Ross Lobegeiger report to farmers

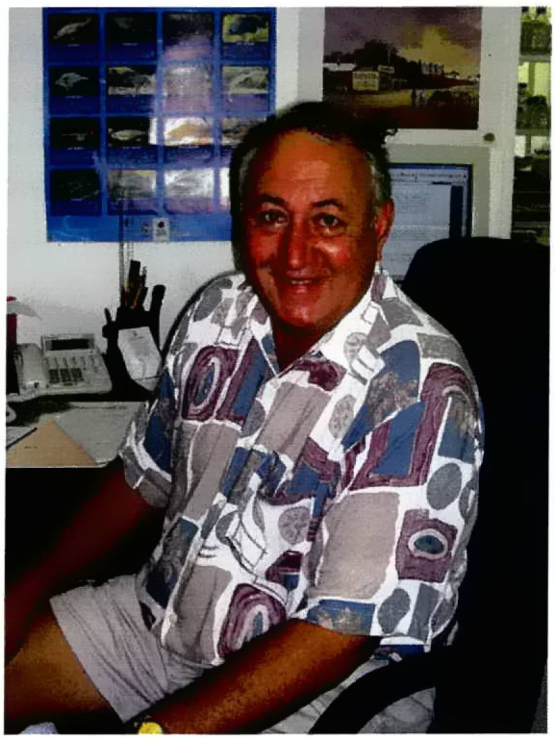
Aquaculture production summary for Queensland 2018-19

Queensland Government

This publication has been compiled by Rebecca Schofield of Fisheries Queensland, Department of Agriculture and Fisheries.

Dedication

In 2011, there was widespread support to rename this report the *Ross Lobegeiger report to farmers* to acknowledge and honour the pivotal role that Ross played in developing and supporting the Queensland aquaculture industry. Ross provided the aquaculture industry with almost 20 years of dedicated service and was responsible, as co-author, for producing the very first edition of this annual report in 1991. Overall he produced a total of 19 issues. As such, Ross Lobegeiger's name has become intrinsically linked with the report and it seems only fitting for the publication to continue to carry his name.



Tragically, Ross Lobegeiger passed away in 2010. He was such a well-known and enormously liked individual that his loss has been felt deeply by a great many people in his professional network and the aquaculture industry.

