

Productivity Commission

Tasmanian Freight Subsidy Arrangements

Frank de Bruyn

General Manager

Monds & Affleck

Tasmanian Grain Elevators

Ruralco
HOLDINGS LIMITED



Monds & Affleck
STOCK FEED

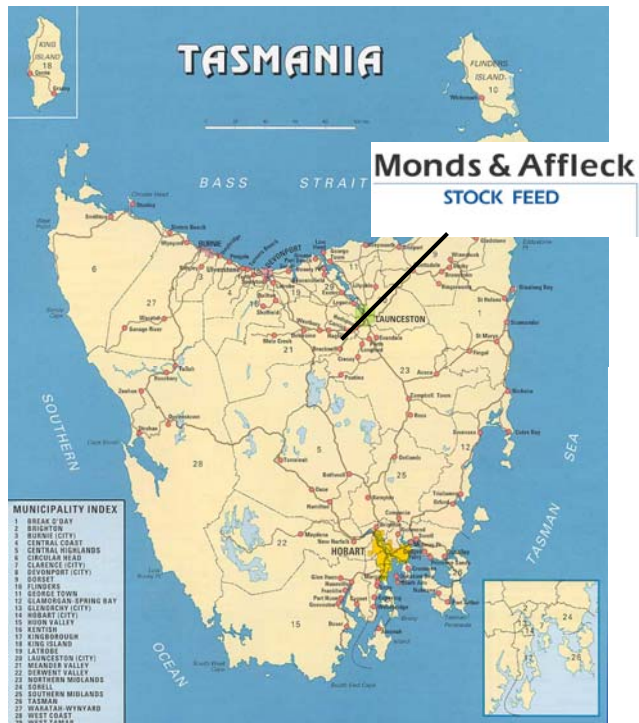
Submission Outline

- Ruralco / Monds & Affleck / Tasmanian Grain Elevators
- Value of Agriculture
- Proposal 1: Phase out TFES
- Proposal 2: Abolish TWFS
- Alternatives to TFES – Flat-rate
- Other issues

Ruralco

- Off-market reverse take-over Roberts Limited
- Monds & Affleck and TGE remain subsidiaries of Roberts
- Joint management: Frank de Bruyn
- Separate companies, delivering different services

Monds & Affleck



- Bulk & bagged stockfeed manufacturer & distributor
- 13 employees + 8 indirect
- Supply 75% commercial layer-feed, 50% domestic bagged feeds & 25% pig & dairy
- Critical ingredients for Tas Feedlot for balancing TMR. Risk Mgmt Plan for Meat Bird industry. Control mechanism for imported weeds for Quarantine

Ruralco
HOLDINGS LIMITED


Tasmanian
Grain Elevators

Monds & Affleck
STOCK FEED

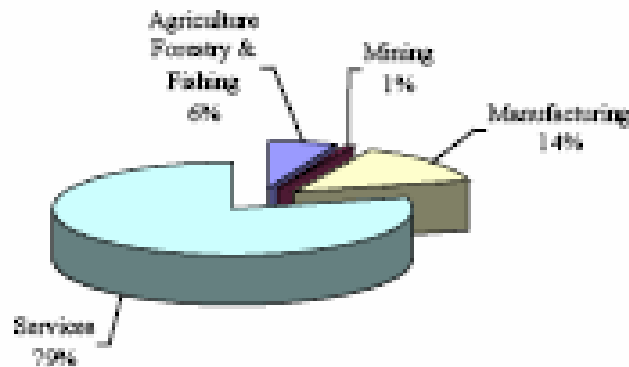
Tasmanian Grain Elevators



- Bulk handling & storage, and grain-sales
- Former GBE. Sold \$9m
- 7 employees + 2 indirect
- 35,000 tonnes storage capacity
- Key contributor to major grain users for storage and distribution.
- Part of Emergency Feed Grain Reserve
- Locations: Powranna, Devonport, Launceston

Value of Agriculture

Figure 5: Industry Contributions to Gross State Product
2003-04

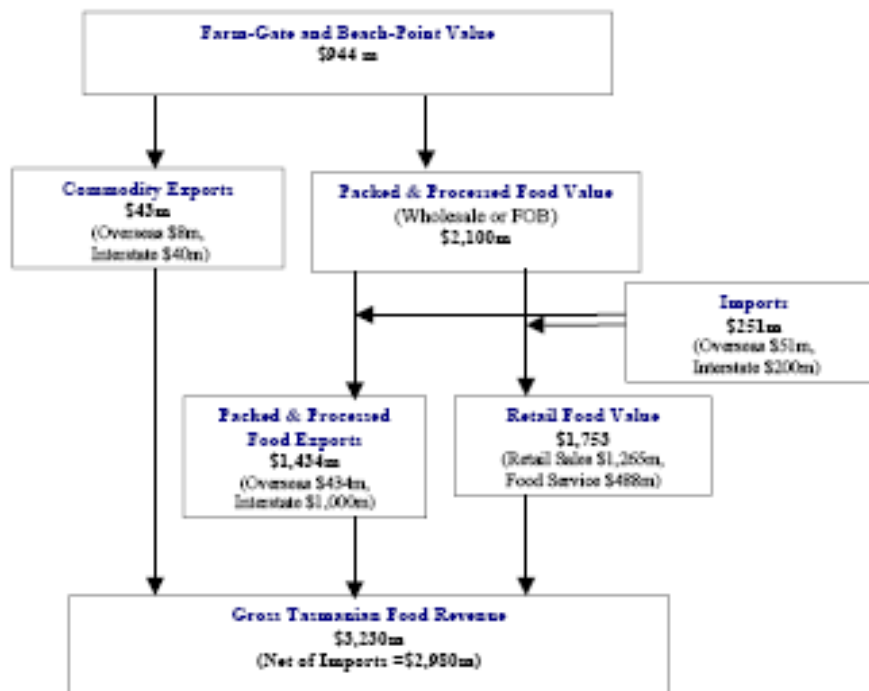


- 6% of gross state product
- 6% total state employment
- More farm-dependent than any other state

TAPG/TFGA Report: Contribution of Agriculture to Tasmanian Economy September 05

Value of Agriculture

Figure 8: Tasmania's Food Industry Value Chain
2002-03



Source Data provided by H.Griffiths, DPIWE, 2005

- Inputs + Outputs = 16% GSP & 20% TSE

- \$944m farm-gate

- \$2,100m packed & processed

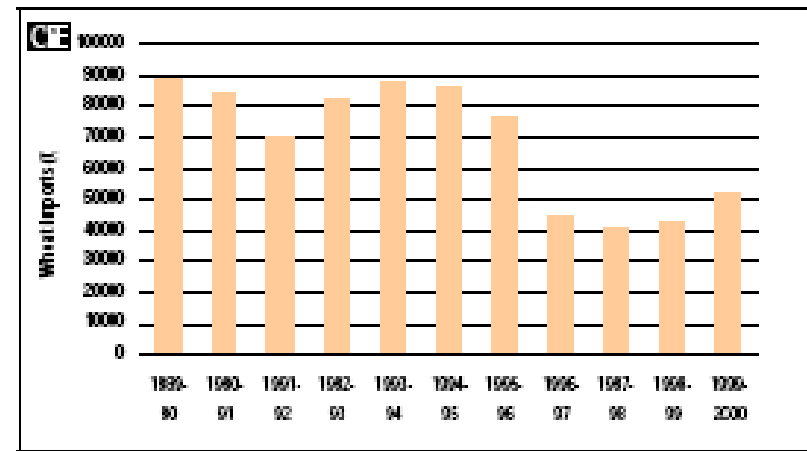
Proposal 1: Phase out TFES

- Fixed-cost businesses pass on changes to the cost of inputs such as freight and grain-purchases
- A reduction in assistance = increase in cost of freight = increase in cost of grain or stockfeed at farm-gate
- Farmer gross-margins are negatively affected

Proposal 2: Abolish TWFS

- No logical basis for determining level of TWFS
- Fixed-sum assistance is worst in drought-years
- TFES supports less efficient method of transporting grain

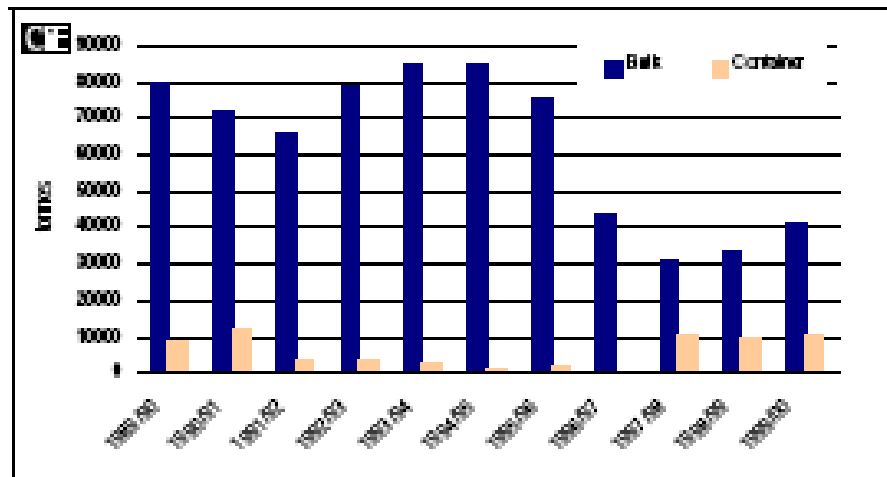
2.1 Tasmanian wheat imports



Data source: APFA, pers. comm., February 2001.

