Feed Grain 2010 Update Report

A report for the

Feedgrain Partnership

November 2010

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1. INTRODUCTION

This report has been commissioned by the Feedgrain Partnership and is an annual update of data presented within the GRDC report titled Benefit to Australian Grain Growers in the Feed Grain Market (Spragg 2008).

The objective of this report is to provide an update of data relating to feed grain supply and demand. Information provided can be used to assist in developing actions that foster the use of Australian feed grain for animal feeding. The report updates data about feed grain supply and demand over the last 12 month period. Forecast crop production for 2010/11 is included, similarly estimates of 2010/11 feed grain demand have been included.

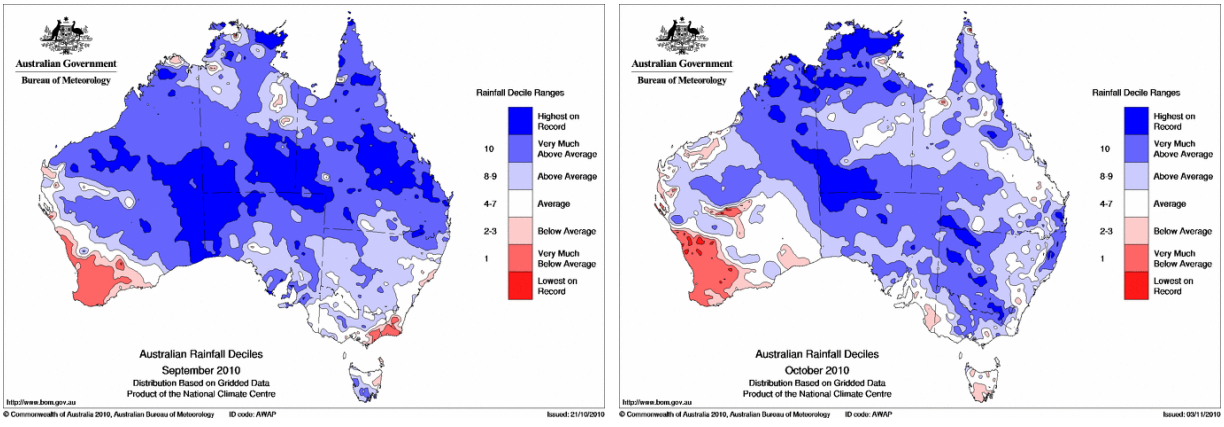
This report is not seen as providing a detailed analysis or discussion on the feed grain market, its intent is for use as a summary document that captures the significant changes occurring within the various livestock and grains industries.

Readers of this update report should refer to the original 2008 report (Spragg 2008) to access further detailed discussion.

2. AUSTRALIAN GRAIN PRODUCTION

Grain production data for this report, written in October/November 2010, includes the 2010/11 year, with data taken from the ABARE September 2010 Crop Report. It has been reported (ABARE-BRS 2010) that September 2010 was Australia's wettest September on record, with rainfall averaged over the country almost three times the long-term average, beating the previous record set in 1906.

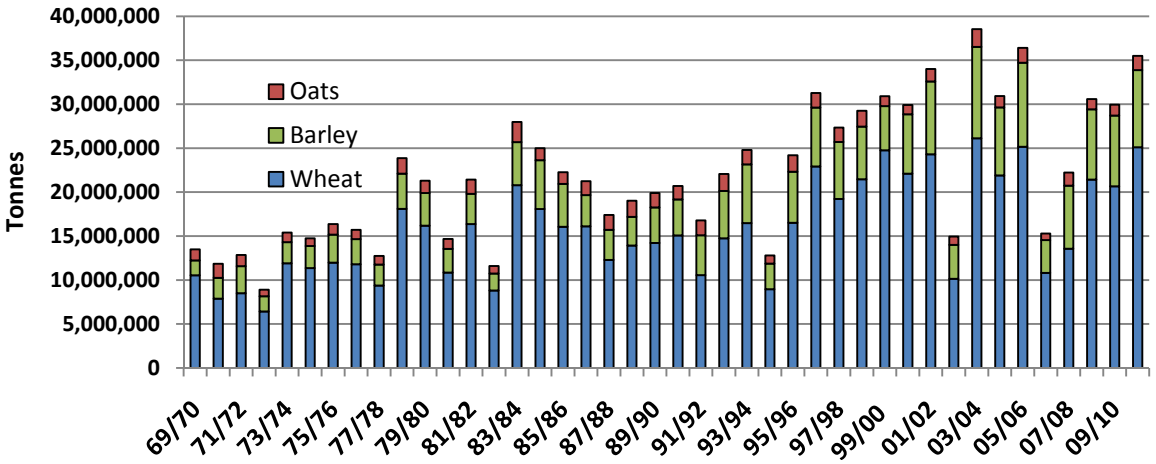
The favourable rainfall conditions in eastern Australia continued into October, with cropping regions in southern NSW, Victoria and South Australia receiving above average rainfall.



In contrast, Western Australia has experienced extremely dry conditions, with some cropping areas recording very much below average rainfall.

Winter cereal grain production (Figure 1) in 2010/11 is projected to exceed 35MMT and this will be the third largest crop. Based on higher rainfall in the eastern states, there will be higher yields than forecast by ABARE in September. The WA harvest will however result in lower than ABARE forecast production due to hot and dry conditions experienced.

Figure 1. Winter Cereal Production 1969/70 - 2010/11 (tonnes)

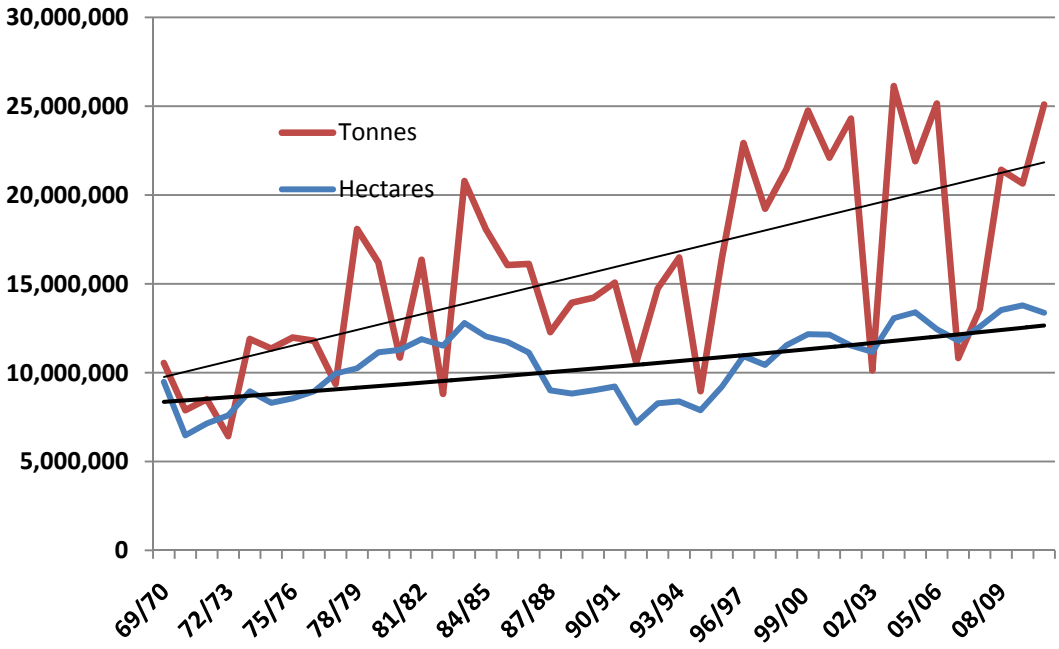


Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Reports.

2.1. Wheat Production

The 2010/11 wheat crop is forecast by ABARE to be 25.1MMT, this being equal with the 2005/06 crop and 1MMT below the record 2003/04 crop.

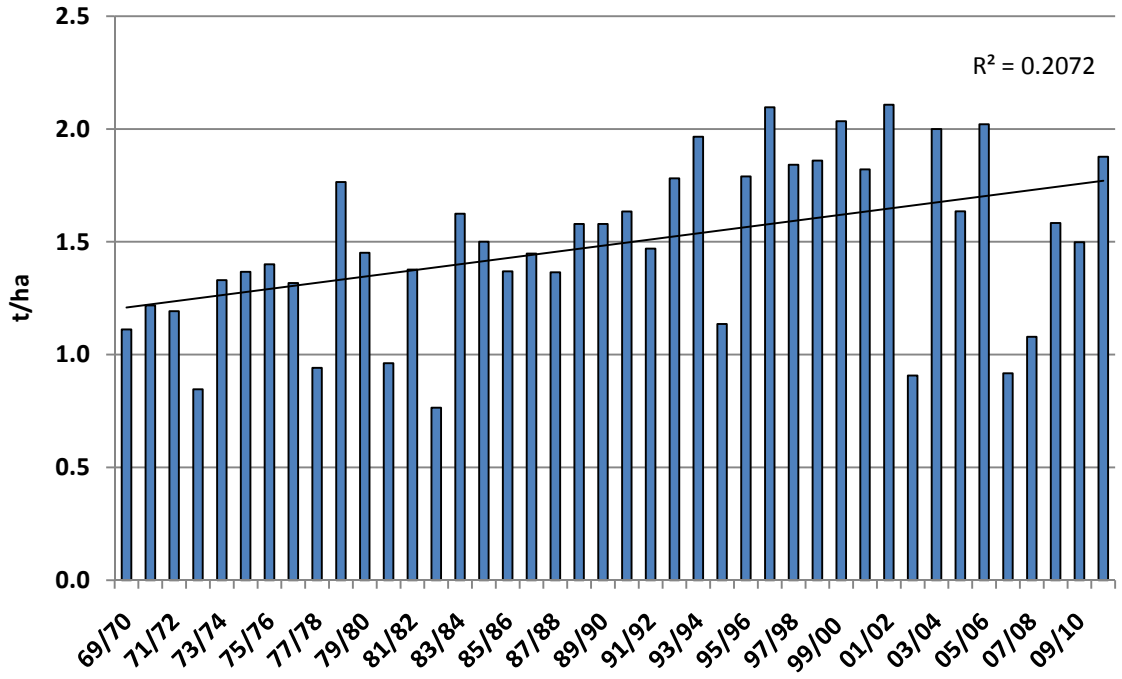
Figure 2. Wheat Production 1969/70 – 2010/11 (tonnes and ha)



Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Reports.