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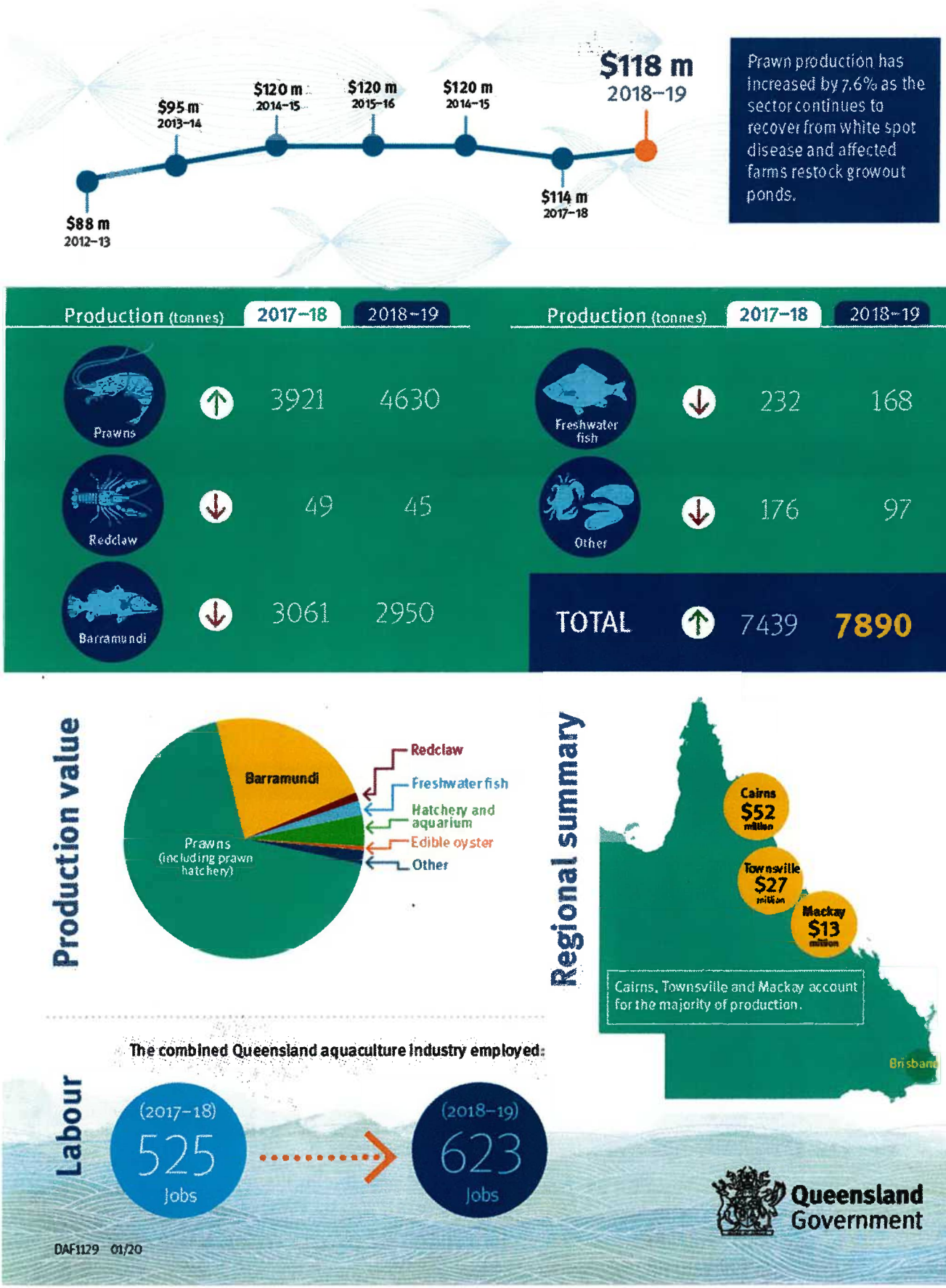
1 Queensland aquaculture industry summary 2018–19



2 Overall value and production

The total value of the Queensland aquaculture industry has increased by 3.7%, with the value of production increasing from $114.2 million in 2017–18 to $118.4 million in 2018–19.

In November 2016, six prawn farms and a separate hatchery facility in the Gold Coast region were impacted by an outbreak of the exotic white spot disease. As a result of the outbreak, production and total value of the sector decreased significantly in 2016–17 and 2017–18. As affected farms continue to recover from the outbreak and restock growout ponds, production and total value of the sector has increased in 2018–19, with an overall prawn production value increase of $5.7 million.

With the continued recovery of the prawn sector, in addition to the release of six Aquaculture Development Areas (totalling approximately 7048 hectares, for the purpose of land-based marine aquaculture) in January 2019 and the investment in Queensland aquaculture farms by Australian salmon aquaculture company Tassal Pty. Ltd., it is anticipated that the total value of the Queensland aquaculture industry will continue to increase in the coming years.

The relative importance of aquaculture to Queensland's total fisheries production has remained steady at an average of 37% over the past six years.

Table 1 – Queensland fisheries production—gross value (2012–13 to 2018–19)

Queensland figures (1)			
Year	**Total fisheries ($m)**	**Aquaculture ($m)**	**Aquaculture (%)**
2012–13	$269.5	$87.6	32.5
2013–14	$276.5	$94.5	34.2
2014–15	$314.9	$119.9	38.1
2015–16	$298.3	$120.2	40.3
2016–17	$311.7	$119.7	38.4
2017–18	$299.2	$114.2	38.2
2018-19	Figure unavailable at the time of publication	$118.4	Figure unavailable at the time of publication
ABARES figures (1)			
Year	**Total fisheries ($m)**	**Aquaculture ($m)**	**Aquaculture (%)**
2012–13	$265	$82.9	31.2
2013–14	$271.2	$89.2	32.9
2014–15	$309.3	$114.3	36.9
2015–16	$293.2	$115.5	39.4
2016–17	$307.4	$115.4	37.5
2017–18	$294.6	$109.6	37.2
2018-19	Figure unavailable at the time of publication	$113.6	Figure unavailable at the time of publication

Note: (1) The Queensland figures include hatchery production for farm stocking and impoundment stocking. Farm stocking details and product supplied to aquaculture growout operations are excluded from the figures used by ABARES.
Sources: ABARES and Fisheries Queensland, Department of Agriculture and Fisheries.