Proposal 2: Abolish TWFS

1.3 Tasmanian wheat imports



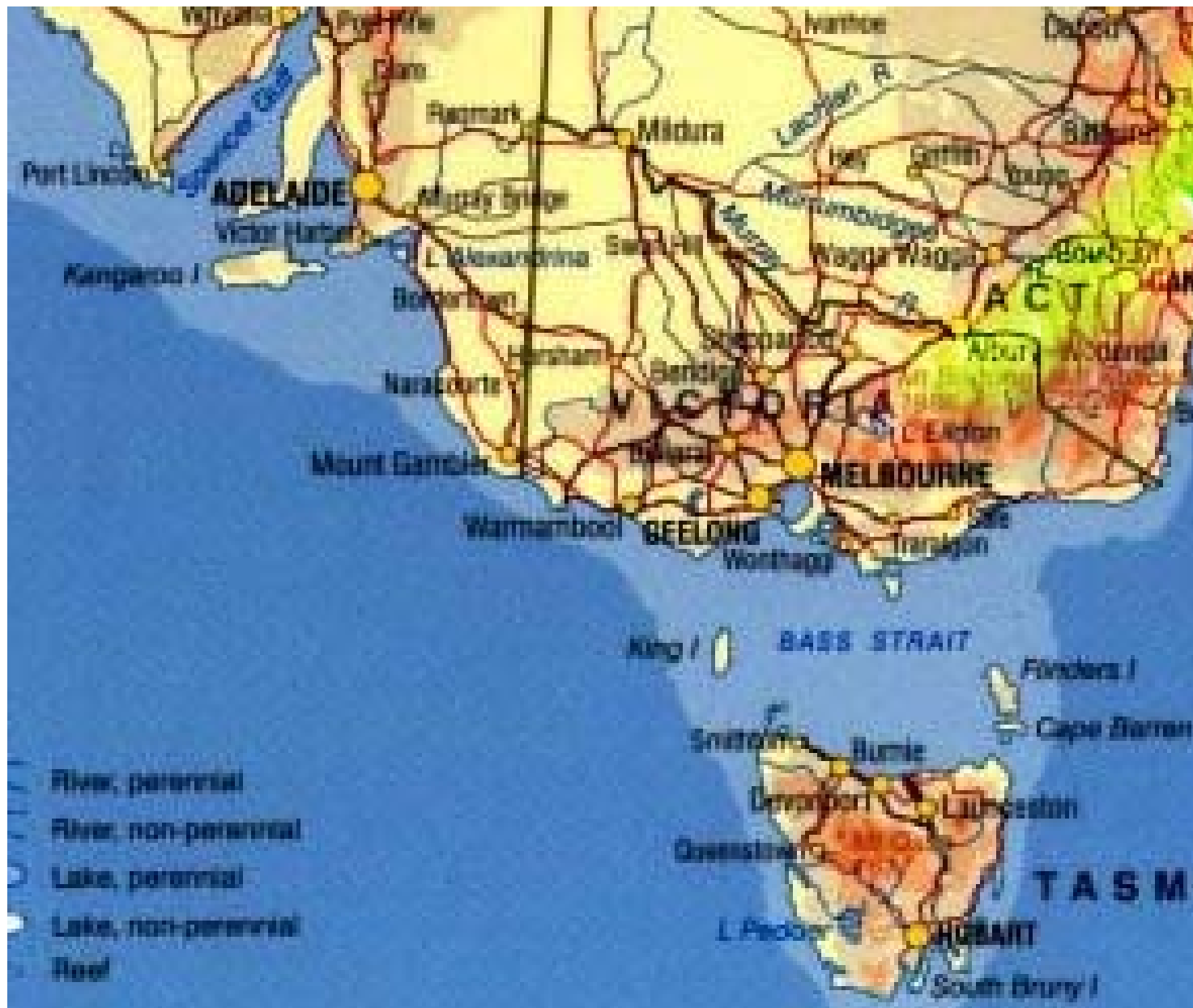
Data source: AFPA

- AS GOVT decision in 2004 impacted on TWFS
- \$15/t advantage under TFES
- Significant infrastructure ramifications – loss of bulk-shipping, future investment, grain reserves, drought

Alternatives to TFES

Retain TFES as flat-rate

- Equity across both subsidies, no matter what level of subsidy is paid



Ruralco
HOLDINGS LIMITED


Tasmanian
Grain Elevators

Monds & Affleck
STOCK FEED

**Tasmanian Agricultural Productivity Group
& Tasmanian Farmers & Graziers Association**

The Contribution of Agriculture to the Tasmanian Economy

September 2005



**Tasmanian Agricultural Productivity Group
& Tasmanian Farmers & Graziers Association**

**The Contribution of Agriculture to the
Tasmanian Economy**

This report was commissioned by the Tasmanian Farmers and Graziers Association (TFGA) and the Tasmanian Agricultural Productivity Group (TAPG) with the support of the National Association for Crop Production and Animal Health (AVCARE). The project was undertaken by Davey and Maynard.

September 2005.



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Key Points

- Agriculture is an important contributor to the Tasmanian economy both in its own right and because of the contribution of other industries that depend on it. In particular, the manufacturing and service sectors that utilise farm outputs are very significant contributors to both gross state product and employment.
- The direct or farm-gate contribution of agriculture is around 5% of gross state product, and 6% of total state employment.
- When agriculture and its related input and output sectors are combined the contribution of the so-called farm dependent economy increases to almost 16% of gross state product, and 20% of state employment.
- Agriculture is a more significant contributor to the Tasmanian economy than it is in any other state. Tasmania's 16% of gross state product from the farm dependent economy compares to a range of 10% to 15% for other states and an Australian average of 12%.
- Two thirds of Tasmania's farm dependent economy contribution to gross state product occurs beyond the farm gate - in the farm output sector. The manufacturing and service sectors each contribute around half of the value added beyond the farm gate.
- Direct farm output in Tasmania in 2003-04 was valued at around \$857 million. This is down slightly from a peak of \$903 million in 2001-02. Since 2003-04 some reduction in vegetable and poppy output is likely to have been more than offset by an increase in the value of milk production.
- Despite its ups and downs, farm output has increased at a compound rate of 4.7% per annum over the past 20 years. This represents an increase in real terms over the period.
- Farm employment in 2003-04 was around 11,000 people. This was down by around 2,000 people since 2001-02 but that reduction has been offset by an increase in agriculturally dependent employment in the manufacturing and service sectors.
- The importance of the downstream benefits of agriculture in Tasmania is highlighted by a recent analysis of the state's food industry (including seafood) which showed the following value chain:

Farm-gate and beach-point value	\$ 944 million
Packed or processed value	\$2,100 million
Total food revenue (net of imports)	\$2,980 million
- The evidence outlined in this report highlights the case for viewing agriculture's contribution to the state economy in a much broader sense than is normally the case.

1. OVERVIEW

Agriculture is an important contributor to the Tasmanian economy in its own right but its contribution is often underestimated because of a focus on its direct or farm-level impact only.

Agriculture's total contribution to income and employment in the state is significantly expanded when account is taken of the inputs it purchases from other sectors and the contribution to downstream industries that are dependent on its outputs.

Inputs purchased from other sectors include such things as fertilisers, chemicals, contracting services and transport.

Outputs from agriculture are value-added in both the manufacturing and service industries. The food manufacturing and service industries in Tasmania are particularly dependent on output from the agricultural sector. Examples include vegetable processing, meat processing and packing, manufacture of dairy products, production of beer and wine, chocolate manufacture, food retailing and restaurants, cafes and hotels.

This report has collated information from a number of sources to provide an overview of agriculture's direct and indirect contribution to the state economy.

Data Sources

The three main sources of information used in this report were:

- (1) Australian Bureau of Statistics (ABS) – Tasmanian agriculture's direct contribution to the state economy in terms of output and employment.
- (2) Department of Primary Industries, Water & Environment (DPIWE) – the value of Tasmania's food industry.
- (3) Australian Farm Institute & Econtech Pty Ltd – the value of Tasmania's Farm Dependent Economy (FDE).

Farm Output

Over the past 20 years agriculture's value of production, which is essentially a farm-gate measure of output, has increased at a compound rate of around 4.7% per annum. This represents a slight increase in real terms over the period.

In general terms there has been a steady increase over time but with two major peaks. In the late 1980's higher than normal value of production was associated with high wool prices (before the demise of the reserve price scheme). More recently there was a peak in the early 2000's associated with high incomes earned from livestock, milk and poppies. The gross value of agricultural production has fallen slightly since then and in 2003-04 was \$857 million¹.

¹ ABS, 7503.0, 2003-04

Over the past five years agriculture has directly contributed an average of 4.8% of Tasmania's gross state product. The most important components of agriculture's value of production during that period were sale of livestock for meat (20-25%), milk (20-25%) and vegetables (around 20%).

Since the compilation of ABS statistics for the 2003-04 year there has been a reduction in the value of vegetables and poppies produced, but this is likely to have been more than offset by an increase in the value of milk production.

Farm Employment

Since 1999-00 agriculture has directly generated an average of 6% of total state employment. Over that time direct farm employment has declined from around 13,000 to 11,000 people. This has been associated with a slight reduction in output since 2001-02, but may also reflect some improvement in labour saving technologies.