The area planted to wheat in 2010 at 11.3M ha was a 3% drop from the previous year's record planting. Yield in t/ha is shown in Figure 3, 2010/11 at 1.88t/ha, is the first in the last 5 years where wheat yield is projected to be above the longer term trend line.

Figure 3. Wheat Yield 1969/70 – 2010/11 (t/ha)

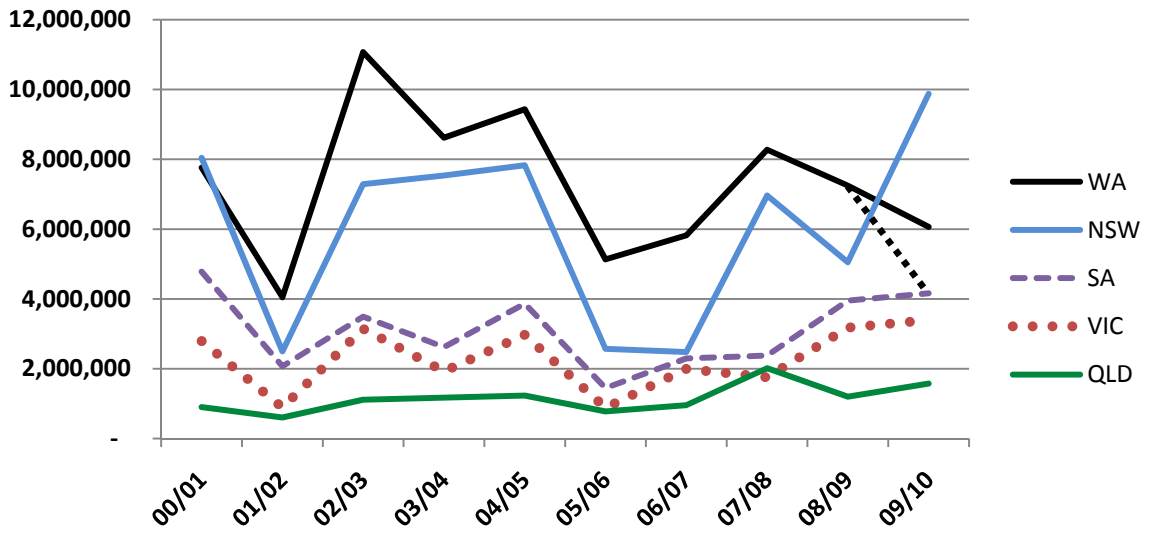


Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Reports.

The 2010/11 wheat crop provides differing fortunes for growers depending on their geographic location. Figure 4 shows wheat production for each of the major wheat growing states over the last 10 years. This year is projected to provide the largest NSW wheat crop, almost reaching 10MMT. Together with larger than average Queensland and Victorian crops, wheat production in the three eastern states is forecast to reach 14.8MMT. The South Australian crop will also result in a significant surplus of grain for export markets.

The WA wheat crop is projected by ABARE to be only 6.5MMT, this reducing the west coast wheat export volumes. WA wheat yield projection at 1.3t/ha is similar to that produced in the 2006/07 and 2007/08 drought years. It must be noted that wheat production will fall below the ABARE September forecast and some industry analyst are reporting the crop to fall below 5MMT. In many areas growers will harvest little more than grain for seed.

Figure 4. Wheat Production by state 2000/01 – 2010/11 (tonnes) broken line for WA provides lower than ABARE forecast outcome.

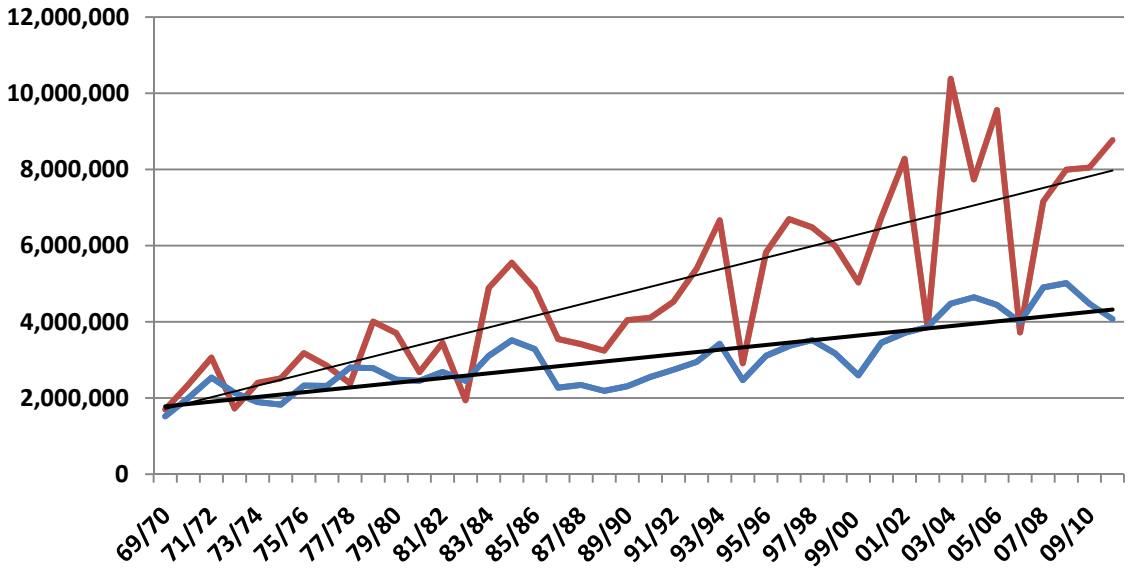


Source: ABARE - BRS Crop Report

2.2.Barley Production

Barley production for 2010/11 (Figure 5) is projected to be 8.7MMT and like wheat the third largest crop on record. The NSW barley crop at 2.4MMT will be a record, above the 2.2MMT harvested in 2005/06. Reduced planting areas in Vic 9% and SA 8% has limited the potential volume of barley that would be available for east coast domestic use.

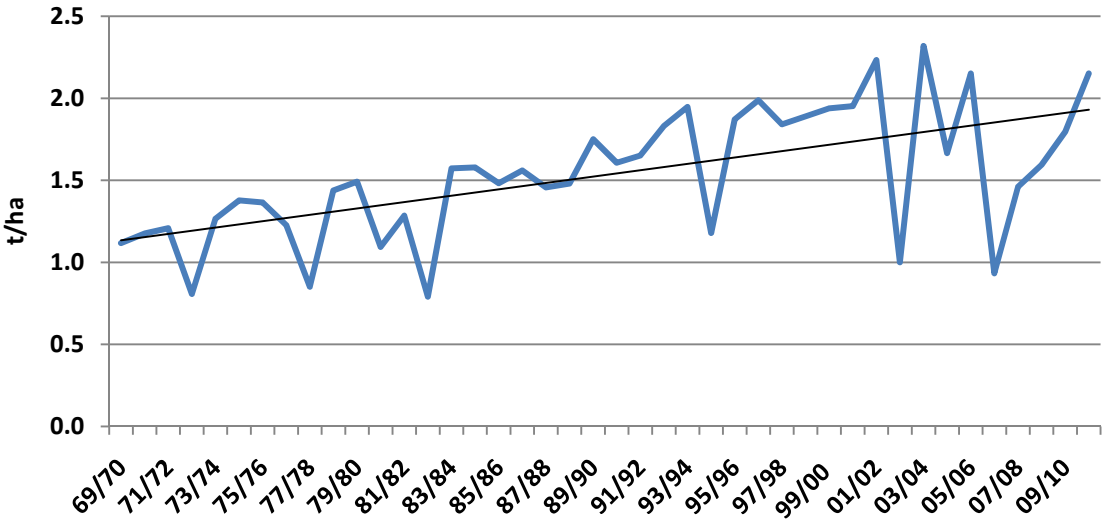
Figure 5. Barley Production 1946/47 – 2009/10 (tonnes)



Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Reports.

The ABARE barley crop predicted yield is 2.2 t/ha. This is however reduced by the WA crop predicted to yield 1.7 t/ha. The NSW and Vic barley crop prediction is based on 2.4 t/ha yields, with these potentially being exceeded due to more favourable rainfall conditions.

Figure 6. Barley Yield 1970/71 – 2010/11 (t/ha)

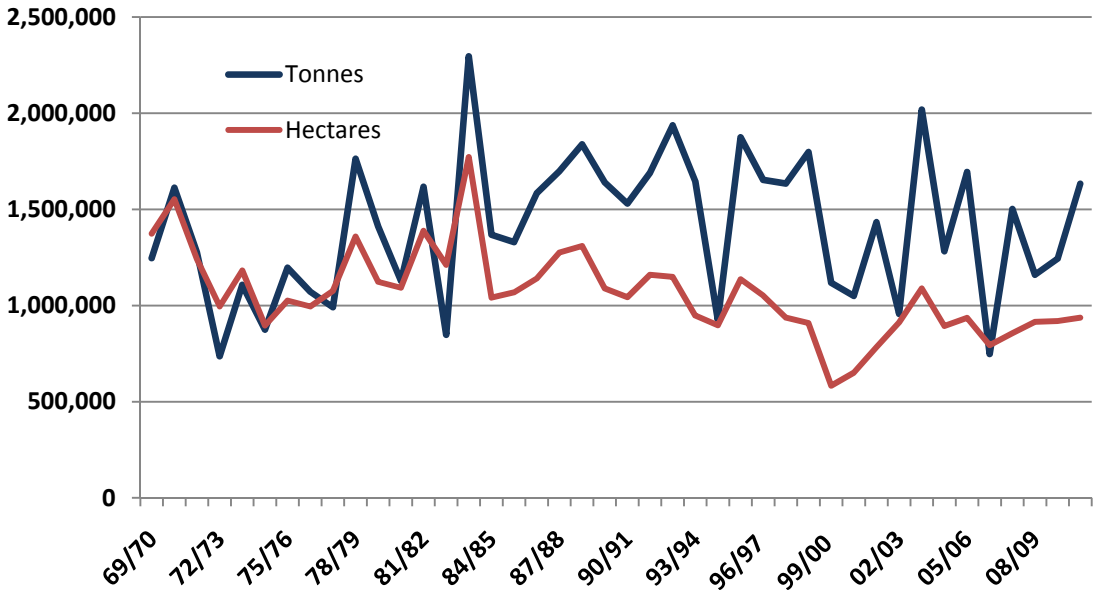


Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Reports.

