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Aquaculture production report

2023-2024



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Photo 2 – Rainbow Trout, credit Jim Harnwell

Photo 3 – Golden Kelp farming with Christopher Ride, Disaster Bay NSW 2024, credit Auskelp Pty Ltd

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Introduction

Interactive dashboard of aquaculture production data

The Department of Primary Industries and Regional Development, Aquaculture unit has created an interactive dashboard that enables the public to easily access and analyse aquaculture production data.

The dashboard compliments this published production report and allows analysis and interrogation of the data across years, estuaries and species.

Interactive dashboard:

<https://www.dpi.nsw.gov.au/dpi/fishing/aquaculture/publications/production-data/production-reports/production-data-comparison>

Social and economic contributions of aquaculture to NSW

For additional data on the social and economic contributions of aquaculture to NSW.

Detailed report:

https://www.dpi.nsw.gov.au/___data/assets/pdf_file/0008/1499606/NSW-Aquaculture-Economic-Contribution_Final-2023.pdf

Summary:

https://www.dpi.nsw.gov.au/___data/assets/pdf_file/0006/1559706/RDOC23-161122-NSW-Aquaculture-Economic-Contribution-Summary-Sheet-BDO-EconSearch.pdf

Table 1 - Snapshot of total aquaculture production for 2023-24

Grouping	Common name	Scientific name	Production kilograms	Production dozens	Average price per kg	Value (\$)
Crustaceans	Yabby	<i>Cherax destructor</i>	1,535		\$42.98	\$65,974
	Yabby (bait)	<i>Cherax destructor</i>	2,850		\$86.03	\$245,196
Subtotal						\$311,170
Molluscs (land-based)	Floodplain Mussel	<i>Velesunio ambiguus</i>	3,678		\$5.88	\$21,640
Subtotal						\$21,640
Freshwater fish	Barramundi	<i>Lates calcarifer</i>	59,246		\$15.42	\$913,735
	Murray Cod	<i>Maccullochella peelii</i>	481,584		\$25.86	\$12,455,277
	Rainbow Trout	<i>Oncorhynchus mykiss</i>	170,714		\$15.53	\$2,650,650
	Silver Perch	<i>Bidyanus bidyanus</i>	69,938		\$20.22	\$1,414,254
Subtotal						\$17,433,916
Hatchery	Hatchery species**					\$9,739,544
Subtotal						\$9,739,544
Molluscs	Sydney Rock Oyster	<i>Saccostrea glomerata</i>		5,153,160		\$68,353,157
	Pacific Oyster	<i>Magallana gigas</i>		624,924		\$9,413,854
	Native Oyster	<i>Ostrea Angasi</i>		15,866		\$237,990
	Oyster spat***					\$4,234,094
Subtotal						\$82,239,095
Others*						\$2,343,919
Total value (\$)						\$112,089,284

* Not available for confidential reasons (≤ 5 permit holders authorised to cultivate species). Species include: Akoya Pearl (*Pinctada imbricata*), Australian Paratya (*Paratya australiensis*), Blue Mussel (*Mytilus galloprovincialis* and *M planulatus*), Brook Trout (*Salvelinus fontinalis*), Brown Trout (*Salmo trutta*), Eel-tailed Catfish (*Tandanus tandanus*), Moreton Bay Bug (*Thenus australiensis*) and Tube Worm (*Diopatra aciculata* and *D. dentata*).

** Refer to table 3; *** Refer to table 7

Table 2 - Fish, crustacean, and mollusc land-based production for 2023-24

Grouping	Common name	Scientific name	Production kilograms	Average price per kilogram	Value (\$)
Crustaceans	Yabby	<i>Cherax destructor</i>	1,535	\$42.98	\$65,974
	Yabby (bait)	<i>Cherax destructor</i>	2,850	\$86.03	\$245,196
Subtotal					\$311,170
Molluscs	Floodplain Mussel	<i>Velesunio ambiguus</i>	3,678	\$5.88	\$21,640
Subtotal					\$21,640
Freshwater fish	Barramundi	<i>Lates calcarifer</i>	59,246	\$15.42	\$913,735
	Murray Cod	<i>Maccullochella peelii</i>	481,584	\$25.86	\$12,455,277
	Rainbow Trout	<i>Oncorhynchus mykiss</i>	170,714	\$15.53	\$2,650,650
	Silver Perch	<i>Bidyanus bidyanus</i>	69,938	\$20.22	\$1,414,254
Subtotal					\$17,433,916
Others*					\$674,507
Total value (\$)					\$18,441,233

* Not available for confidential reasons (≤ 5 permit holders authorised to cultivate species). Species include Australian Paratya (*Paratya australiensis*), Brook Trout (*Salvelinus fontinalis*), Brown Trout (*Salmo trutta*), Eel-tailed Catfish (*Tandanus tandanus*), Moreton Bay Bug (*Thenus australiensis*) and Tube Worm (*Diopatra aciculata* and *D. dentata*).