Tasmania's Food Industry

The downstream benefits of agriculture in Tasmania have been highlighted by recent DPIWE work on the value of Tasmania's food industry². Including seafood, total farm-gate and beach-point production value in 2002-03 was around \$944 million. After packing and/or processing this value increased to \$2,100 million (2.2 times farm-gate value). Total food revenue net of imports was estimated at around \$2,980 million (3.2 times farm-gate value). Around 92 per cent of total state food revenue of \$3,230 million came from Tasmanian product as distinct from overseas or interstate imports.

The DPIWE report highlighted a number of key points in relation to Tasmania's food industry:

- (1) Tasmania produces a large net surplus of food,
- (2) The dominance of processed foods and beverages rather than fresh produce,
- (3) International and national brands are often the dominant labels on Tasmanian produce,
- (4) National markets (80%) predominate rather than export markets (20%), and
- (5) Confectionary, dairy products, beef & lamb, processed vegetables; salmon and beer are the big-ticket items.

Tasmania's Farm Dependent Economy

A recent report by the Australian Farm Institute³ assessed the total value of agriculture's contribution to the Australian economy including its interaction with other sectors of the economy. That total contribution was defined as the farm dependent economy (FDE) including agriculture and the farm-input and farm-output sectors.

For Australia as a whole it was found that the FDE contributed 12.1% of national gross domestic product and 17.2% of total employment.

² DPIWE, Tas Regions, December 2004 and January 2005.

³ Australian Farm Institute, Australia's Farm-Dependent Economy: Analysis of the Role of Agriculture in the Australian Economy, Research Report, March 2005.

Information provided in that report and obtained directly from Econtech Pty Ltd, which undertook the research on behalf of the Australian Farm Institute, has shown that Tasmania's FDE is 30% more important to the Tasmanian economy than it is to the nation as a whole. Tasmania's FDE has contributed an average of 15.8% of its gross state product over the past five years. This is 3.3 times its direct contribution of 4.8%.

It is possible that the assessed FDE contribution to total gross state product may itself underestimate the true value because of ABS reporting criteria which may allocate some Tasmanian factory output to mainland states due to the location of company headquarters on the mainland. More research is required to ascertain whether this is in fact the case.

Two thirds of Tasmania's FDE contribution to gross state product occurs beyond the farm gate - in the farm output sector. The manufacturing and service sectors each contribute around half of the value added beyond the farm gate.

While total employment in the direct agriculture sector has fallen somewhat in recent years, this has been offset by an increase in the farm-output sector. Total FDE employment has fluctuated between 40,000 and 44,000 over the past five years. That is around 20% of total state employment. This compares to a 17.2% contribution by the FDE nationally.

Slightly more than two thirds of farm dependent economy employment occurs beyond the farm gate – in the farm output sector. Within the farm output sector (ex farm-gate) 70% of employment is in the service sector and 30% is in manufacturing.

2. BACKGROUND

Agriculture occupies around 24% of Tasmania's total land area of around 6.8 million hectares. This compares to around 50% in conservation and natural environment and 22% in forestry.

Table 1: Land Use in Tasmania

Land Use	Area	
	Total (^{'000} ha)	Per cent (%)
Conservation and Natural Environment	3,440	50%
Forestry		
Production Forestry	1,286	19%
Plantation Forestry	214	3%
	1,501	22%
Agriculture		
Grazing Natural Vegetation	277	4%
Grazing Modified Pastures	1,224	18%
Irrigated Modified Pasture	57	1%
Cropping	75	1%
Perennial Horticulture	6	0%
Other	0.5	0%
	1,639	24%
Intensive Uses	89	1%
Water	174	3%
Total	6,843	100%

Source: From Drenan A, Land Use Mapping at Catchment Scale, Tasmanian Report, DPIWE, March 2003

2.1 Agricultural Enterprises in Tasmania

Agriculture in Tasmania is a particularly diverse industry with a wide range of crop and livestock products produced.

Crops include cereals for grain, vegetables, poppies, apples, stone fruit, grapes, and pyrethrum as well as cereals and pasture cut for hay.

Livestock enterprises include beef cattle, dairying, sheep, pigs and poultry with the main products being livestock sales for slaughter, milk, wool and eggs.

Table 2 outlines the area and production of major crops grown in Tasmania in 2003-04⁴.

Low value cereals and hay crops occupy a large proportion of total crop area with the output of the hay crops largely used on-farm.

Vegetables are a very important industry in the state and occupy a total of around 17,000 hectares. Potatoes – mainly for processing dominate both area and value.

Poppy area is around 12,000 hectares down from 20,000 hectares in 2000-2002.

Stone fruit and grapes are high value enterprises that have grown in area recent years and are expected to become relatively more important over time.

Table 2: Crop Area & Production

2003-04

Crop	Hectares	Tonnes
Cereals	23,000	69,000
Grapes	1,205	7,860
Legumes	2,000	3,000
Pasture Seed	3,000	3,000
Pasture & Cereal Cut for Hay	46,000	215,000
Pome Fruit		
Apples		37,255
Pears		730
Poppies*	12,000	
Stone Fruit		
Apricots		690
Cherries		920
Nectarines		90
Peaches		75
Vegetables		
Beans	1,660	12,475
Broccoli	785	4,360
Carrots	885	52,615
Cauliflowers	310	6,085
Green Peas	5,110	28,535
Lettuces	260	2,700
Onions	1,265	64,745
Potatoes	6,760	327,600

* Not published in this ABS report. Industry estimate approx 12,000 hectares.

Down from 20,000 hectares in 2000-2002.

Source: ABS, Agricultural Commodities Australia, 2003-04, 7121.0

Industry sources suggest that at least some of ABS production figures underestimate the true level of output. In the case of vegetables, for example, it appears that the ABS estimates for broccoli, beans, peas and potatoes are well below their true value:

⁴ ABS, Agricultural Commodities, Australia, 2003-04, 7121.0

	Industry Estimate	(ABS)
Broccoli	9,700 t	(4,360 t)
Beans	16,700 t	(12,475 t)
Carrots	52,000 t	(52,615 t)
Onions	65,000 t	(64,745 t)
Peas	32,600 t	(28,535 t)
Potatoes	415,000 t	(327,600 t)

Tasmania's livestock enterprises are summarised in Table 3.

Table 3: Livestock Numbers & Production

2003-04

		Quantity
Livestock Numbers		
Dairy Cattle	('000)	189
Beef Cattle	('000)	496
Sheep	('000)	3,183
Pigs	('000)	14
Poultry	('000)	343
Livestock Slaughterings		
Cattle	('000)	205
Calves	('000)	47
Sheep	('000)	346
Lambs	('000)	419
Pigs	('000)	44
Poultry	('000)	np
Livestock Products		
Meat	('000 t)	73
Wool	('000 t)	15
Milk	(ML)	590
Eggs	('000 doz)	4,791

Source: ABS, Agricultural Commodities Australia, 2003-04, 7121.0

2.2 Measuring the Value of Agriculture

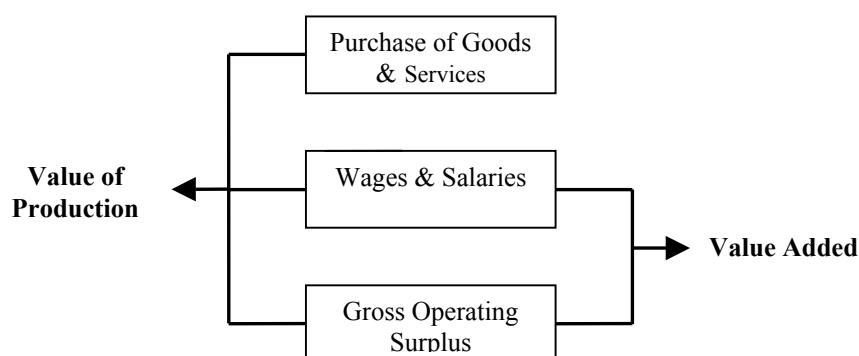
The value of agriculture's contribution to the overall state economy is commonly expressed in terms of the following criteria:

- (1) Value of Production
- (2) Value Added,
- (3) Employment Generated

Value of production is a measure of the value of the output of a sector. It is effectively made up of the cost of inputs (goods and services and labour) plus profit (gross operating surplus) (see Figure 1).

Value added is the value of production less the cost of inputs (goods & services) from other sectors. As such it is a better measure for comparing the contribution of the various sectors that contribute to total state product. If the value of production of each sector along a value-adding chain was used for comparison purposes there would be double counting - because the output from one sector is often the input for another.

Figure 1: Value of Production & Value Added



Value of production in agriculture is normally measured as **gross value of agricultural production (GVAP)**. This is the value placed on production at wholesale prices realised in the market place. Essentially it is the farm gate value plus any marketing costs such as transport and commission. In Tasmania these tend to be relatively low so that local value (farm gate) is not very different to GVAP (factory door etc).

Value added for the agriculture sector is referred to as **gross agricultural product (GAP)**. This is the value of production less the cost of inputs such as fertiliser, contracting, transport and storage used in production. Because the cost of output from other sectors is taken this is a more valid measure of agriculture's contribution to the state economy. Likewise manufacturing based on agricultural inputs would deduct the cost of those agricultural (and other) inputs to estimate its contribution to the states economy.

To fully assess agriculture's contribution to the state economy it is necessary to go beyond the farm-gate. Agriculture in Tasmania has a large indirect contribution to the state's economy because of the inputs it buys from other sectors, and the degree to which the manufacturing, processing and service industries are dependent on it for their inputs.