2.3.Oat Production

The projected area of oats planted in 2010 has remained static at 937,000 ha. Based on a more favourable yield of 1.7 t/ha this will result in the availability of 1.6MMT of oats.

Figure 7. Oat Production 1969/70 – 2010/11 (tonnes)



Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Report

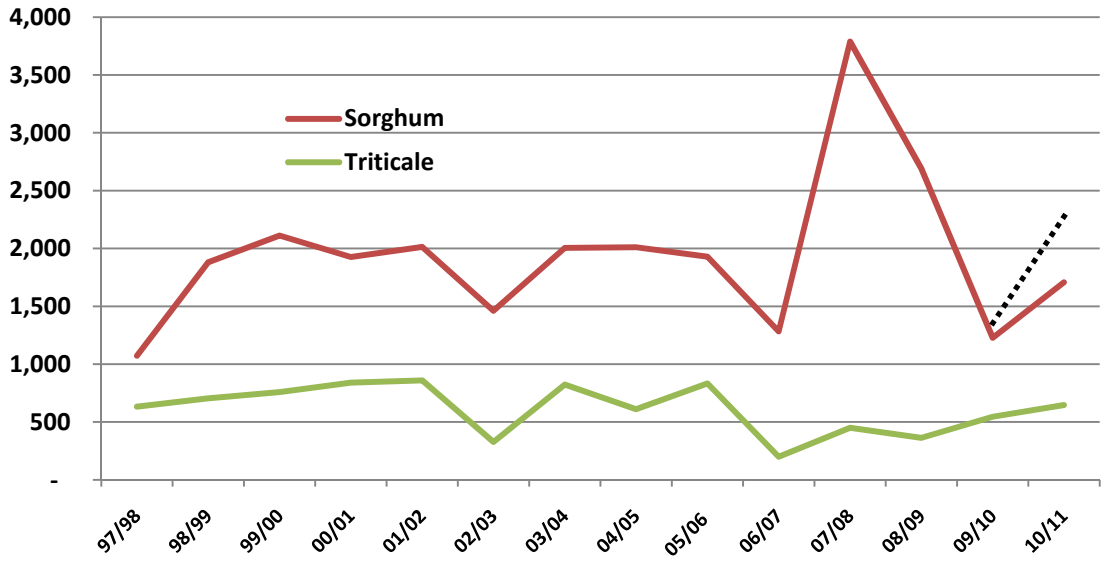
2.4.Dedicated Feed Grains – Sorghum and Triticale

Triticale production is forecast to increase to 646,000 tonnes in 2010/11, this providing an additional 100,000 tonnes of feed grain for the domestic market.

The ABARE sorghum crop prediction of 1.7 MMT is felt to be low when account is taken of the Qld and NSW soil moisture profiles. Both upper and lower soil moisture levels have improved over the July-September periods (ABARE-BRS 2010), with further rainfall events in October resulting in the potential for a high yielding sorghum crop.

The ABARE September Crop Report uses a sorghum yield of 2.8 t/ha. If a 3.6 t/ha yield is achieved, as occurred in 2008/09, this would result in an additional 460,000 tonnes of sorghum being produced. A crop producing 4.0t/ha as occurred in 2007/08 would increase sorghum production by 700,000 tonnes to 2.4MMT.

Figure 8. Production of dedicated feed grains 1997/98 – 2009/10 ('000 tonnes)

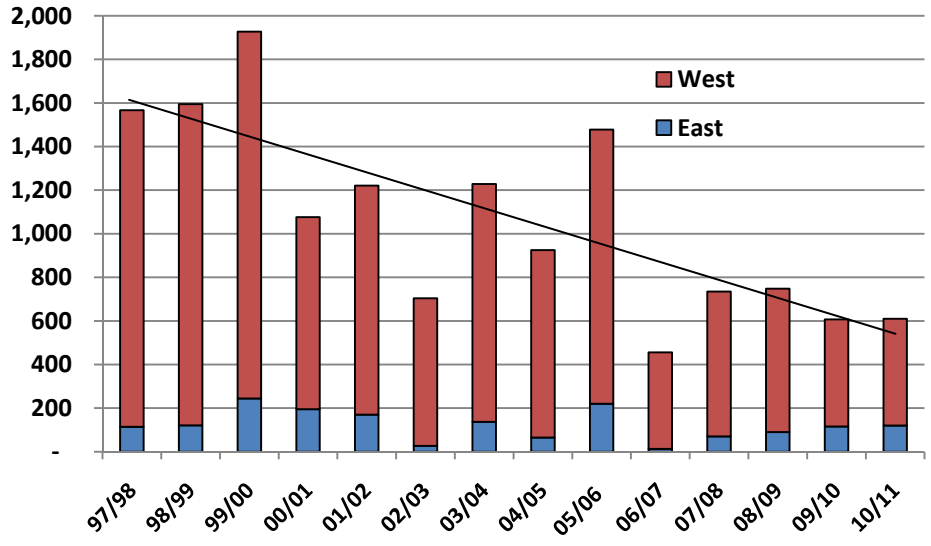


Source: ABARE - BRS Crop Report

2.5.Lupin Production

The 2010/11 lupin crop will be at the low end of historic production levels. Even though it is a better production year, the three eastern states will produce only 137,000 tonnes. The limitation is the declining area planted to peas in NSW and Victoria. SA production will be at 100,000 tonnes and WA is not expected to reach the ABARE projection of 390,000 tonnes. WA lupin production has dropped from a planted area of 1.2 million hectares in 1997/98 to now be less than 400,000 hectares.

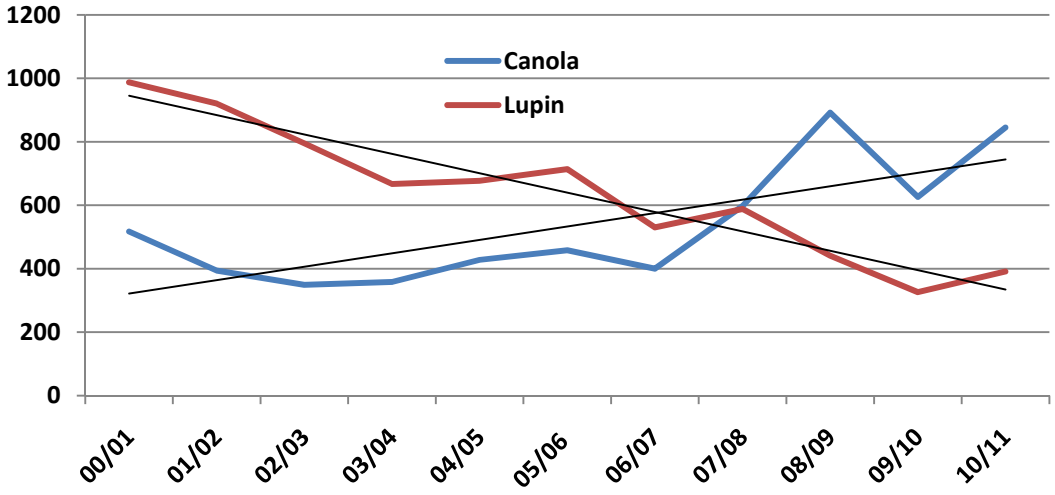
Figure 9. Lupin production 1997/98 - 2009/10 ('000 tonnes)



Source: ABARE - BRS Crop Report

The decline in area planted to lupins in WA has to a large extent been replaced by canola. Figure 10 provides the change in planted area of lupins and canola in WA since 2000/01. Based on this significant swing to canola production, it is very likely that lupins will become a minor crop and destined to only providing a relatively small volume of feed grain for the domestic livestock industries.

Figure 10. WA Lupin and Canola hectares planted ('000 hectares)

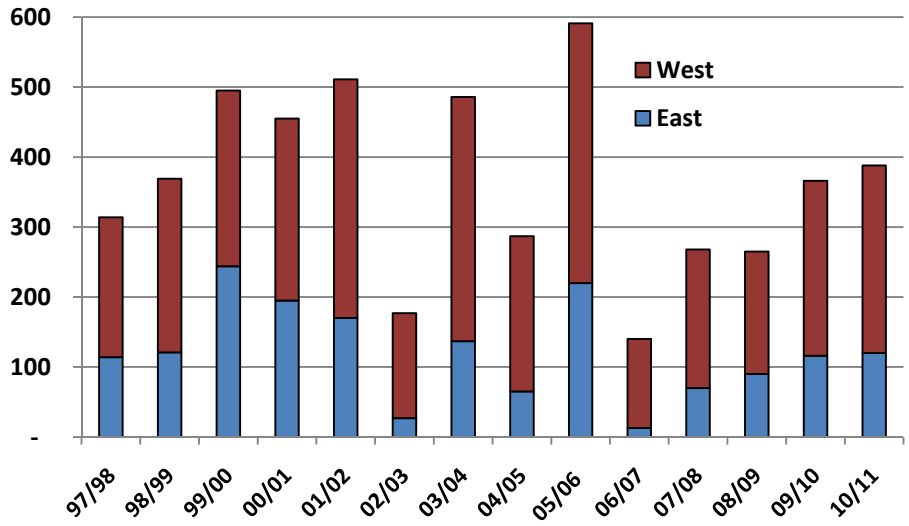


Source: ABARE - BRS Crop Report

2.6.Pea Production

Pea production remains at a low level as shown in Figure 11. More favourable planting conditions has not provided any increase in hectares planted across Vic, SA and WA. There are no peas grown in Qld and only a small volume in NSW. A significant limitation for the east coast feed market remains the lack of availability of grain legumes.