Figure 1 - Comparison of land-based aquaculture production by species and year

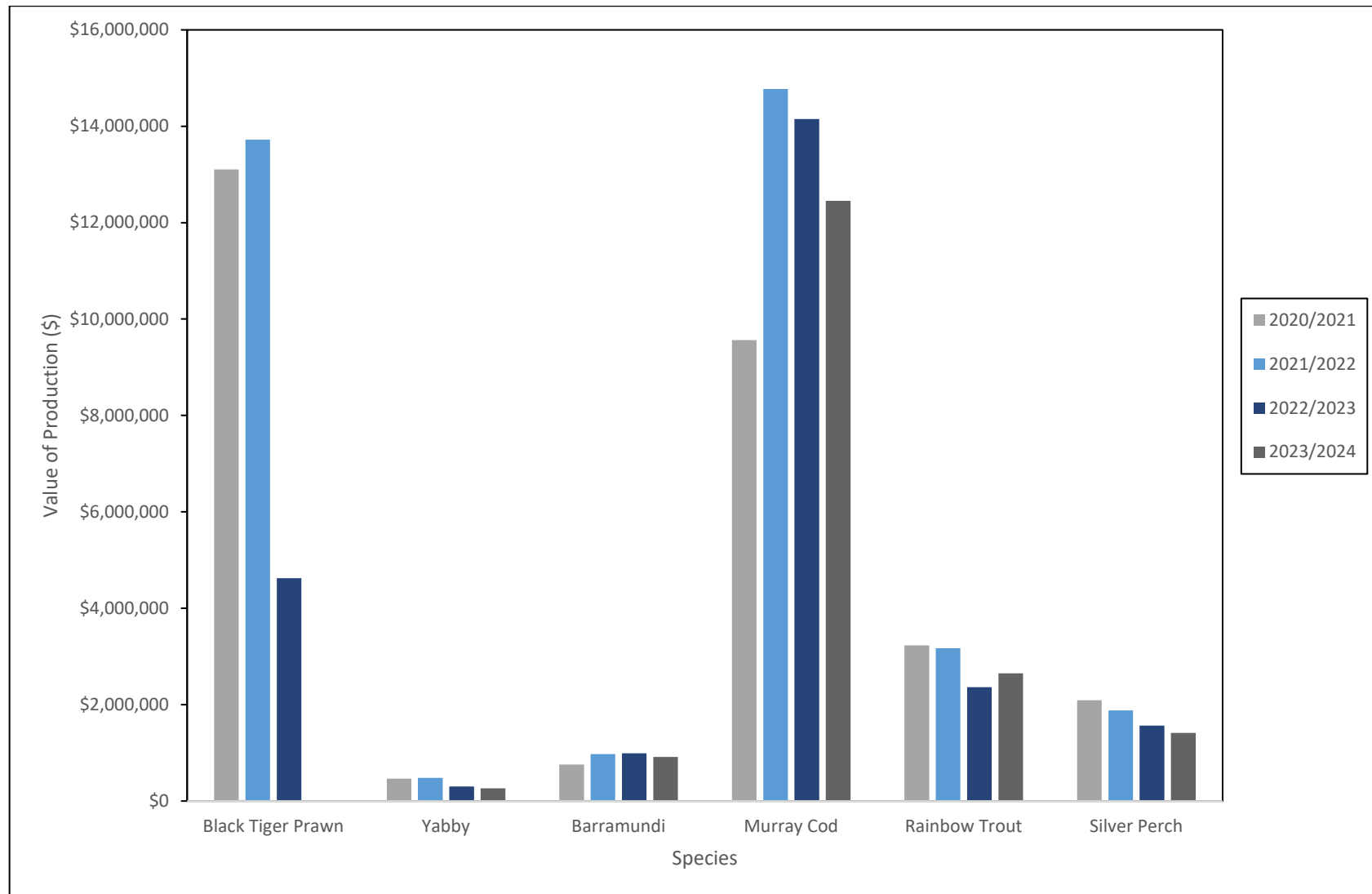


Table 3 - Hatchery production for 2023-24

Grouping	Common name	Scientific name	Production (individuals)	Average price per individual	Value (\$)
Aquarium species	Aquarium species		**	**	\$331,239
Subtotal					\$331,239
Freshwater fish	Australian Bass	<i>Macquaria novemaculeata</i>	1,306,672	\$1.14	\$1,490,328
	Golden Perch	<i>Macquaria ambigua</i>	4,754,100	\$0.54	\$2,573,493
	Murray Cod	<i>Maccullochella peelii</i>	2,161,534	\$0.90	\$1,950,862
	Rainbow Trout	<i>Oncorhynchus mykiss</i>	1,666,600	\$1.35	\$2,252,057
	Silver Perch	<i>Bidyanus bidyanus</i>	502,773	\$0.67	\$337,219
	Yabby	<i>Cherax destructor</i>	27,573	\$1.12	\$30,754
Subtotal					\$8,634,713
Others*					\$773,592
Total value (\$)					\$9,739,544***

* Not available for confidential reasons (≤ 5 hatcheries authorised to cultivate species). Species include: Akoya Oyster (*Pinctada imbricata*), Australian Paratya (*Paratya australiensis*), Brown Trout (*Salmo trutta*), Dusky Flathead (*Platycephalus fuscus*), Eel-tailed Catfish (*Tandanus tandanus*), Estuary Perch (*Macquaria colonorum*), Floodplain Mussel (*Vesunio ambiguus*), Mulloway (*Argyrosomus japonicus*), Native Oyster (*Ostrea Angasi*), Pacific Oyster (*Magallana gigas*), Sydney Rock Oyster (*Saccostrea glomerata*) and Trout Cod (*Maccullochella macquariensis*).

** Quantity and average price not recorded due to a wide range of species.

*** The total value includes the equivalent value of fingerlings used for restocking purposes.

Table 4 - Sydney Rock Oyster and Pacific Oyster production by estuary and grade 2023-24

Estuary	Species	Large dozens	Large value (\$)	Medium dozens	Medium value (\$)	Small dozens	Small value (\$)	Total dozens	Total value (\$)