2.3 Sources of Information

This report summarises information from three main sources to provide an overview of agriculture's overall contribution to the state economy:

- (1) Australian Bureau of Statistics (ABS) – Tasmanian agriculture's direct contribution to the state economy.
- (2) Department of Primary Industries, Water & Environment (DPIWE) – the value of Tasmania's food industry.
- (3) Australian Farm Institute & Econtech Pty Ltd – the value of Tasmania's Farm Dependent Economy (FDE).

3. AGRICULTURE'S DIRECT CONTRIBUTION

This section reviews agriculture's direct contribution of to the State's economy in terms of:

- (1) Value of production
- (2) Value added, and
- (3) Employment generated

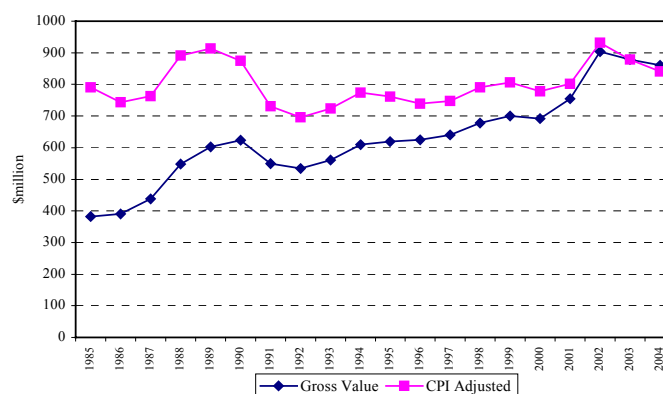
3.1 Value of Production

Value of production for agriculture is normally referred to as gross value of production, which is the value placed on production prior to direct sale or packaging or processing. Essentially this is the farm gate value plus any marketing costs. In 2003-04, the gross value of agricultural production in Tasmania was \$857 million⁵.

In the past 20 years the gross value of agricultural production has increased at a compound rate of around 4.7% per annum (Figure 2). There has also been a slight increase over the period in real (inflation adjusted) terms.

Agriculture as an industry is prone to substantial variation as a result of fluctuations in weather and market conditions. This is mitigated somewhat in Tasmania because of its relatively stable climate and the broad range of crop and livestock products that make up the overall output. Over the past 20 years there have been two substantial peaks in output. Apart from these peaks there has been a relatively consistent increase in output over the period.

Figure 2: Gross Value of Agricultural Production
1985-2004



Source: ABS, Value of Agricultural Commodities, 7503.0,
CPI adjusted figures are in 2002-03 dollars

The peak in the late 1980's was associated with high production and prices for wool. Output fell dramatically with the demise of the Reserve Price Scheme.

⁵ ABS, 7501.0, 2003-04 (preliminary).

The peak in the early 2000's was due to high milk and poppy values on top of steadily increasing livestock sale values. The fall in 2002-03 and 2003-04 was mainly associated with a reduction in milk price, and poppy area and price.

In the past five years, Tasmania's gross value of agricultural production has increased from around \$700 million in 1999-00 to a peak of around \$903 million in 2001-02 before falling somewhat after that (Table 4).

Table 4: Gross Value of Agricultural Production

2000-2004

Sector	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
Crops					
Vegetables	135.5	146.9	168.0	165.4	179.5
Fruit & Grapes	67.0	77.0	65.8	80.6	91.1
Pastures and Grasses	31.8	41.9	43.3	40.3	43.8
Cereals for Grain	10.6	13.8	14.7	17.1	14.1
<u>Other Crops</u>	<u>75.4</u>	<u>70.5</u>	<u>101.5</u>	<u>99.7</u>	<u>58.3</u>
Total Crops	320.4	350.1	393.3	403.1	386.8
Livestock Slaughterings	153.6	160.4	193.0	203.1	221.6
Livestock Products					
Wool	78.1	86.0	87.4	110.5	77.2
Milk	132.5	147.7	219.8	151.3	160.4
<u>Other Livestock Products</u>	<u>6.6</u>	<u>10.8</u>	<u>9.9</u>	<u>10.2</u>	<u>10.9</u>
Total Livestock Products	217.2	244.4	317.1	272.0	248.5
Total Gross Value	691.2	755.0	903.4	878.2	856.9

Source: ABS, Value of Agricultural Commodities, 7503.0

Since these ABS statistics were compiled for the 2003-04 year there have been several significant changes:

- (1) Milk prices have increased by around 25% + \$40 million⁶
- (2) Vegetable output have been reduced - \$19 million⁷
- (3) Poppy output has been further reduced - \$10 million⁸

Overall it would appear that the reduction in vegetable and poppy output has been more than offset by an increase in the value of milk production.

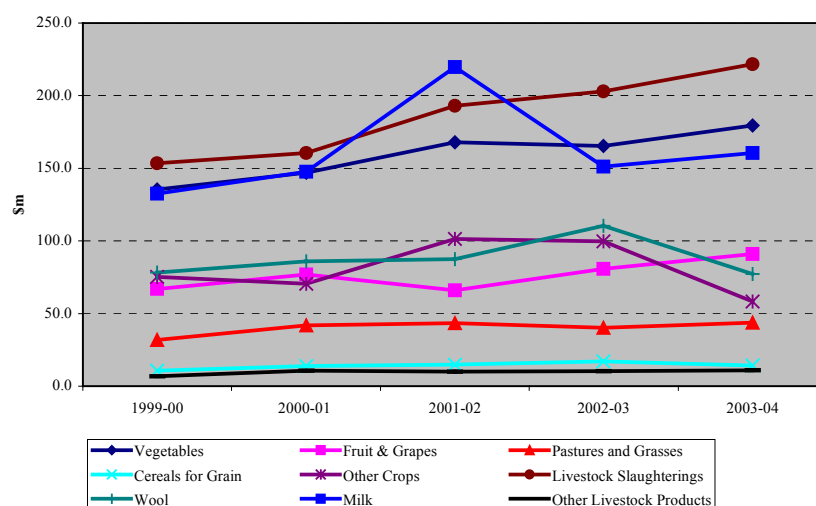
⁶ Davey & Maynard estimate.

⁷ Tasmanian Vegetable Industry Situation Paper, DPIWE & DED, August 2005,

⁸ Davey & Maynard estimate.

Figure 3 shows trends in output for various commodities over the past five years.

Figure 3: Gross Value of Agricultural Production
2000-2004



Source: ABS, Value of Agricultural Commodities, 7503.0

The most consistent trend in the past five years has been the steadily increasing value of the livestock industry - associated with improved beef and lamb prices. Some levelling off is expected in the next few years.

High milk prices in 2001-02 coincided with good seasonal conditions and low grain prices and resulted in a record dairy value of production in that year. Milk prices fell in 2002-03 and 2003-04 but have increased again since that time. There appears to be strong growth potential in the dairy industry.

The increase in “Other Crop” value in the early 2000’s was mainly a result of record poppy output. Both area planted and price have fallen since then although the impact has been mitigated somewhat by gains in output per hectare. High stocks associated with world oversupply are the main reason behind the current reduction in poppy output. It may be several years before there is a recovery in area planted.

Fruit (especially cherries and apricots) and grapes have shown a steady increase over the past five years and are becoming more significant as a contributor to the state’s economy. Because of market advantages associated with Tasmania’s climate there appears to be good prospects in particular for continued increase in the output of cherries apricots, and grapes.

Crops and livestock make up almost 50% each of the total value of agricultural production in Tasmania (Table 5 & Figure 4)

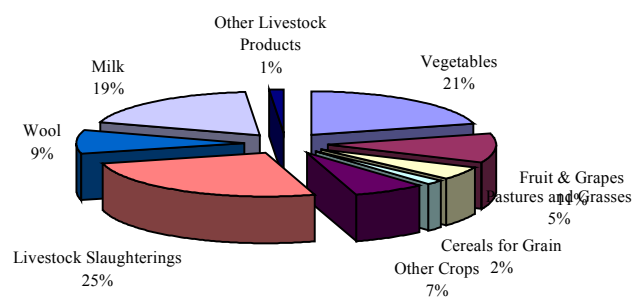
Within “Crops”, the vegetable industry is the major contributor at around 20% of the total value of agricultural production in the state. Livestock slaughtering and milk are the major contributors within the livestock industry - at around 20-25% each of the total gross value of agricultural production.

Table 5: Gross Value of Agricultural Production – Per Cent of Total
2000-2004

Sector	1999-00	2000-01	2001-02	2002-03	2003-04
Crops					
Vegetables	20%	19%	19%	19%	21%
Fruit & Grapes	10%	10%	7%	9%	11%
Pastures and Grasses	5%	6%	5%	5%	5%
Cereals for Grain	2%	2%	2%	2%	2%
<u>Other Crops</u>	<u>11%</u>	<u>9%</u>	<u>11%</u>	<u>11%</u>	<u>7%</u>
Total Crops	46%	46%	44%	46%	45%
Livestock Slaughterings	22%	21%	21%	23%	26%
Livestock Products					
Wool	11%	11%	10%	13%	9%
Milk	19%	20%	24%	17%	19%
<u>Other Livestock Products</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>	<u>1%</u>
Total Livestock Products	31%	32%	35%	31%	29%
Total Gross Value	100%	100%	100%	100%	100%

Source: ABS Value of Agricultural Commodities Produced 7503.0

Figure 4: Gross Value of Agricultural Production – Per Cent of Total
2003-04



3.2 Value Added

Gross agricultural product (GAP) is a value added measure calculated by deducting the costs of inputs other than labour from gross value of agricultural production (GVAP). GAP makes up around 70 to 75% of GVAP.