The trend of aquaculture industry growth in Queensland over the past seven years can be seen in Figure 1 (below). The most valuable sectors of the Queensland aquaculture industry continue to be prawn and barramundi respectively. Acknowledging that there will always be some degree of fluctuation between years (for example, due to climatic issues), there is still a clear trend that

1999–2000. Gains in value in the 2018–19 financial year have been in the prawn sector. The barramundi, redclaw, freshwater fish, aquarium and hatchery, oyster and other sectors recorded a decline in value from the previous year.

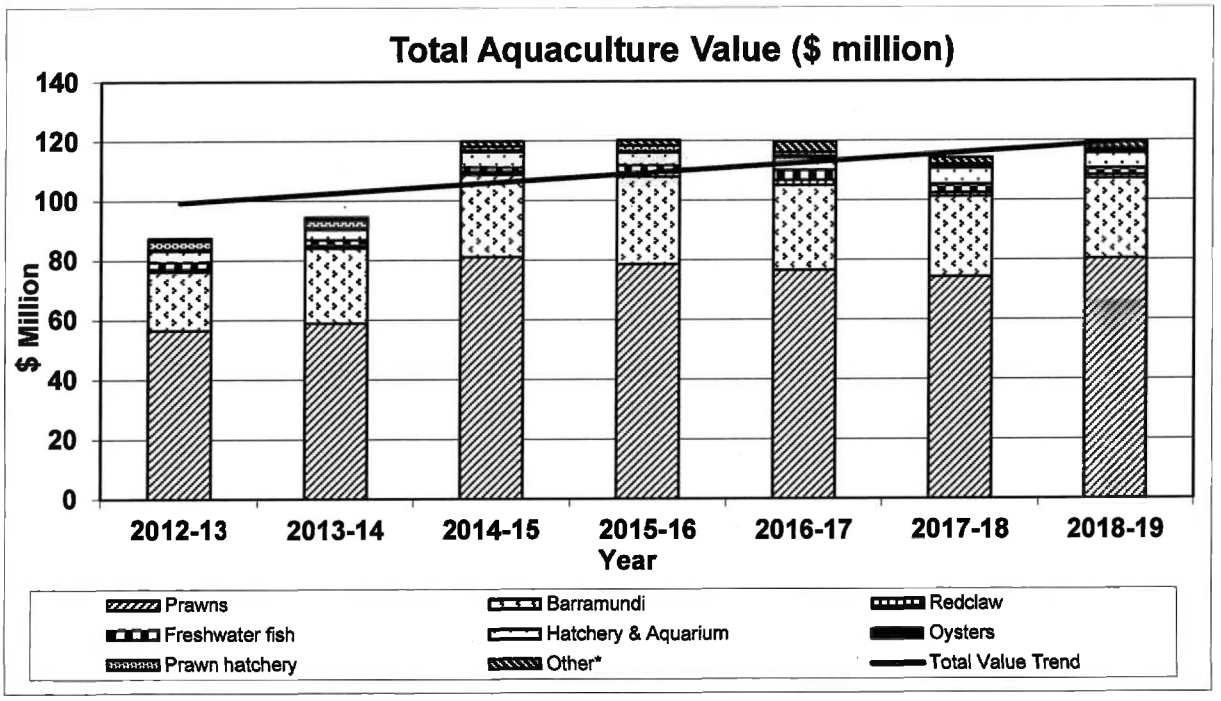


Figure 1 – Trend in value ($ million) of Queensland aquaculture production

In 2018–19, there was a 6.1% increase in total production compared to the previous year (2017–18). The long term 20-year average has the industry increasing at a rate of 5.5% per annum (Figure 2).