Figure 11. Pea production 1997/98 - 2009/10 ('000 tonnes)

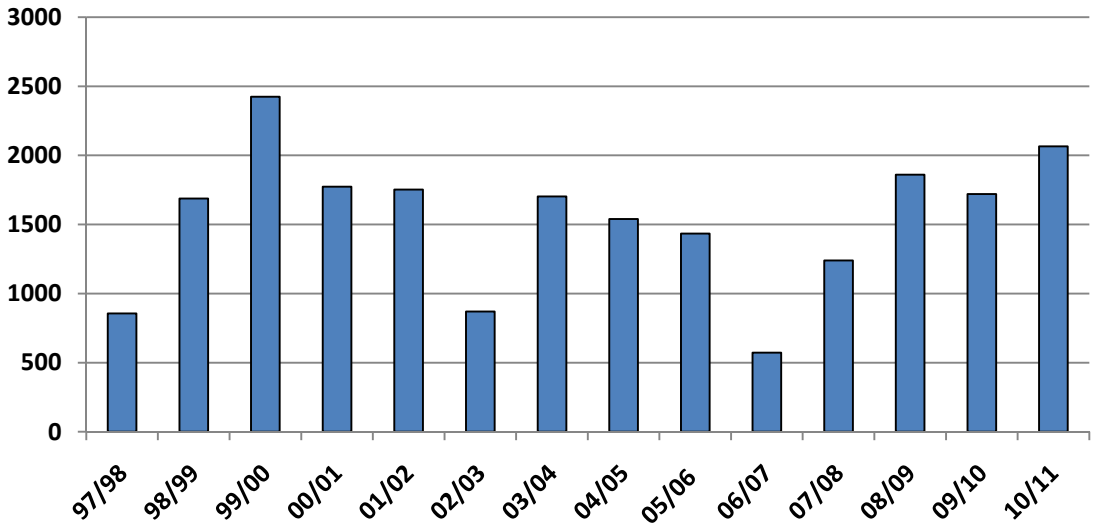


Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2010/11 ABARE Crop Report

2.7.Canola Production

Canola production is predicted by AOF, in their October Crop Report, to reach 2.06MMT. The previous September report projected a 2.2MMT canola crop. The decline is largely due to a lack of rainfall in WA, as well as some decline in Victoria due to water logging. There will be ample canola supply for the domestic oilseed crushing industry, with surplus seed destined for export markets.

Figure 12. Canola production 1997/98 - 2010/11 ('000 tonnes)



Source: ABS Agricultural Commodities Historic Data to 2007/08, years 2008/09 to 2009/10 ABARE Crop Report, 2010/11 AOF Crop Report Oct. 2010

3. GRAIN END USE

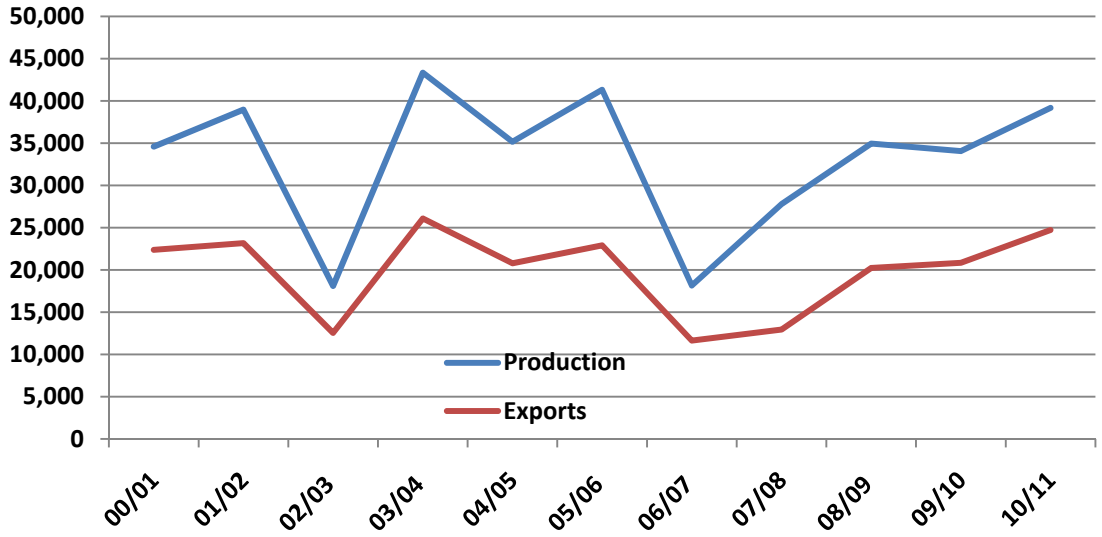
The following end use market outlets for Australian grain have been updated to account for changes in use data occurring over the last 12 month period. Projections for 2009/10 are included within the data presented.

3.1.Export Grain

Cereal grain exports during 2009/10 are reported by ABARE as being 20.8MMT, this is forecast to increase to 24.7MMT in 2010/11 due to the larger grain crop.

Figure 13 identifies the level of grain exports over the period 2000/01 to 2010/11. Exports include wheat, barley, oats, sorghum, lupins, peas and maize.

Figure 13. Cereal Grain Production and Exports 2000/01 to 2010/11 - ('000 tonnes)

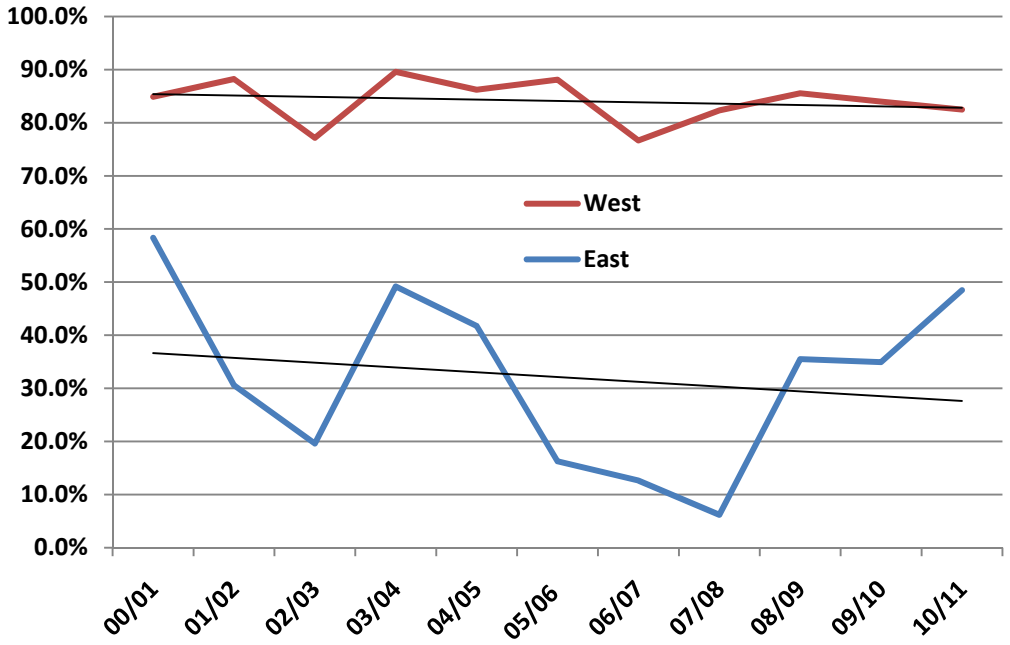


Source: ABARE - BRS Crop Report

When the data is split between east and west production and export regions, it is seen in Figure 14 that grain exports from the west have consistently remained around 80%. Due to the lower crop production for this coming harvest, the availability of export grain in WA is expected to fall below the traditional 80% level.

For eastern Australia, the larger 2010/11 production year will result in exports reaching around 50% of production. This will be the highest level of exports since the early 2000's.

Figure 14: Cereal grain exports as a percentage of total production 2000/01 to 2009/10



Source: Derived from Australian Commodity Statistics and ABARE Crop Report Sept 2010 Production.

The relative size of the grain surplus available for export in 2010/11 is shown in Table 1. Should Australia export 24.7MMT tonnes, this will be the highest export volume since 2003/04 when 26MMT was exported.

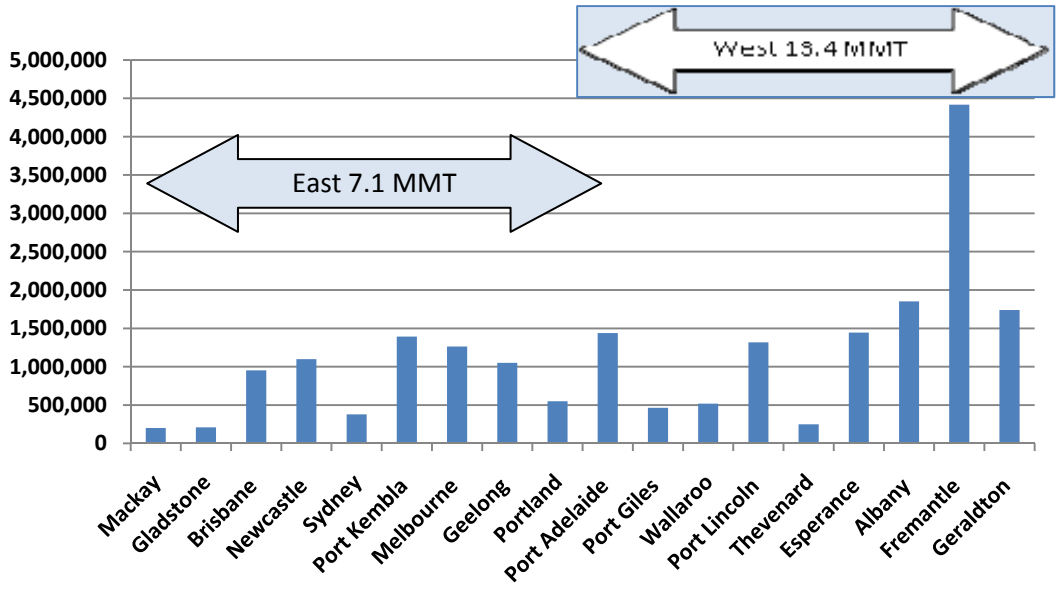
Table 1. Grain exports 2010/11 forecast against average 1999/10 to 2009/10 (tonnes)

Grain	Exports 2010/11 Forecast	Exports 1999/00 - 2009/10 average	% Change
Wheat	18,376,000	13,616,200	35%
Barley	5,041,000	4,517,500	12%
Oats	261,000	154,600	69%
Triticale	0	0	-
Sorghum	537,000	480,500	12%
Maize	35,000	37,000	-5%
Lupins	269,000	340,800	-21%
Field Peas	205,000	208,600	-2%
Total	24,724,000	19,355,200	28%

Source: Australian Commodity Statistics and ABARE Crop Report Sept 2010.

Bulk shipping data for export ports shown in Figure 15 highlights the significance of WA and SA in supplying grains for export markets. Exports from the three eastern states is only just over half the volume normally exported from WA and SA.