In recent years the direct contribution of value adding by the agricultural sector to total state gross product has varied between 4.3% and 5.6% (Table 6). The high of 5.6% occurred in 2001-02 on the back of record livestock, milk and poppy sales.

Table 6: Gross Agricultural Product & Gross State Product

2000-2004

	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
Gross Agricultural Product (GAP)	482	537	687	651	643
Gross State Product (GSP)	11,244	11,568	12,281	12,796	12,914
GFP as % GSP	4.3%	4.6%	5.6%	5.1%	5.0%

Source: ABS, Australian National Accounts: State Accounts 5220.0 See Appendix 2

In 2003-04, the industry classification “agriculture, forestry and fishing” ranked seventh at 6.5% in terms of contribution to gross state product (GSP)^{9,10}. Industries above it were manufacturing (13.7%), health & community services (9.0%), retail trade (6.7%), construction (6.5%), finance & insurance (6.5%), electricity, gas & water supply (5.8%).

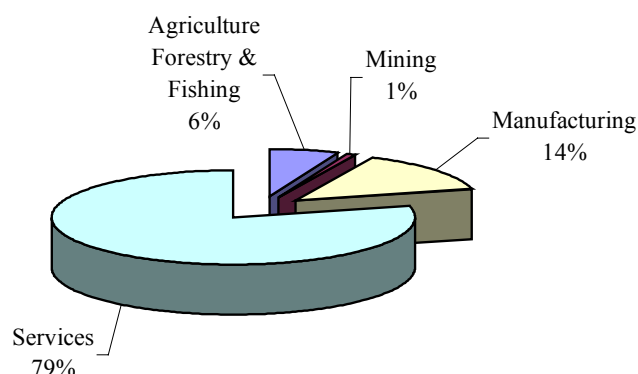
Agriculture makes up the major part of the agriculture, forestry and fishing sector (80% of the 5.7% sector total in 2003-04). As discussed later agriculture’s full contribution to the state economy is greater than its direct value-added contribution because of its importance in buying outputs from, and providing inputs to other sectors.

The direct contribution of agriculture forestry & fishing to total GSP is compared to mining, manufacture and the combined “service” sectors in Figure 5.

⁹ Based on Factor Incomes = Sum of compensation of employees, gross operating surplus and gross mixed income. (Similar to Value added)

¹⁰ ABS, Australian National Accounts: State Accounts, 5220.0 See Appendix 1

Figure 5: Industry Contributions to Gross State Product
2003-04



Source: ABS, Australian National Accounts: State Accounts 5220.0 See Appendix 1

Tasmania's agriculture, forestry and fishing sector 6% contribution to GSP compares to an Australian average of 3% (See Appendix 1). Only South Australia has a similar figure with other states ranging from 2% (NSW), 3% (Vic & NT), 4% (Qld) and 5% (WA).

3.3 Employment

In the past 5 years direct employment in agriculture has declined from around 13,000 to just under 11,000 people (Table 7, Figure 6). This has been associated with a slight reduction in output since 2001-02, but may also reflect some improvement in productivity.

In addition to the 10,900 people currently employed in agriculture there are 8,800 people employed in manufacturing industries directly dependent on agriculture¹¹, as well as a people in service industries with a substantial dependence on agriculture (see Section 5.2).

¹¹ See Table 7, Food, Beverage & Tobacco Manufacturing plus Textile, Clothing, Footware & Leather Manufacturing.

Table 7: Tasmanian Employment

2000-2005

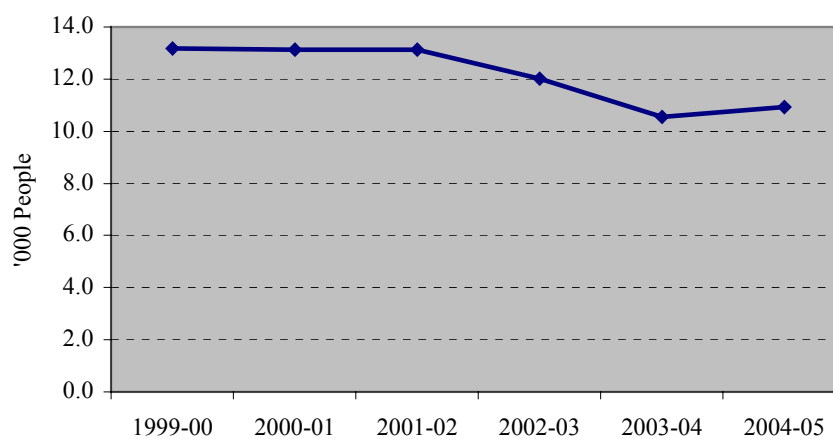
('000 People)

Sector	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Agriculture, Forestry & Fishing						
Agriculture	13.2	13.1	13.1	12.0	10.6	10.9
Services to Agriculture	1.2	1.2	1.2	0.9	1.0	0.8
Forestry & Logging	2.0	2.4	2.4	2.2	3.4	3.7
Commercial Fishing	<u>1.8</u>	<u>1.2</u>	<u>1.2</u>	<u>1.3</u>	<u>1.8</u>	<u>1.3</u>
Total Agriculture Forestry & Fishing	18.2	17.9	17.9	16.5	16.8	16.7
Mining	2.1	1.6	1.6	1.9	2.0	2.1
Manufacturing						
Food, Beverage & Tobacco Mfg	7.0	5.9	5.9	6.2	4.9	6.3
Textile, Clothing, Footware & Leather Mfg	2.3	1.5	1.5	1.8	1.7	1.5
Other Manufacturing	<u>15.7</u>	<u>13.8</u>	<u>13.8</u>	<u>14.0</u>	<u>15.8</u>	<u>15.7</u>
Total Manufacturing	25.0	21.2	21.2	22.0	22.3	23.5
Services	153.2	157.9	156.8	161.0	168.0	173.3
Total	198.5	200.4	197.6	201.4	209.1	215.5

Source: ABS Employment by Industry, supplied directly, See Appendix 3

Figure 6: Direct Employment in Agriculture

2000-2005



Source: ABS Employment by Industry, supplied directly, See Appendix 3

As a per cent of total state employment agriculture's share has fallen over the past five years from around 6.6% to around 5.0% (Table 8).

Table 8: Tasmanian Employment – Per Cent of Total
2000-05

Sector	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Agriculture, Forestry & Fishing						
Agriculture	6.6	6.6	6.6	6.0	5.0	5.1
Services to Agriculture	0.6	0.6	0.6	0.5	0.5	0.3
Forestry & Logging	1.0	1.2	1.2	1.1	1.6	1.7
Commercial Fishing	<u>0.9</u>	<u>0.6</u>	<u>0.6</u>	<u>0.6</u>	<u>0.9</u>	<u>0.6</u>
Total Agriculture Forestry & Fishing	9.1	8.9	9.1	8.2	8.0	7.7
Mining	1.1	0.8	0.8	0.9	1.0	1.0
Manufacturing						
Food, Beverage & Tobacco Mfg	3.5	2.9	3.0	3.1	2.3	2.9
Textile, Clothing, Footware & Leather Mfg	1.1	0.7	0.8	0.9	0.8	0.7
Other Manufacturing	<u>7.9</u>	<u>6.9</u>	<u>7.0</u>	<u>6.9</u>	<u>7.6</u>	<u>7.3</u>
Total Manufacturing	12.6	10.6	10.7	10.9	10.7	10.9
Services	77.2	78.8	79.4	80.0	80.3	80.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: ABS Employment by Industry, supplied directly, See Appendix 3

4. TASMANIA'S FOOD INDUSTRY

The Tasmanian Department of Primary Industries Water & Environment (DPIWE) has recently undertaken research in an attempt to assess the full value of Tasmania's food industry¹². That work has highlighted the downstream benefits of Tasmania's agricultural and fisheries industries to the overall state economy.

As distinct from agriculture per se, the DPIWE assessment has excluded non-food agricultural commodities such as wool, poppies etc, but includes seafood. It therefore differs somewhat in its coverage from the assessment in Section 3.

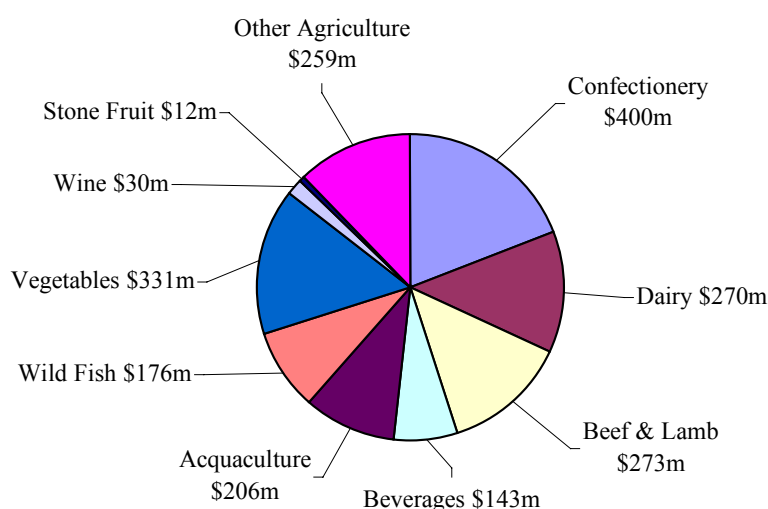
In general terms the analysis has shown a more than three-fold increase in value down the food industry value chain:

Farm-gate and beach-point production value	\$ 944 million
Packed or processed value	\$2,100 million
Total food revenue (net of imports)	\$2,980 million

The components of the \$2,100 million value after packing or processing are outlined in Figure 7.