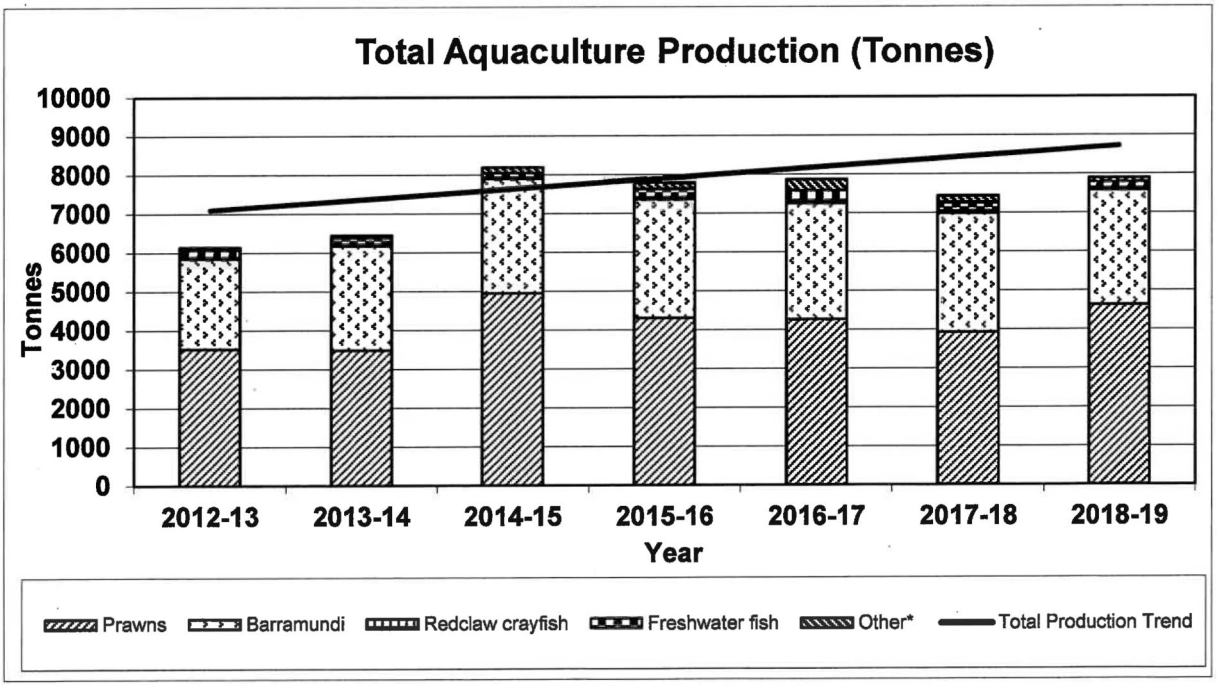


Figure 2 – Trend in Queensland aquaculture total production (tonnes)

3 Return methods

Production statistics for the 2018–19 financial year were collected from all sectors of the Queensland aquaculture industry. The requirement to complete the production survey is a mandatory condition for all holders of a current aquaculture development authority.

Of the 406 current registered aquaculture authority holders in Queensland, 390 producers completed the production survey this year—a response rate of 96%. The results presented reflect the information provided by the industry through the statistical returns.

The following conversion factors and definitions are used in the report:

- **Conversion factors**
  Fish production is reported on a whole fish basis. For example, gilled and gutted barramundi to whole fish (0.89:1 on weight basis) and fillet barramundi to whole fish (0.48:1 on weight basis).
- **Feed conversion ratio**
  Estimated average feed conversion ratios are published for most species sectors. However, this information is only an estimate as it is reported as a direct ratio of the weight of feed provided verse the weight of product sold. Therefore, a number of other relevant factors, such as the weight of stock remaining in ponds at the end of the reporting period (i.e. fed but not yet harvested), are not considered.
- **Fingerling fish**
  Fingerling fish are small fish in the 2–10 g range.
- **Labour conversion**
  Labour full time employees (FTEs) are calculated by adding the total permanent labour units to the casual labour units converted to FTEs. Forty hours per week casual labour for 48 weeks per year is considered one FTE labour unit.

