydney's poultry meat farming and processing industries must form a symbiotic relationship to resolve issues within their industries. Continuing dialog with external stakeholders is another requirement. The PMIC should take a lead role in facilitating these requirements through periodical forums, newsletters or other suitable communications mediums for mutual benefit of grower and processor industries and the regional community.

9. Limitations

Unless stated otherwise all information gathered from the research study was from primary sources namely poultry (chicken and turkey) meat grower and processor survey questionnaires. Doublj Consulting conducted a mail out census of poultry meat growers based on information provided by the NSW PMIC. There was no face-to-face communication with individual growers. Instead, Doublj Consulting met with grower representatives. The purpose of these meetings was to inform grower delegates about the reasons for the survey and the survey's content and the importance of communicating this to growers.

Conversely, Doublj Consulting conducted on site meetings with three of the four processors to explain the purpose of the survey resulting in all three agreeing to participate in the survey. Due to extenuating business circumstances, a formal meeting with the fourth processor was not possible. Nonetheless, explanation of the survey's purpose was afforded the processor's executive representative (at a PMIC meeting) who although initially agreeing in principle to participate later withdrew. This meant that the real value of the poultry meat processing industry was not able to be determined for the Sydney region.

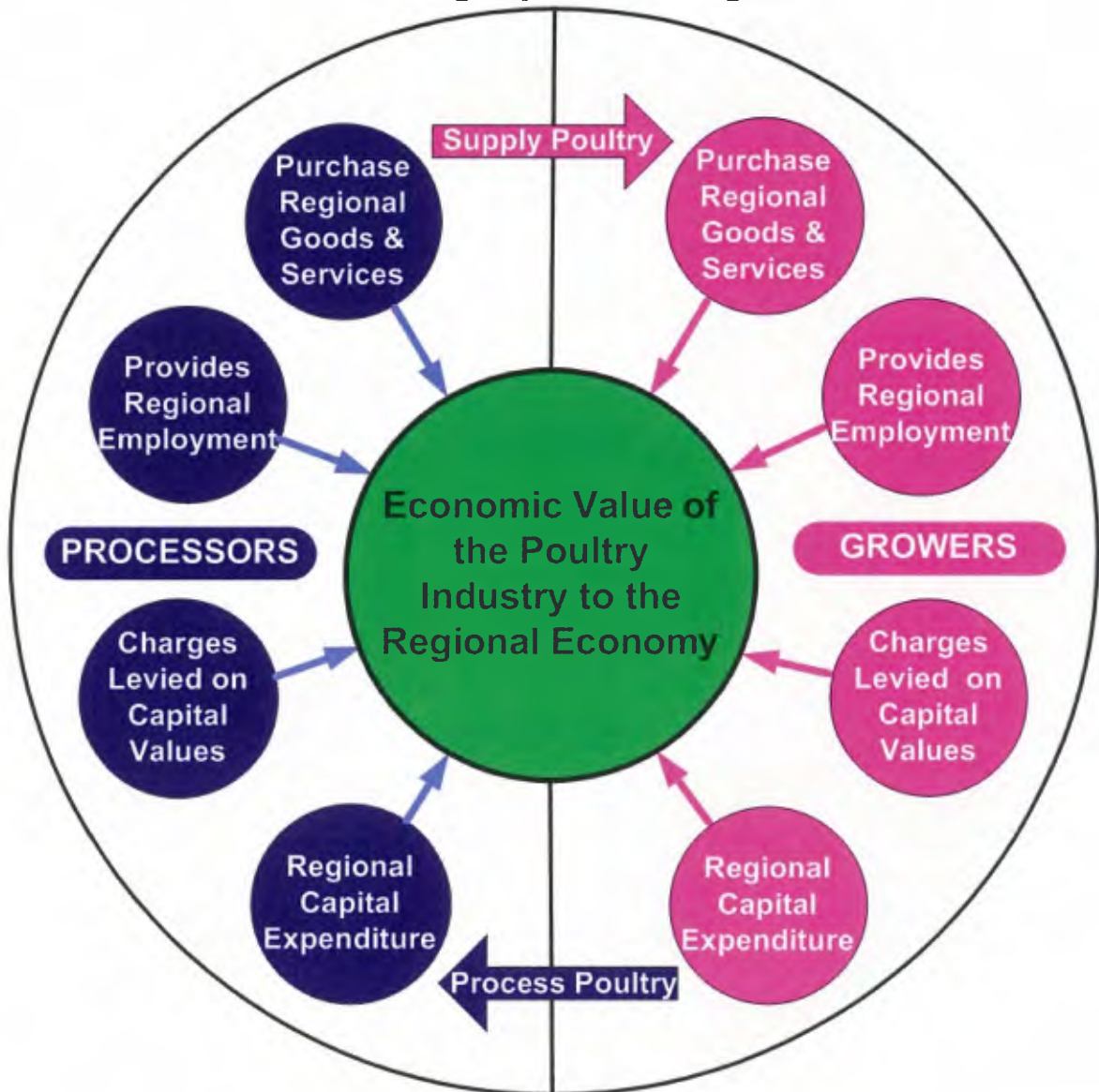
The survey return rate for poultry growers in the Sydney region was well below expectations. This precluded the application of a confidence level to enable analysis of quantitative data. All grower and processor survey information was restricted to poultry meat growers and processors engaged in the production of chicken or turkey meat during the 2011/2012 financial year.

Analysis of all economic data was restricted to those respondents (growers and processors) that returned surveys. Data was analysed on the basis that information provided by respondents was a true and fair view of their circumstances during the 2011/2012 financial year.

10. Appendices

10.1. Appendix 1: Economic evaluation model

NSW PMIC Poultry Meat Survey 2013 Proposed Economic Value Model A Geographical Region



11. References

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