Figure 7: Packed or Processed Food Value

2002-03



Source: DPIWE, Tas Regions, March 2005.

The analysis highlights several value-added commodities not always associated with agriculture's contribution to the state economy - in particular, the \$400 million confectionery value (chocolate ex milk) in addition to the more normal cheese and milk powder value included under the \$270 million dairy value. Also, the \$143 million beverage value (beer ex barley and hops) is not always fully recognised as an agricultural contributor.

¹² DPIWE Tas Regions, December 2004 & January 2005, plus H.Griffiths pers comm.

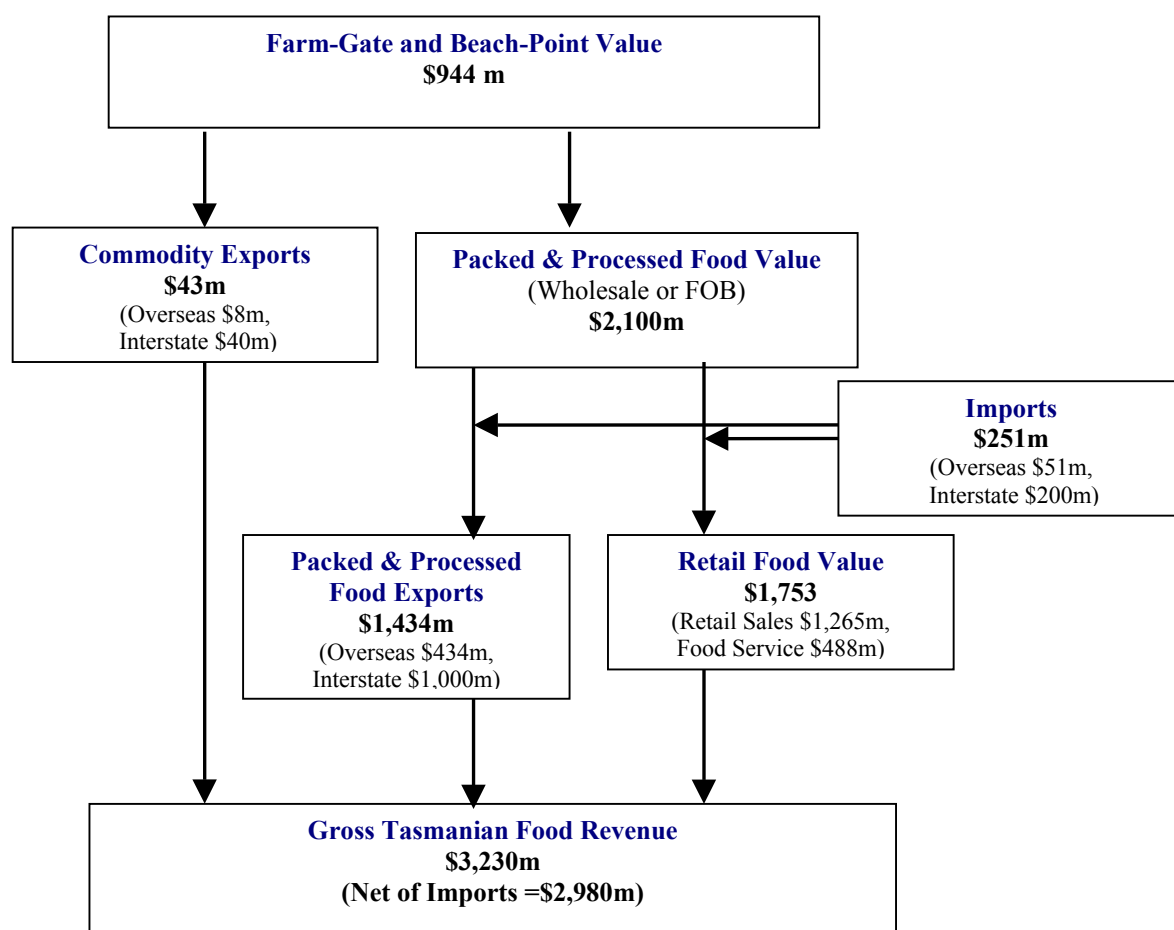
The DPIWE report highlighted a number of key points in relation to Tasmania's ex-factory (packed or processed) food value:

- (1) Tasmania produces a large net surplus of food,
- (2) The dominance of processed foods and beverages rather than fresh produce,
- (3) International and national brands are often the dominant labels on Tasmanian produce,
- (4) National markets, at 80% of total wholesale value, predominate rather than export markets (20%), and
- (5) Confectionary, dairy products, beef & lamb, processed vegetables, salmon and beer are the big ticket items.

Figure 8 outlines the full food industry chain stemming from the \$944 million farm-gate and beach-point value. Gross Tasmanian food revenue at the end of the chain is \$3,230 million. With \$251 million (8%) coming from imports, the net value of Tasmania's food sector is around \$2,980 million.

Figure 8: Tasmania's Food Industry Value Chain

2002-03



Source Data provided by H.Griffiths, DPIWE, 2005

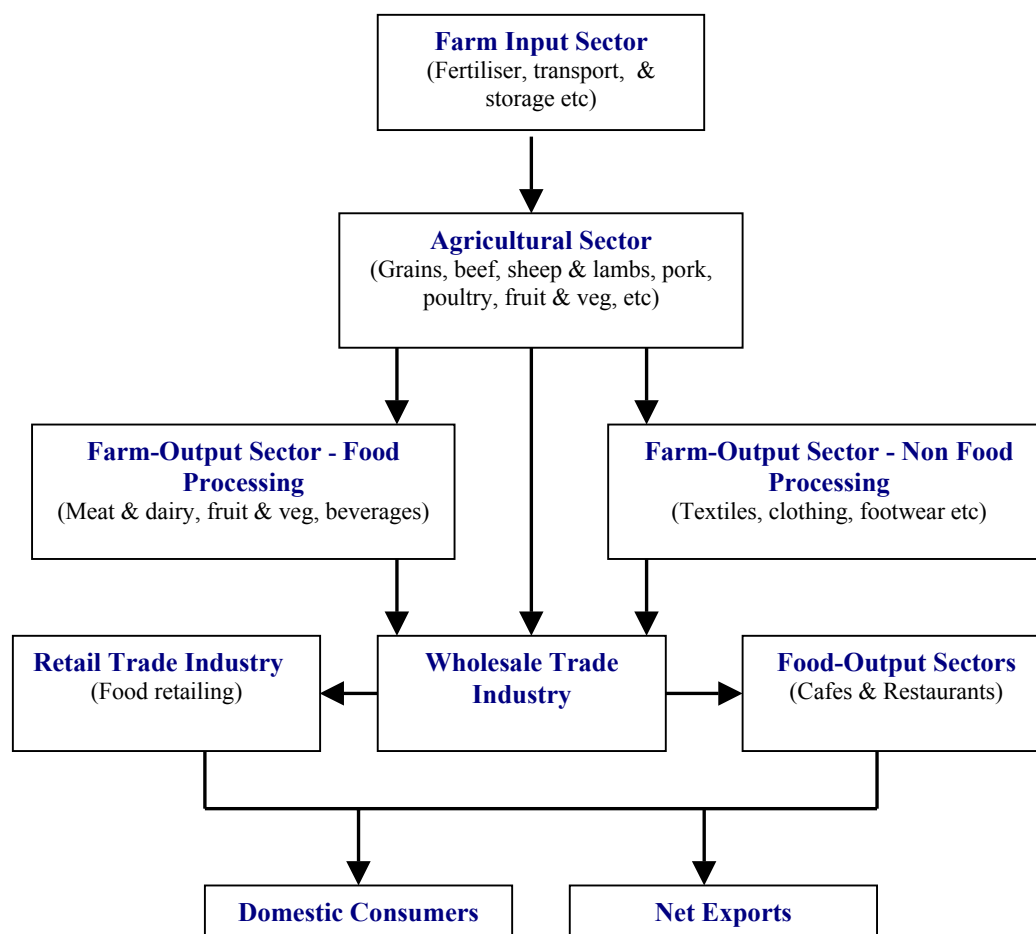
5. THE FARM DEPENDENT ECONOMY

The direct contribution of agriculture to gross state product and employment does not fully reflect agriculture's contribution to the state economy. The agricultural sector buys inputs from other sectors, and very importantly provides outputs that support a range of both small and large industries in the state - particularly in the manufacturing sector and the food retailing and accommodation, cafe and restaurant sectors.

The full importance of the agricultural sector in Tasmania can be better measured by including the value of all the economic activities supporting farm production and all the value-added activities that occur to farm outputs post farm-gate.

The Australian Farm Institute has recently described the combination of agriculture plus the farm-input and farm-output sectors as the Farm Dependent Economy (FDE)¹³. The components of the FDE described in that report are outlined below (Figure 9).

Figure 9: Components of the Farm Dependent Economy (FDE)



The description of Tasmania's FDE in this section comes from the Australian Farm Institute report and additional information supplied by Econtech Pty Ltd, which undertook that

¹³ Australian Farm Institute, Australia's Farm-Dependent Economy: Analysis of the Role of Agriculture in the Australian Economy, Research Report, March 2005.

research on behalf of the Australian Farm Institute. Econtech used their definition of the FDE together with the latest input-output data published by the Australian Bureau of Statistics (ABS) to construct an input-output farm model.