4 Aquaculture sector production and value

Prawn

Queensland's marine prawn industry produced three species of prawns—black tiger (*Penaeus monodon*), banana (*Fenneropenaeus merguiensis*) and eastern king (*Melicertus plebejus*). Production in the prawn sector increased by 18.1% (from 3921.2 tonnes in 2017–18 to 4630 tonnes in 2018–19), while the value increased by 7.6% (from $74.7 million in 2017–18 to $80.4 million in 2018–19). Hatchery sales of prawns for the year were $0.9 million, which is up from $0.4 million in 2017–18. The number of post larvae produced increased from 210 million in 2017–18 to 388 million in 2018–19. There were 20 producing farms for 2018–19, up four from the previous financial year.

Barramundi

Barramundi production decreased by 3.6%, with 3060.9 tonnes sold in 2017–18 and 2950.2 tonnes sold in 2018–19. The value of the barramundi sector decreased by 0.3%, from $26.9 million in 2017–18 to $26.8 million in 2018–19. Over this period, the average price (whole fish basis) increased, from $8.77/kg in 2017–18 to $9.09/kg in 2018–19. The majority of barramundi production is in pond-based systems. There were 25 producing farms in 2018–19, which is one less compared to the previous year. The total feed used in ponds and tanks decreased from 5205.7 tonnes in 2017–18 to 4829.6 tonnes in 2018–19. The estimated average feed conversion ratio in 2018–19 was 1.6:1, down from 1.7:1 in 2017–18.

Table 2 – Queensland aquaculture production—gross value by sector ($ million)

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018-19
Prawns (includes prawn hatchery)	$59.3	$61.7	$82.6	$80.5	$77.8	$74.7	$80.4
Barramundi	$19.7	$25.1	$27.5	$29.3	$28.4	$26.9	$26.8
Redclaw crayfish	$0.8	$0.7	$1.0	$1.3	$1.7	$1.3	$1.2
Freshwater fish	$2.5	$2.2	$1.5	$2.6	$3.4	$2.9	$2.3
Hatchery and aquarium	$3.8	$3.4	$5.2	$4.2	$4.2	$5.3	$4.9
Edible oysters	$0.5	$0.5	$0.4	$0.5	$0.5	$0.9	$0.6
Other (1)	$1.1	$0.9	$1.7	$1.8	$3.7	$2.3	$2.2
Total	**$87.6**	**$94.5**	**$119.9**	**$120.2**	**$119.7**	**$114.2**	**$118.4**

Note: (1) Not available for publication (included in 'Other'). 'Other' includes marine fish, worms, sea cucumbers, algae and ulva, crustaceans and other bivalves in some years

Freshwater fish

The freshwater fish growout sector currently produces silver perch (*Bidyanus bidyanus*), jade perch (*Scortum barcoo*), Murray cod (*Maccullochella peelii peelii*) and eel-tailed catfish (*Tandanus tandanus*). The total production of freshwater fish (species other than barramundi) was 168.3 tonnes, which has decreased from the 231.7 tonnes produced in 2017–18. The value of the sector also decreased to $2.3 million, down from $2.9 million in 2017–18. The number of producing farms increased from 12 to 15 in 2018–19.

Silver perch production decreased during this reporting season to 66 tonnes, down from 96 tonnes in 2017–18. The value of the silver perch sector decreased from $1 million in 2017–18 to $0.9 million with an average price of $13.33/kg. For silver perch production, the total feed

used decreased from 186.2 tonnes in 2017–18 to 171.8 in 2018–19. Based on the silver perch harvest figures, this equates to a feed conversion ratio of 2.6:1.

Jade perch production decreased from 117 tonnes in 2017–18 to 78 tonnes in 2018–19. The value of jade perch sales totalled $1 million with an average price of $12.99/kg.

While Murray cod and eel-tailed catfish are contributors to the freshwater fish sector, in 2018–19 only a few growers produced these species and detailed production data cannot be published due to client confidentiality.

Redclaw

Production of the redclaw crayfish sector decreased by 8.1% (from 48.8 tonnes in 2017–18 to 44.9 tonnes in 2018–19). Value of the redclaw sector decreased to $1.2 million down from $1.3 million in 2017–18. The number of producing farms for 2018–19 was 22. Average prices decreased from $26.06/kg in 2017–18 to $25.69/kg.