Figure 15. Bulk grain shipments from Australian Ports – average annual volume 1999/98 – 2009/10 (tonnes)

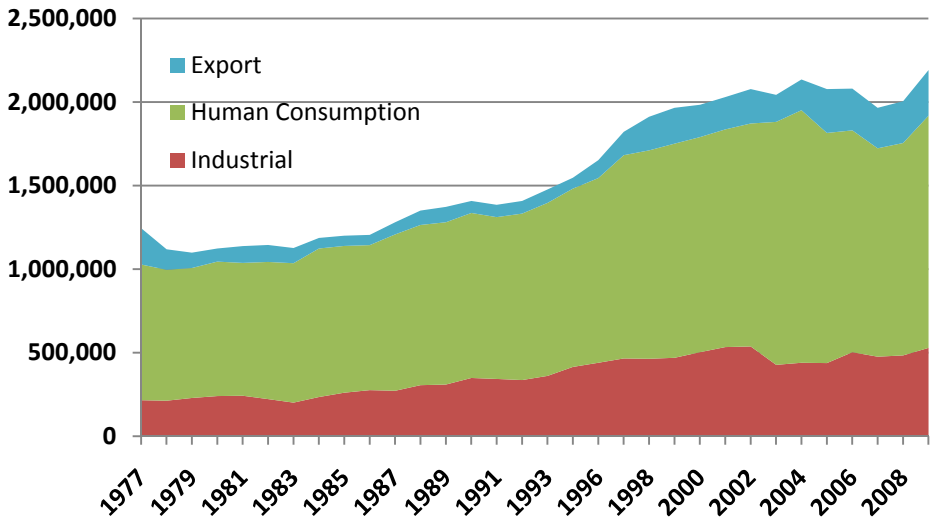


Source: AAPMA

3.2.Wheat use in Flour Milling

Due to the closure of the Flour Mill's Council of Australia, the ABS is no longer commissioned to collect flour milling data. Figure 16 provides data up to 2008/09, no data is available after June 2009.

Figure 16. Flour production for industrial, human and export market uses 1977/78 to 2008/09 (tonnes)



Source: Flour Millers Council of Australia

The manufacture of 2.3 MMT of flour utilises 2.85 MMT of wheat and also generates 570,000 tonnes of millmix as a co-product. NSW is the major flour milling state with 62% of flour production.

Flour production expansion is occurring with Manildra building a new flour mill to service it ethanol production capacity at Nowra NSW. This expansion project has been reported as providing a flour milling capacity of 1,000,000 tonnes of wheat. The capacity utilisation is dependent on ethanol demand and regulatory support for mandated ethanol inclusion within motor fuels. The potential wheat demand from the Manildra ethanol expansion project is significant relative to the existing wheat demand for flour milling in Australia.

3.3.Grain Use in Ethanol Production

There are only two operating ethanol plants that are reliant on sourcing grain as their feedstock.

- Nowra NSW owned by Manildra and utilises downgraded starch and wheat flour.
- Dalby Qld plant is processing sorghum.

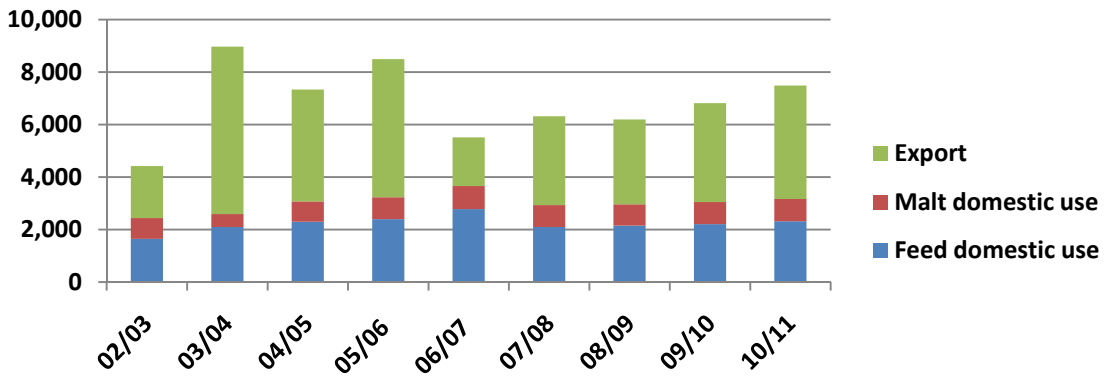
The ethanol plant operating at Dalby commenced operation in early 2009, it has however been moved into receivership. This plant is utilising sorghum, with an annual grain use of 200,000 tonnes when operating at full capacity.

The ethanol plant located at Nowra NSW utilises wheat flour, with the grain used within this plant incorporated into the data collected by the Flour Millers' Council of Australia as shown in Figure 16 as part of the industrial flour production. Wheat demand for industrial flour production will more than double following the commissioning of the new Manildra flour mill at Nowra.

3.4.Barley Use in Malt Production

Domestic malt production utilises less than 1 MMT of barley produced. The volume used annually in domestic animal feeding is in the range 2.1 – 2.8MMT. Barley produced surplus to domestic requirements is exported for both animal feed and malt uses. It is of note that although over 80% of barley grown is using malt barley varieties, only 30% of the barley grain is used for malt production either in Australia or overseas. Animal feeding is the major end use for Australian barley.

Figure 17. Barley Use in Domestic Feed, Malt and the Exported Surplus ('000 tonnes)



Source: ABARE Crop Reports

3.5.Grain Use in Animal Feeding

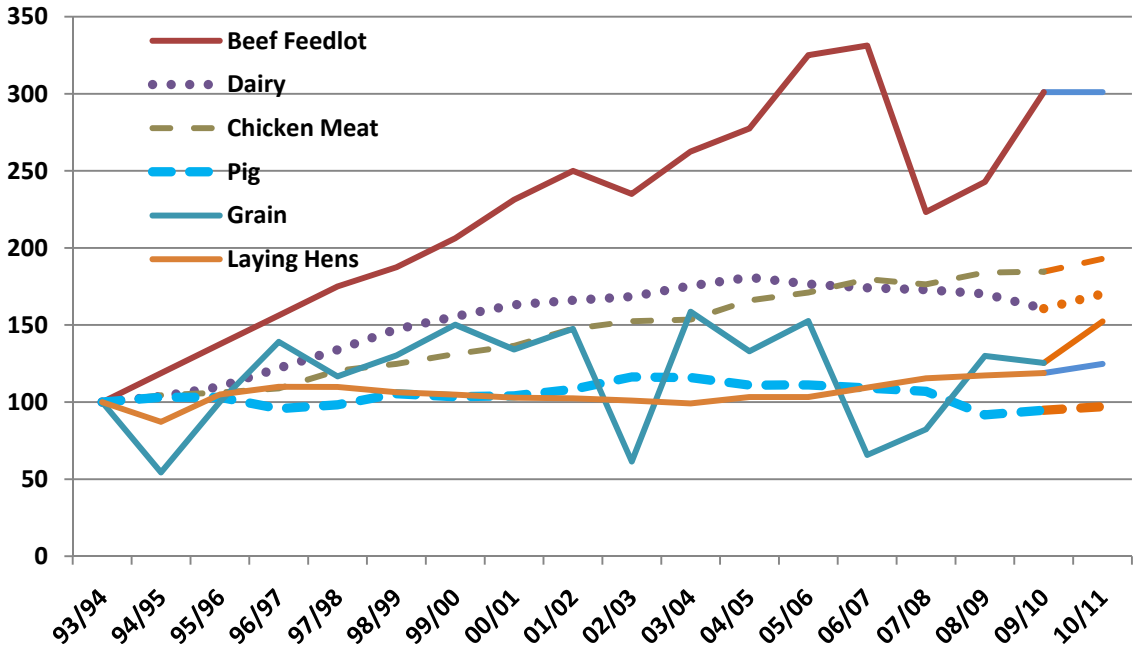
The rate of growth of the major Australian livestock feed grain using industries relative to the growth in grain production is shown in Figure 18. Total grain use by the Australian livestock industries is forecast to be 8.9MMT in 2010/11. This is a 3% increase in feed grain demand from 2009/10. Feed grain use is yet to return to the 2006/07 high year where beef feedlots were operating at close to full capacity.

This data has been compiled by JCS Solutions from published production data and provides an indexed growth rate, base year 1993/94, to demonstrate the relativity between livestock industries and the grains industry. Growth has been defined in volume production terms as follows:

- Grain – wheat crop tonnes
- Chicken Meat – tonnes
- Laying hens – flock size
- Beef Feedlot – number turned off
- Pig Meat – tonnes
- Dairy – tonnes grain use (cow herd number X kg grain/lactation)

For the year 2010/11, data is based on JCS Solutions predictions of growth, refer below for industry comments.

Figure 18. Industry growth 93/94 to 10/11, indexed from 1993/94

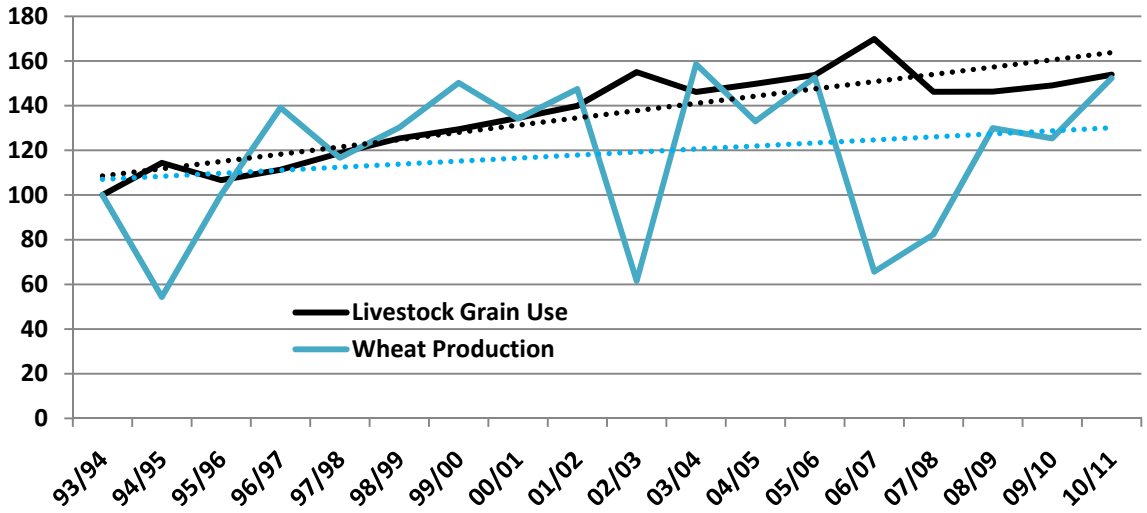


Sources: ABS, Dairy Australia and JCS Solutions estimates.