For Australia as a whole the report concluded that the FDE contributed an average of 12.1% of national GDP for the six years up to and including 2003-04. FDE employment was 17.2% of the national total.

5.1 Farm Dependent Economy (FDE) Value Added

In terms of value-added, Tasmania's FDE is around 30% more important to the state economy than it is for Australia as a whole.

Compared to the national average of a 12.1% contribution to GDP, Tasmania's FDE contribution has averaged 15.8% over the past five years (Table 9). There has been steady growth over that period with increased growth in the farm-output sector more than offsetting some reduction in agriculture itself over the past two years. Total FDE contribution is between three and four times that of agriculture on its own.

Table 9: Farm Dependent Economy Share of Tasmania's Gross State Product
2000-2004

(\$million)

Sector	1999-00	2000-01	2001-02	2002-03	2003-04
Farm-Input Sector	87	104	123	91	118
Agricultural Sector	541	661	778	588	719
<u>Farm-Output Sector</u>	<u>1,528</u>	<u>1,415</u>	<u>1,470</u>	<u>1,546</u>	<u>1,765</u>
Total FDE	2,155	2,180	2,371	2,225	2,601
Tasmania	13,333	13,745	14,439	14,941	16,638
FDE Share of Tasmania	16.2%	15.9%	16.4%	14.9%	15.6%
Total FDE:Agriculture	4.0	3.3	3.0	3.8	3.6

Source: Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, plus additional data from Econtech Pty Ltd

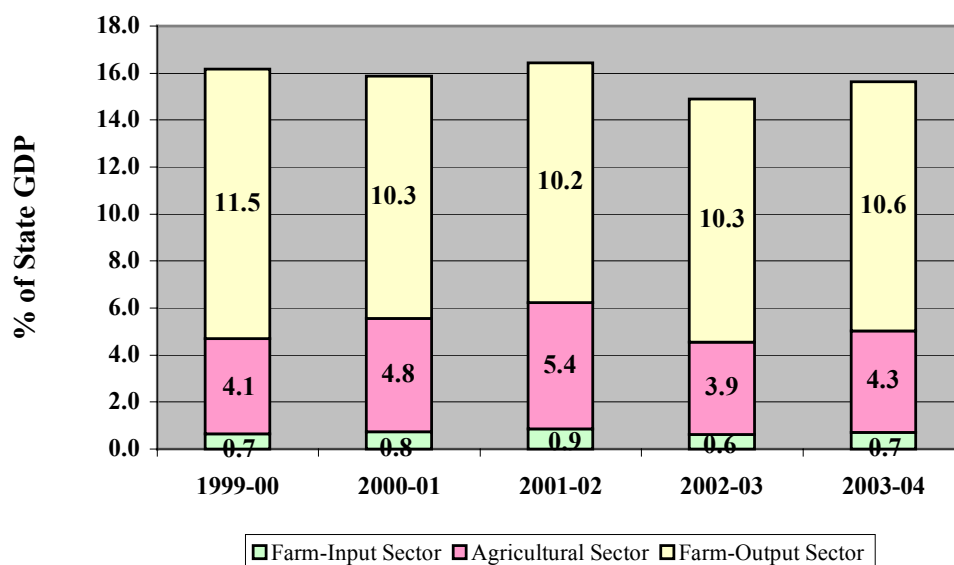
Agriculture is a more significant contributor to the Tasmanian economy than it is in any other state. Tasmania's 15.8% of gross state product from the farm dependent economy compares to a range of 9.8% to 14.8% for other states¹⁴.

It is also possible that the Tasmanian FDE assessment shown here may itself underestimate the true value because of ABS reporting criteria which may allocate some Tasmanian manufacturing output to mainland states due to the location of company headquarters on the mainland. More research is required to ascertain whether this is in fact the case.

¹⁴ Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, p18.

Figure 10 highlights the importance of the farm-output sector in the overall contribution of agriculture to the state's economy. Over the five years, the farm-output sector has contributed an average of 10.6% of GSP. In other words around two thirds of Tasmania's farm dependent economy contribution occurs beyond the farm gate - in the the farm output sector. Within the farm output sector the manufacturing and service sectors contribute roughly half each.

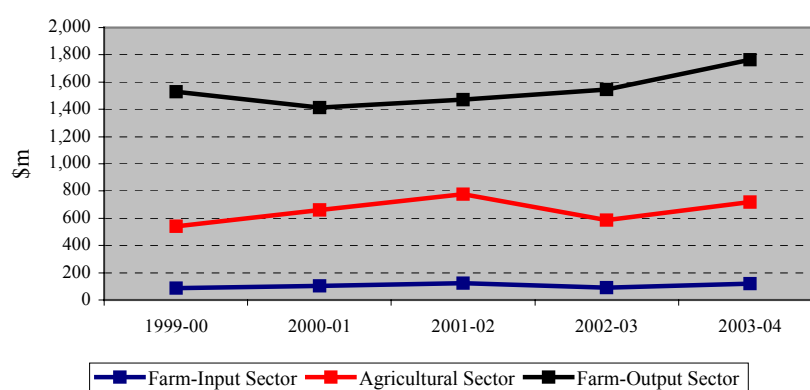
Figure 10: Contribution Farm Dependent Economy Sectors to Gross State Product
2000-2004



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Despite some ups and downs in the agriculture sector the farm-output sector has shown consistent growth in recent years Figure 11.

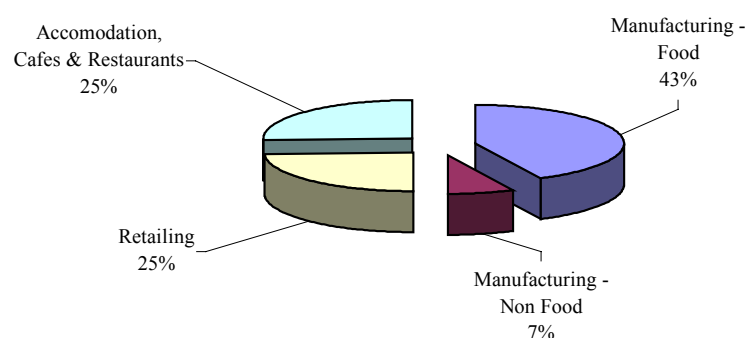
Figure 11: Farm Dependent Economy Value Added
2000-2004



Source: Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, plus additional data from Econtech Pty Ltd

Manufacturing and the service sectors make up around half each of the farm-output sector's contribution to GSP (Figure 12). Food manufacturing is the major contributor to the farm-output sector making up 43 per cent of total value added in the sector.

Figure 12: Components of Farm-Output Value Added
1998-99



Source: Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, plus additional data from Econtech Pty Ltd (See Appendix 4)

5.2 Farm Dependent Economy (FDE) Employment

Tasmania's FDE contributed an average of almost 20% of total state employment over the five years to 2003-04 (Table 10). This compares to a national average of 17.2 per cent ¹⁵.

The total FDE contribution is between 3.5 and 4 times that of agriculture on its own.

Table 10: Farm Dependent Economy Share of Total State Employment
2000-2004

('000 People)

Sector	1999-00	2000-01	2001-02	2002-03	2003-04
Farm-Input Sector	1.3	1.5	1.7	1.2	1.4
Agricultural Sector	12.5	12.2	11.9	10.8	10.5
<u>Farm-Output Sector</u>	<u>30.0</u>	<u>28.2</u>	<u>27.7</u>	<u>28.5</u>	<u>30.3</u>
Total FDE	43.7	41.8	41.3	40.5	42.2
Tasmanian Total	208	210	207	211	219
FDE Share of Tasmania	21.0%	19.9%	20.0%	19.2%	19.3%
Total FDE:Agriculture	3.5	3.4	3.5	3.7	4.0

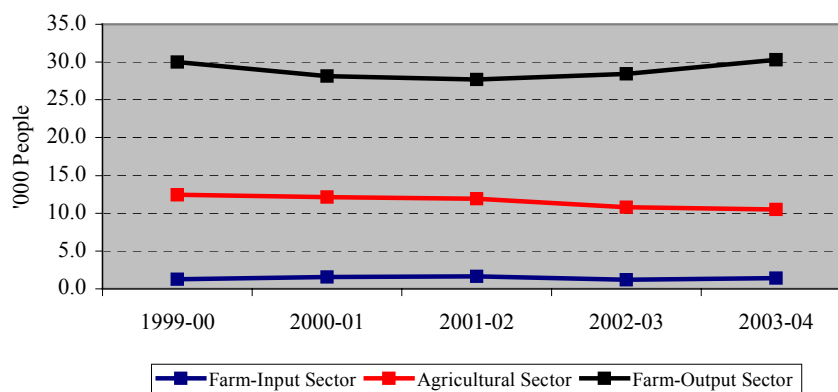
Source: Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, plus additional data from Econtech Pty Ltd

Note: Total state employment figures here are around 10,000 higher each year than those provided by ABS in Table 7

¹⁵ Australian Farm Institute, Australia's Farm Dependent Economy, March 2005

While total employment in the agriculture sector has fallen somewhat in recent years, there have been offsetting increases in employment in the farm-output sector (Figure 13).