Table 3 – Queensland aquaculture production (tonnes) by sector

	2012–13	2013–14	2014–15	2015–16	2016–17	2017–18	2018–19
Marine prawns	3518.7	3487.1	4951.5	4302	4264.1	3921.2	4630.0
Barramundi	2319.1	2681.7	2930.9	3052.7	2987.4	3060.9	2950.2
Redclaw crayfish	40.8	35.2	45.0	51.3	64.8	48.8	44.9
Freshwater fish	196.8	180.4	120.7	222.7	268.6	231.7	168.3
Other (1)	65	62	139.0	154.8	284.3	176.4	96.9
Total	**6140**	**6446.4**	**8187.1**	**7783.5**	**7869.2**	**7439**	**7890.3**

Note: (1) 'Other' includes marine fish, worms, sea cucumbers, algae and ulva, crustaceans and other bivalves in some years.

Hatchery and aquarium

The hatchery and aquarium sector encompasses growers who produce ornamental aquarium species and native fish fingerlings for commercial growout (aquaculture) and stocking in public impoundments. In 2018–19, 10.7 million fish were sold—this was 23.9% less than the 14 million fish sold during 2017–18. The value of the hatchery sector increased, from $4.9 million in 2017–18 to $5.6 million in 2018–19. Fingerling sales increased for Murray cod, Australian bass and Barramundi, while there was a notable decline in fingerling sales for Silver perch, Jade perch, and Golden perch.

The value of fingerlings sold to the aquaculture sector for commercial growout was $2.9 million—this was a 4.1% decrease in sales compared to 2017–18 at $3 million. Value of fingerlings sold for the state fish restocking program into public impoundments decreased by 14.7%, from $1.2 million in 2017–18 to $1 million in 2018–19. Ornamental sales decreased by 6.4% from $1.2 million in 2017–18 to $1.1 million in 2018–19.

Oysters

Total edible oyster production decreased by 43.2%, from 132,787 dozen in 2017–18 to 75,395 dozen in 2018–19. The value of the edible oyster industry decreased from $0.9 million in 2017–18 to $0.6 million. Average price per dozen of oysters increased from $6.98 to $7.74.

Labour

The combined Queensland aquaculture industry employed 623.3 full-time equivalents (FTEs)—calculated by combining numbers of permanent and casual labour. The prawn farming sector was the largest employer at 350.9 FTE workers or 56.3% of the industry's total labour force.

5 Regional summary

Information has been analysed to provide a regional overview of the aquaculture industry in Queensland. The regions are based on the Australian Statistical Geography Standard SA4 statistical division adopted by the Australian Bureau of Statistics. Figure 3 depicts the majority of the industry value comes from the Cairns, Townsville, Mackay and Gold Coast statistical divisions.