Feed grain use by the domestic livestock industries as shown in Figure 19 is compared against wheat production. It is seen that the level of demand has shown a consistent increase, being 60% higher than the level in 1993/94, this representing an average annual growth rate of 3.6%/year over the 17 year period.

The production of wheat over this same period has shown significant variation, fluctuating between a 40% decline in drought years and a 50% increase in the better cropping seasons. The trend line identifies faster growth in livestock feed grain use than is being supplied from increasing wheat production.

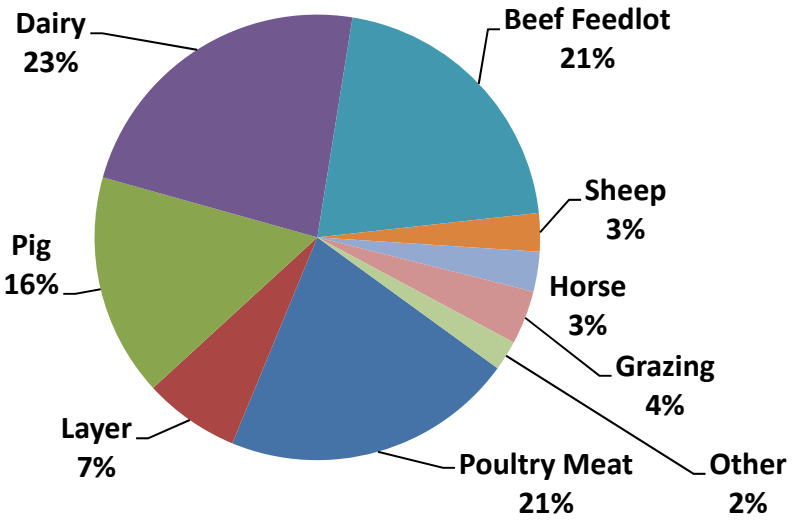
Figure 19. Australian domestic livestock feed grain use and wheat production, indexed from 1993/94



Sources: ABS, Dairy Australia and JCS Solutions estimates

Estimated feed use by each of the livestock industries is shown in Figure 20.

Figure 20. Feed use by livestock industry – 2010/11



Source: JCS Solutions

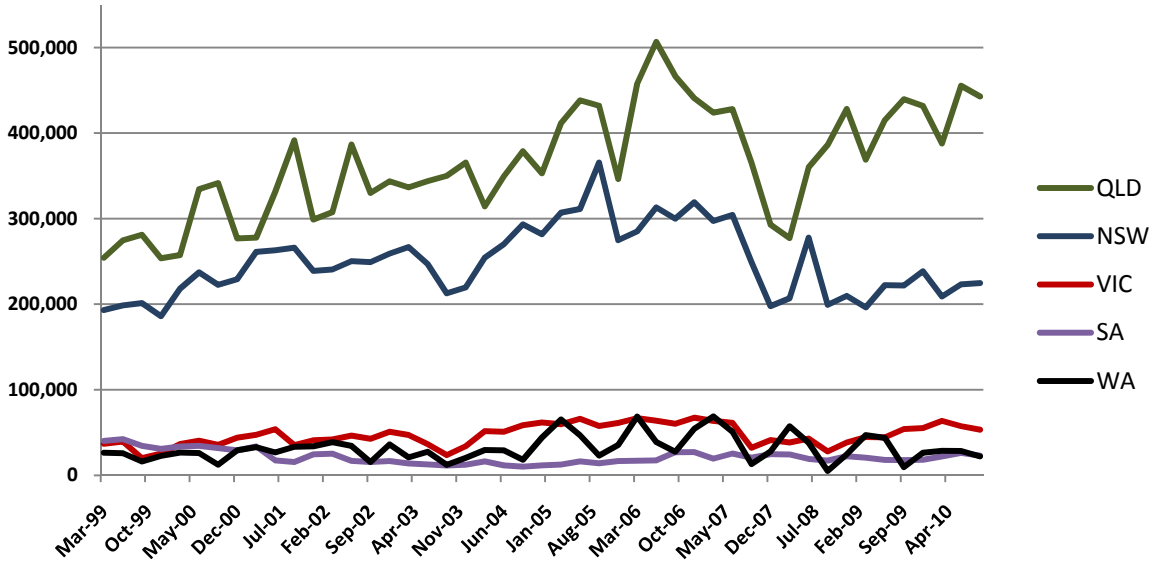
3.5.1. Beef Feedlots

Numbers of cattle on feed through 2009/10 has shown further growth in Queensland, getting closer to the volumes seen in 2006/07. The NSW feedlot numbers have remained static. Victorian feedlots are operating at higher stocking numbers. ALFA has reported that more favourable supplies of

sorghum and feed grain prices have assisted in offsetting higher feeder cattle prices. Beef producers on the east coast have been retaining stock to higher live weights due to the availability of pasture growth, this reducing the availability of suitable cattle for feedlot finishing.

The feedlot market remains dependent on export market demand and prices. Increasing US competition in the Japanese and Korean markets is a limiting factor for Australian grain fed exports. The stronger Australian currency has also been working against beef export prices.

Figure 21. Number of Feedlot Cattle on Feed 1999-2010 (head)



Source: ALFA/MLA Quarterly Feedlot Surveys

The opportunity feedlot sector has seen little activity with plentiful grazing conditions favouring grass finishing across most of eastern Australia.

3.5.2. Dairy Industry

The dairy industry is experiencing more favourable global milk prices in 2010, this follows the significant depression in prices seen through 2009. Milk production in 2009/10 declined by almost 5%. It is projected that production during 2010/11 will show a small increase to 9.1 billion litres.

During 2009, Victorian, South Australian and Tasmanian dairy farmers had negative cash flows due to low prices driven by the global market. This resulted in many farmers reducing their grain feeding rates, with a consequent drop in milk production. Farmers in Northern Victoria and the Riverina were most affected due to the added limitation of irrigation water supply access. The improved seasonal conditions during 2010, together with rising milk prices has increased industry confidence, this has lead to a return to more typical grain feeding levels.

Dairy farmers in NSW, Queensland and Western Australia during 2009 benefited from contracted milk prices and due to more favourable feed costs were able to maintain feeding rates and milk production.

Table 7. Australian Dairy Industry Statistics

	1980	1990	2000	06/07	07/08	08/09	09/10	10/11
Milk Production (million litres)	5,432	6,262	10,847	9,776	9,149	9,388	8,946	9,100[P]
Dairy Cows ('000)	1,880	1,654	2,171	1,810	1,700	1,650	1,600	1,600[P]
Farm numbers	21,994	15,396	12,896	8,055	7,953	7,924	7,800[p]	7,750[p]
Export share of production	22%	31%	56%	50%	45%	48%	46%	48%[p]

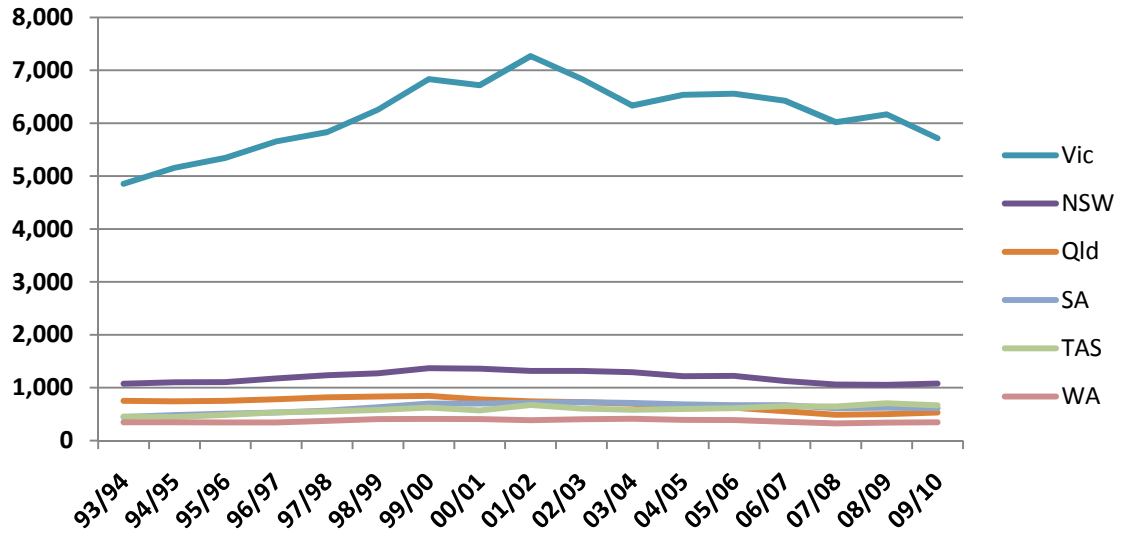
Source: Dairy Australia, 09/10 P = projected data from JCS Solutions

Figures 22 and 23 identifies the volume of milk produced in Victoria relative to the other states. During 2009/10 milk production declined by 7.3%, 5.4% and 1.5% in Vic, Tas and SA respectively, over the same period milk production increased by 2.2%, 5.6% and 1.2% in NSW, Qld and WA respectively.

It is seen that the decline in milk production in Vic has been occurring over the last decade, this being associated with less favourable seasonal conditions and reduced irrigation water availability. It is anticipated that during 2010/11 there will be an increase in Victorian milk production with higher spring rainfall, an increase in irrigation water availability, increasing milk prices and favourable grain prices.

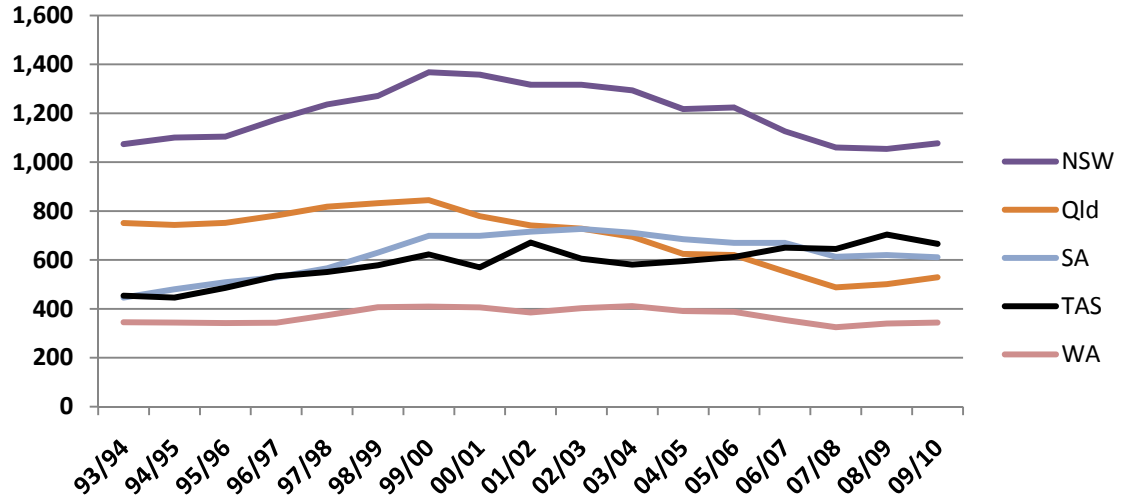
The non Victorian milk production, shown in Figure 23, indicates that production in Tasmania has been consistently increasing. Production in Qld, NSW and WA would seem to have bottomed out and is showing signs of also increasing to meet domestic market demand.