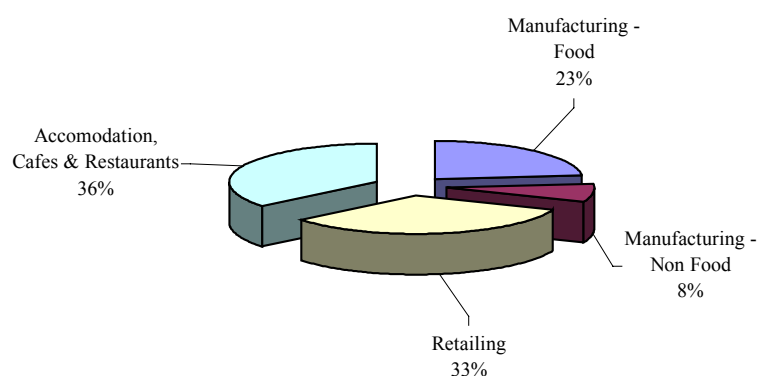
Figure 13: Farm Dependent Economy Employment
2000-2004



Source: Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, plus additional data from Econtech Pty Ltd

The farm-output sector contributes over two thirds of the total employment in the FDE (Table 10). Within the farm-output sector, the service industries make up almost 70% of total employment, with manufacturing making up the remaining 30%. (Figure 14). Thus, within the farm-output sector the service industries are relatively more important for employment than for value adding where the share was 50:50 manufacturing to services (Figure 12).

Figure 14: Components of Farm-Output Sector Employment
1998-99



Source: Australian Farm Institute, Australia's Farm Dependent Economy, March 2005, plus additional data from Econtech Pty Ltd (See Appendix 4)

APPENDICES

- 1. INDUSTRY CONTRIBUTION TO TOTAL FACTOR INCOME**
- 2. GROSS AGRICULTURAL PRODUCT AND AGRICULTURAL INCOME**
- 3. TASMANIAN EMPLOYMENT BY SECTOR**
- 4. FARM DEPENDENT ECONOMY CONTRIBUTION TO THE
TASMANIAN ECONOMY**

Appendix 1: Industry Contribution to Total Factor Income

(Similar to Share of Gross State Product)

Industry	Percent of Total
	%
Agriculture Forestry & Fishing	5.7
Mining	1.3
Manufacturing	13.7
Services	
Electricity, Gas & Water Supply	5.8
Construction	6.5
Wholesale Trade	4.1
Retail Trade	6.7
Accommodation, Cafes & Restaurants	2.7
Transport & Storage	5.2
Communication Services	2.5
Finance & Insurance	6.5
Property & Business Services	5.4
Government Administration & Defence	5.6
Education	5.1
Health & Community Services	9.0
Cultural & Recreational Services	1.4
Personal & Other Services	2.4
Ownership of Dwellings	7.7
General Government	<u>2.8</u>
	79.4
All Industries	100.0

Source: ABS, Australian National Accounts: State Accounts 5220.0

Industry Contribution to Total Factor Income by State

Sector	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Aust
	%	%	%	%	%	%	%	%	%
Agriculture, forestry & fishing	2	3	4	6	5	6	3		3
Mining	2	1	7	2	18	1	20		5
Manufacturing	12	15	10	14	9	14	4	2	12
Electricity, gas & water supply	2	3	2	4	3	6	2	2	3
Construction	6	6	8	7	8	6	8	8	7
Wholesale trade	6	6	6	5	5	4	3	2	5
Retail trade	5	6	7	5	5	7	5	4	6
Accommodation, cafes and restaurants	2	2	3	2	2	3	3	2	2
Transport & storage	5	5	6	5	5	5	5	3	5
Communication services	3	3	3	3	2	3	3	2	3
Finance & insurance	10	9	5	7	5	7	3	4	8
Property & business services	14	13	9	9	10	5	9	14	12
Government administration & defence	4	3	4	3	2	6	8	26	4
Education	4	5	5	5	4	5	5	6	5
Health & community services	6	6	6	8	6	9	7	6	6
Cultural & recreational services	2	2	1	2	1	1	2	3	2
Personal & other services	2	2	3	3	2	2	2	3	2
Ownership of dwellings	10	9	8	9	6	8	6	8	9
General government	2	2	3	2	2	3	3	4	2
Total	100	100	100	100	100	100	100	100	100

Source: ABS Australian National Accounts, State Accounts 2003-04, 5220.0

Appendix 2: Gross Agricultural Product and Agricultural Income

	1999-00	2000-01	2001-02	2002-03	2003-04
	\$m	\$m	\$m	\$m	\$m
Gross Value of Agricultural Production (GVAP)	691	755	905	878	861
GVAP (Adjusted*)	789	860	1,023	981	993
plus Subsidies not included in GVP	15	17	18	19	20
less Production valuation adjustment	-3	-2	-3	1	1
less Production costs other than wages and consumption of fixed capital	<u>-331</u>	<u>-349</u>	<u>-362</u>	<u>-359</u>	<u>-378</u>
Total Agricultural Factor Income	470	526	676	642	636
Taxes less subsidies on production and imports	12	11	11	9	7
Gross Agricultural Product (GAP)	482	537	687	651	643
less Compensation of employees, consumption of fixed capital, and net property income payable.	-332	-383	-394	-375	-392
less Taxes less subsidies on production and imports	<u>-12</u>	<u>-11</u>	<u>-11</u>	<u>-9</u>	<u>-7</u>
Agricultural Income	138	143	282	267	244

* Adjusted in national accounts to include an estimate of gross fixed capital expenditure on livestock and an estimate for output for home consumption.

Source: ABS, Australian National Accounts: State Accounts 5220.0

Appendix 3: Tasmanian Employment by Sector

(‘000 People)

Sector	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Agriculture, Forestry & Fishing						
Agriculture	13.2	13.1	13.1	12.0	10.6	10.9
Services to Agriculture	1.2	1.2	1.2	0.9	1.0	0.8
Forestry & Logging	2.0	2.4	2.4	2.2	3.4	3.7
<u>Commercial Fishing</u>	<u>1.8</u>	<u>1.2</u>	<u>1.2</u>	<u>1.3</u>	<u>1.8</u>	<u>1.3</u>
Total	18.2	17.9	17.9	16.5	16.8	16.7
Mining	2.1	1.6	1.6	1.9	2.0	2.1
Manufacturing						
Food, Beverage & Tobacco Mfg	7.0	5.9	5.9	6.2	4.9	6.3
Textile, Clothing, Footware & Leather Mfg	2.3	1.5	1.5	1.8	1.7	1.5
<u>All Other Manufacturing</u>	<u>15.7</u>	<u>13.8</u>	<u>13.8</u>	<u>14.0</u>	<u>15.8</u>	<u>15.7</u>
Total	25.0	21.2	21.2	22.0	22.3	23.5
Electricity, Gas & Water Supply	1.5	1.6	2.1	1.9	2.5	2.5
Construction	10.6	11.3	10.9	12.1	13.2	15.9
Wholesale Trade	8.1	8.6	8.6	9.0	7.9	7.5
Retail Trade	28.6	33.2	31.3	32.2	33.5	32.3
Accommodation, Cafes & Restaurants	10.5	9.6	9.6	9.6	11.9	12.0
Transport & Storage	10.0	8.8	8.1	8.1	9.3	9.1
Communication Services	3.3	3.5	3.1	2.6	2.8	3.4
Finance & Insurance	5.1	4.3	5.5	5.8	5.0	5.2
Property & Business Services	14.4	15.0	15.3	15.2	16.7	17.6
Government Administration & Defence	10.6	10.2	10.9	11.8	12.1	13.3
Education	15.7	14.5	13.9	16.2	16.1	16.7
Health & Community Services	23.6	24.6	23.6	22.9	23.7	23.8
Cultural & Recreational Services	4.1	4.5	5.5	5.4	4.6	5.9
Personal & Other Services	7.4	8.6	8.6	8.3	9.1	8.1
Total	198.5	200.4	197.6	201.4	209.1	215.5

ABS Employed Persons (ST E06 Aug'94) Average of quarterly data provided by ABS

Appendix 4: Farm Dependent Economy Contribution to the Tasmanian Economy 1998-99

	GDP	Employment
	(\$m)	(persons)
Agricultural Sector:		
Grain, Sheep and Beef Cattle Farming	144	3,909
Dairy Cattle Farming	137	3,178
Poultry Farming	37	451
Horticulture and Fruit Growing	116	2,166
Other Agriculture	88	1,644
Services to Agriculture; Hunting and Trapping	43	925
Sub-Total Agriculture Sector	566	12,273
Farm-Output Sector:		
Meat and Meat Product Manufacturing	89	1,450
Dairy Product Manufacturing	85	674
Fruit and Vegetable Processing	165	1,291
Other food products	206	2,857
Beverages and tobacco products	69	421
Textiles	82	1,467
Clothing and footwear	21	812
Food Retailing	352	9,492
Accommodation, Cafes and Restaurants	365	10,337
Sub-Total Farm-Output Sector	1,434	28,801
Farm-Input Sector:		
Forestry & fishing - used by Agriculture	5	93
Mining - used by Agriculture	0	1
Manufacturing - used by Agriculture:		
<i>Chemicals</i>	7	76
<i>Other Manufacturing</i>	3	54
Trade & Transport Services - used by Agriculture:		
<i>Wholesale trade</i>	6	188
<i>Retail trade</i>	11	295
<i>Transport & storage</i>	14	170
Other Services - used by Agriculture:		
<i>Electricity, gas & water</i>	8	37
<i>Finance & insurance</i>	11	99
<i>Property & business services</i>	6	97
<i>Other services</i>	9	138
Sub-Total Farm-Input Sector	82	1,247
Total Farm-Dependent Economy	2,082	42,321

Econtech Pty Ltd, July 2005