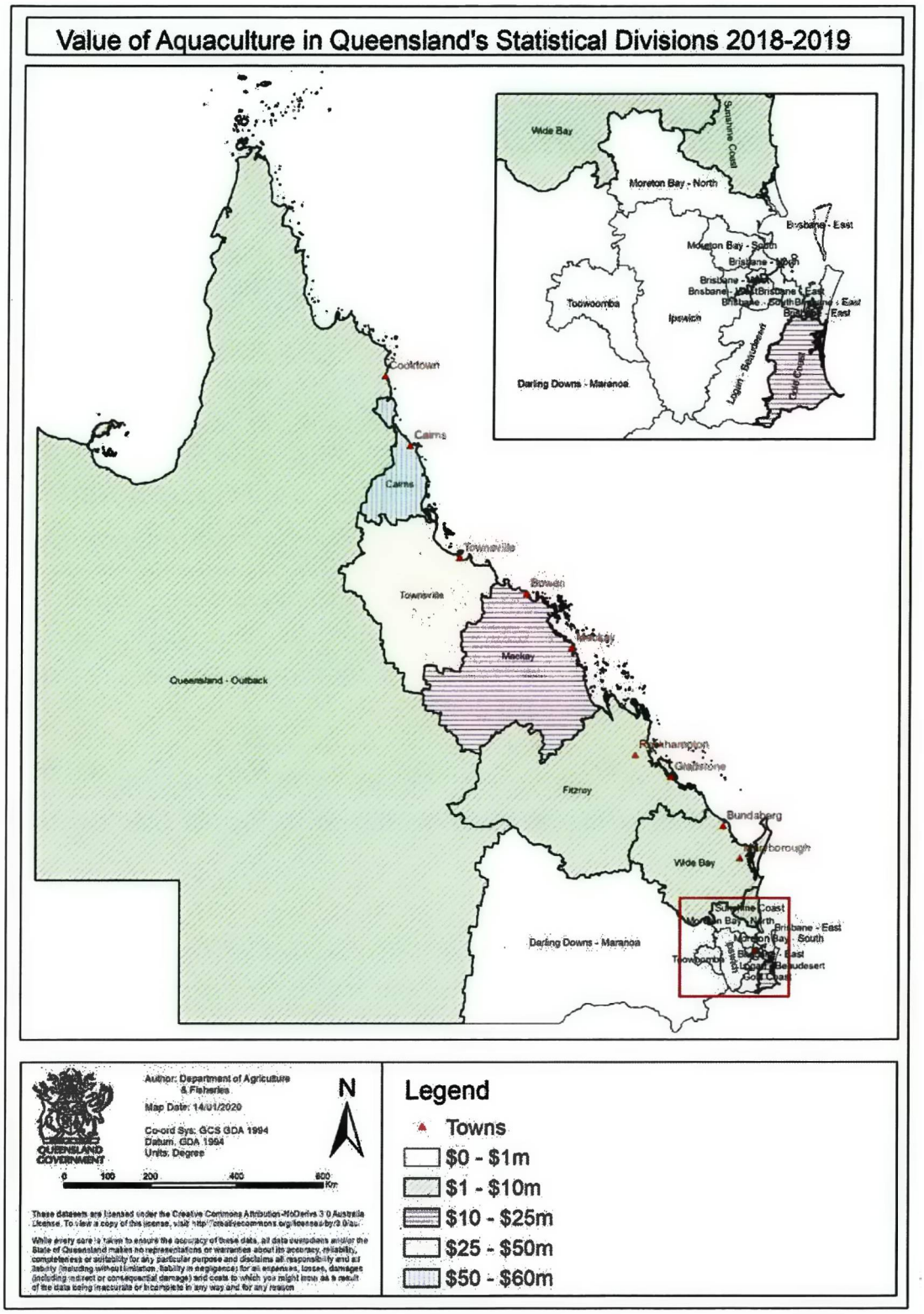


Figure 3 – Value of aquaculture ($ million) for each Australian Bureau of Statistics statistical division within Queensland

Information presented in Table 4 was compiled from the annual production returns received from registered aquaculture authority holders. Table 4 demonstrates how some of the major production parameters such as production, ponded area, labour and total production value are divided between the respective Australian Bureau of Statistics Queensland statistical divisions.

Table 4 – Production, ponded area, employment and total production value of the Queensland aquaculture industry (2018–19)

Statistical division	Production (tonnes)	Ponded area (hectares)	Employment (FTE)	Total production value ($ million)
Brisbane – east	0.032		31.1	$0.4
Brisbane – north				
Brisbane – west				
Cairns	3691.3	337.3	227	$51.5
Darling Downs–Maranoa				
Fitzroy	189.5	30.4	30.5	$3.6
Gold Coast	605.7	80.8	48.6	$11.2
Ipswich				
Logan–Beaudesert				
Mackay	1024.4	68.7	74.4	$13.3
Moreton Bay – north				
Moreton Bay – south				
Queensland – outback	132.1	6.4	24	$1.6
Sunshine Coast	32.2	11.2	16.2	$1.1
Toowoomba				
Townsville	1862	136.4	91	$27.2
Wide Bay–Burnett	275.3	113.5	62.9	$6.8
Total	**7890.3**	**804.8**	**623.3**	**$118.4**

Note: Due to client confidentiality, detailed production, ponded area, employment and total production value data cannot be published for all statistical divisions.