Figure 22. State milk production 1993-94 to 2009/10 (million litres)



Source: ABS

Figure 23. Non Victorian milk production 1993-94 to 2009/10 (million litres)



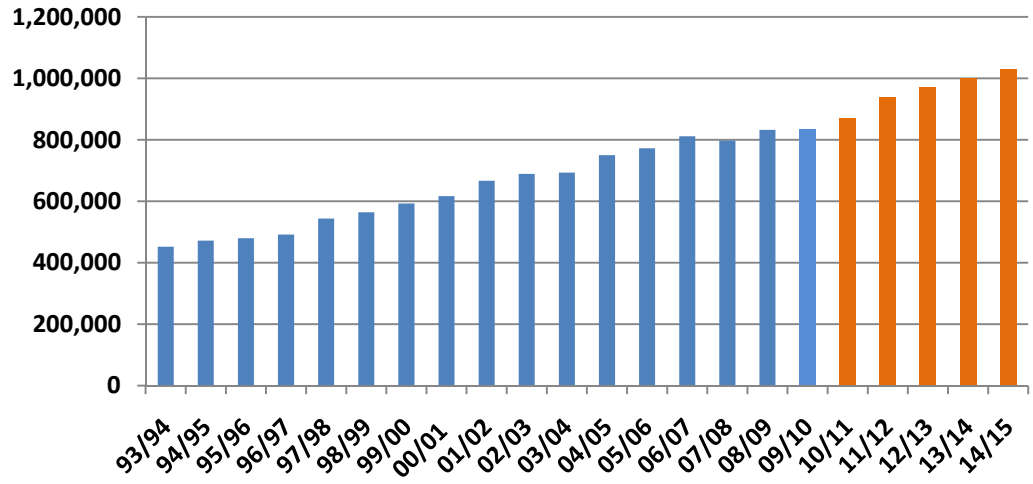
Source: ABS

The level of supplementary feeding by dairy farmers is reported by Dairy Australia, based on a survey of 1,000 dairy farmers taken in February/March 2010, to have been an average 1.58 tonne per cow per year. Since this survey, with higher milk prices, feed manufacturers have seen an increase in feeding rates. For the 2010/11 season, feeding rates have been estimated to be 1.7 tonnes per cow per lactation, this figure including an allowance for calf rearing and dry cow feeds.

3.5.3. Poultry Meat

Chicken meat production increased by only 0.2% in 2009/10. The data shown in Figure 24 includes ABARE production forecasts through to 2014/15. It is seen that there is forecast strong growth in chicken meat production, reaching one million tonnes in 2013/14. To reach this production level requires an average growth rate of 4.6% per annum. Over the previous 12 year period, the average increase in chicken meat production has been 4.4% per annum. This level of growth would require a significant increase in new farm development.

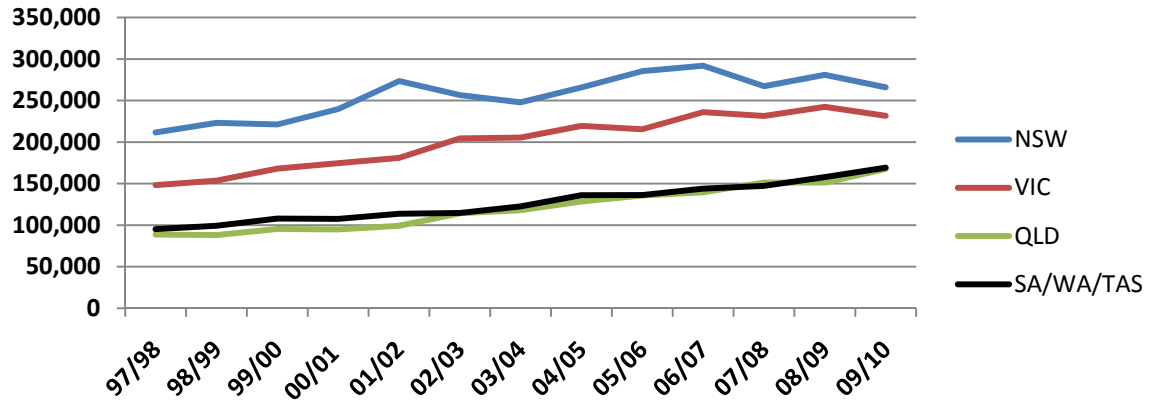
Figure 24. Australian Chicken Meat Production (tonnes)



Source: ABS, 2010/11 to 2014/14 ABARE data predictions

The ABARE projections are based on a combination of population growth as well as increasing consumption of chicken meat relative to other meats, especially beef. ABARE is forecasting chicken meat consumption to increase from 38kg/person/year in 2009/10 to 41.7 kg/person/year in 2014/15.

Figure 25. State Chicken Meat Production (tonnes)



Source: ABS

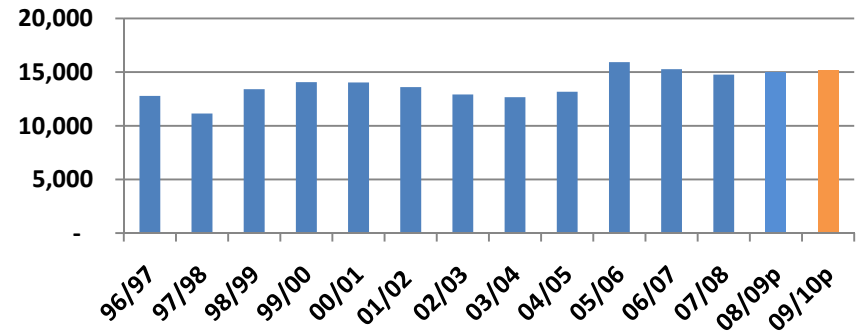
The growth in chicken meat production in Qld and SA has continued, with volumes in both NSW and Victoria declining. The industry is seen to be shifting its production base to locations more suited to intensive farming; this being in terms of land values, availability of feed grains and biosecurity in obtaining farm isolation. Victorian production was impacted by the fire at Ingham's Somerville processing plant in January 2010. This resulted in some volume being transferred to other states until the plant is rebuilt.

The industry has also been moving to a higher proportion of further processed chicken meat products. The manufacture of these products is suited to having centralised larger scale operations, with higher gross margins allowing products to be transported to larger population bases in NSW and Victoria.

3.5.4. Layer Industry

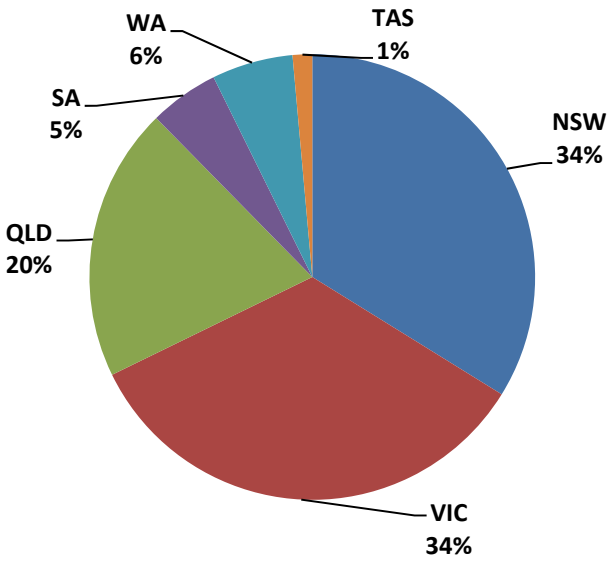
The Australian layer flock in recent years has remained in the range 14-15 million hens. The industry is concentrated in the three east coast states as shown in Figure 27 and it is based upon fresh egg supply.

Figure 26. Australian Laying Hen Flock (000's)



Source: ABS, 2008/09 and 2009/10 data predictions based on advice from AECL

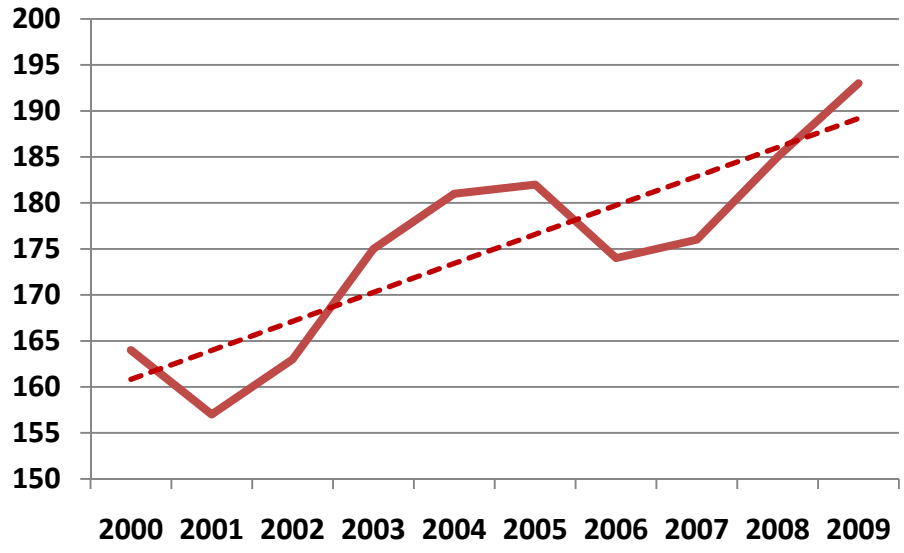
Figure 27. Laying flock located within each state



Source: ABS

The industry has reported a shortage of eggs during 2010, this being attributed to increasing egg consumption. The industry through product promotion, including gaining Heart Foundation endorsement, has seen egg consumption growing from a low of 160 eggs/person in the early 2000's, to 195 eggs/person in 2009. Demand growth has lead to the expansion of some farming operations to increase supply. The fastest growth is occurring within the free range market sector and some of the new production capacity is aimed at servicing this market.

Figure 28. Egg consumption (eggs/person/year)

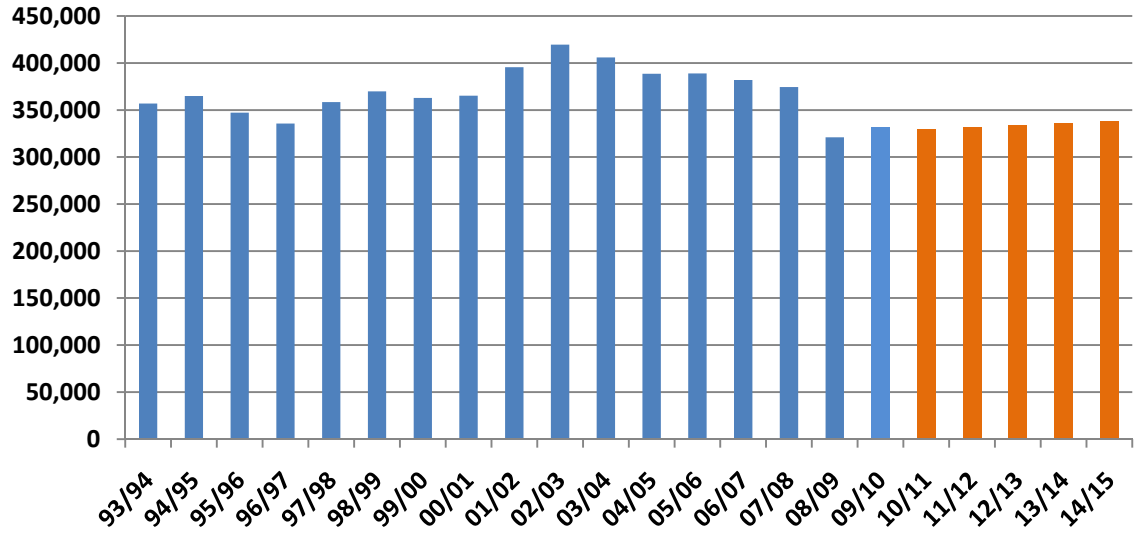


Source: AECL

3.5.5. Pig Production

Following the drop in sow numbers and pig meat produced during 2008/09, more favourable meat prices and relief in feed costs has resulted in a 3.2% increase in pig meat production in 2009/10. ABARE in their Outlook forecasts are indicating a flat level of production through to 2014-15.

Figure 29. Australian Pig meat production (tonnes)

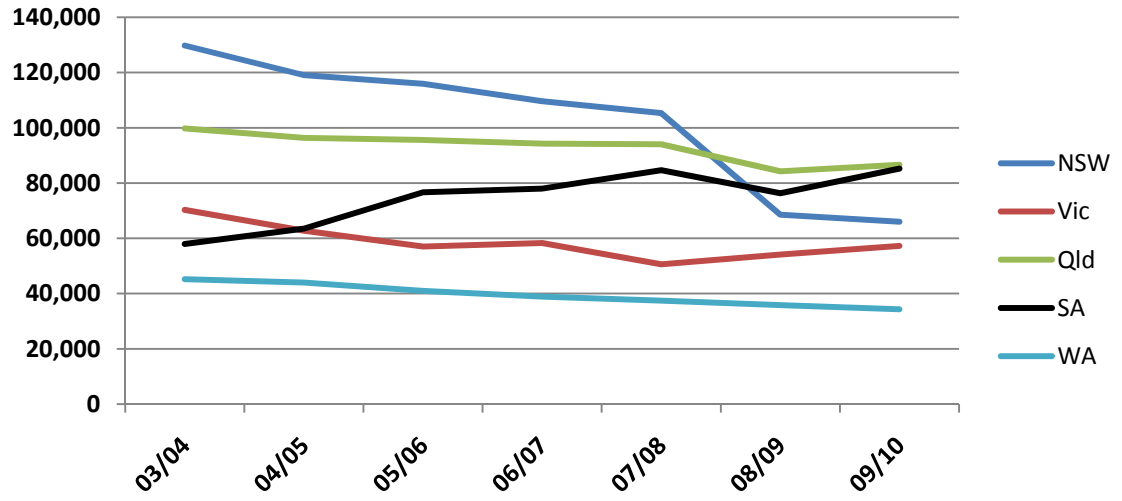


Source: ABS, 2010/11 to 2014/14 ABARE data predictions

The industry is focused on supplying fresh pork meat to the domestic market. The majority of meat used for processed pig products are utilising imported meat.

The spread of pig meat production across the states is shown in Figure 30. It is seen that the greatest decline in production has occurred in NSW. In contrast South Australian pig meat production has been increasing. This shift in production is both due to changes in slaughter location, as well as farming expansion in SA in preference to other states.

Figure 30. Pig meat production by state (tonnes)

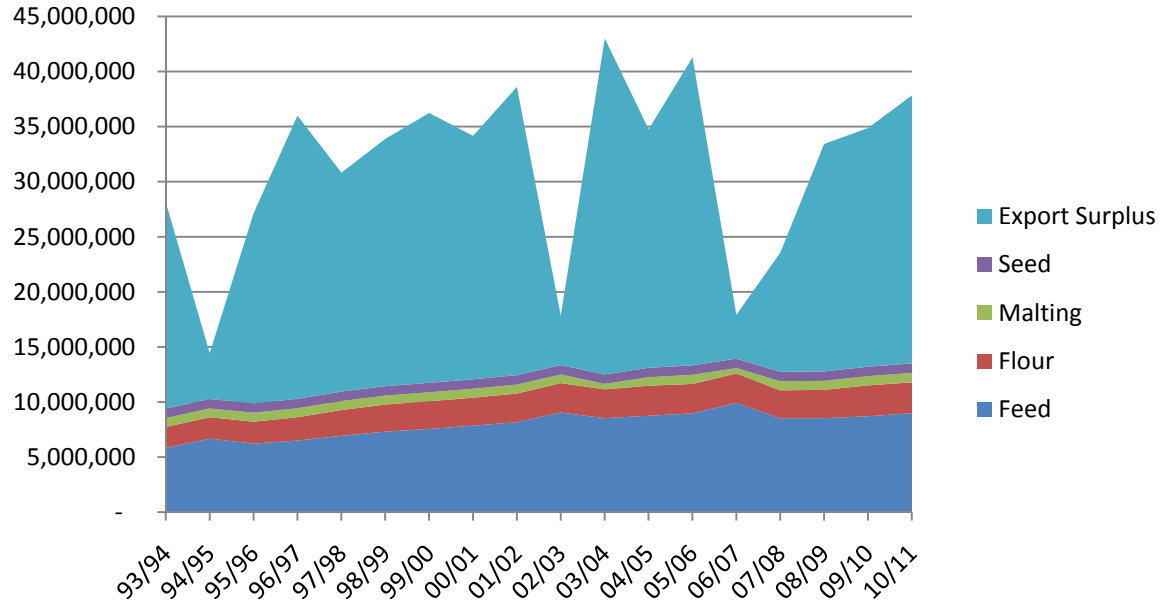


Source: ABS

3.6.Feed Industry Use of the Grain Crop

Utilising calculated estimates of feed consumption by each livestock industry, total feed grain demand by the Australian livestock industries in 2010/11 is forecast to be 8.9MMT, this being a 3.2% increase over the previous 12 month period. There will be a large surplus of grain, estimated to be 24.3MMT available for export markets.

Chart 31. Grain use by sector 1993/94 - 2009/10 - tonnes



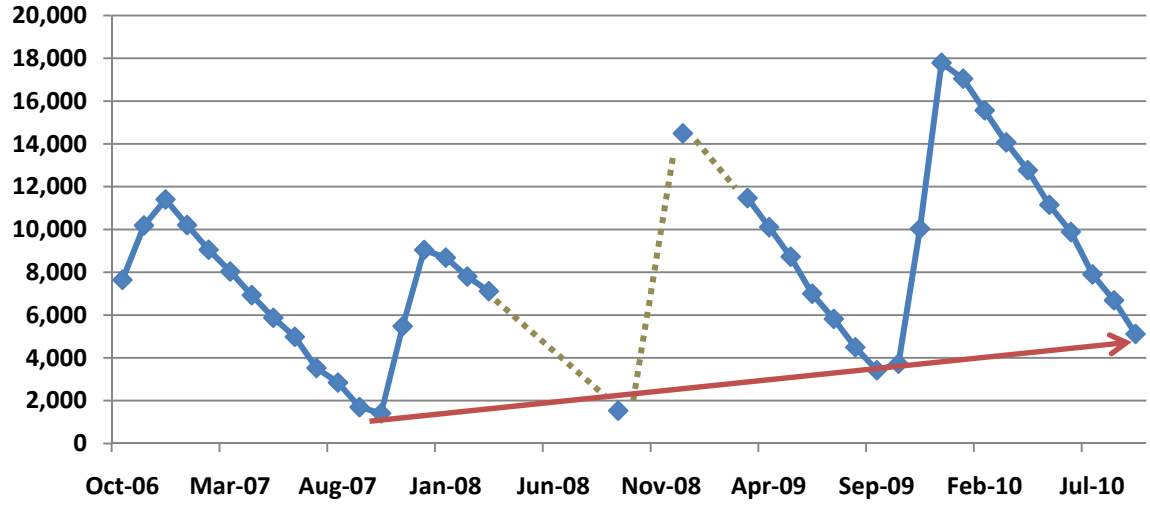
Sources: JCS Solutions derived from published industry data, 2010/11 predicted

4. WHEAT STOCKS

Wheat stocks data collected by ABS is shown in Figure 32. It is seen that both the maximum and minimum wheat stocks held by the bulk handlers and traders have been increasing since the 2007 low harvest year. With the coming harvest potentially being greater then 2009, it could be expected that there will be a further increase in wheat stocks held by the bulk handlers and traders.

It is of note that this data, based on the Productivity Commission recommendation, will cease to be collected after 30 June 2011. Further collection is subject to industry funding provision and the agreement of the bulk handlers to participate.

Figure 32: Wheat Stocks held by Bulk Handlers and Traders (000's tonnes)



Source: ABS, missing data points through no ABS collection have been replaced with trendlines.

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