Macleay River	Sydney Rock Oyster	24,085	\$390,659	27,793	\$379,374	9,893	\$97,446	61,771	\$867,479
Hastings River	Sydney Rock Oyster	50,977	\$826,847	113,955	\$1,555,486	46,999	\$462,940	211,931	\$2,845,273
Camden Haven	Sydney Rock Oyster	41,635	\$675,320	108,797	\$1,485,079	130,439	\$1,284,824	280,871	\$3,445,223
Manning River	Sydney Rock Oyster	10,719	\$173,862	49,808	\$679,879	21,797	\$214,700	82,324	\$1,068,442
Wallis Lake	Sydney Rock Oyster	126,747	\$2,055,836	318,953	\$4,353,708	231,833	\$2,283,555	677,533	\$8,693,100
Port Stephens	Sydney Rock Oyster	85,323	\$1,383,939	125,502	\$1,713,102	235,046	\$2,315,203	445,871	\$5,412,244
Port Stephens	Pacific Oyster (diploid)	18,182	\$260,184	33,449	\$406,405	15,404	\$173,141	67,035	\$839,731
Port Stephens	Pacific Oyster (triploid)	52,996	\$972,477	39,794	\$570,646	10,879	\$132,180	103,669	\$1,675,302
Brisbane Water	Sydney Rock Oyster	19,609	\$318,058	78,661	\$1,073,723	85,005	\$837,299	183,275	\$2,229,080
Brisbane Water	Pacific Oyster (Triploid)	350	\$6,423	500	\$7,170	700	\$8,505	1,550	\$22,098
Hawkesbury River / Patonga Creek	Sydney Rock Oyster	16,383	\$265,732	5,016	\$68,468	4,220	\$41,567	25,619	\$375,768
Hawkesbury River / Patonga Creek	Pacific Oyster (triploid)	28,557	\$524,021	83,838	\$1,202,237	12,394	\$150,587	124,789	\$1,876,845
Crookhaven / Shoalhaven River	Sydney Rock Oyster	38,000	\$616,360	142,264	\$1,941,904	57,476	\$566,139	237,740	\$3,124,402
Crookhaven / Shoalhaven River	Pacific Oyster (triploid)	16,136	\$296,096	20,268	\$290,643	14,552	\$176,807	50,956	\$763,546

Estuary	Species	Large dozens	Large value (\$)	Medium dozens	Medium value (\$)	Small dozens	Small value (\$)	Total dozens	Total value (\$)
Clyde River	Sydney Rock Oyster	44,759	\$725,991	153,446	\$2,094,538	101,001	\$994,860	299,206	\$3,815,389
Clyde River	Pacific Oyster (triploid)	90,829	\$1,666,712	134,138	\$1,923,539	36,194	\$439,757	261,161	\$4,030,008
Tuross Lake	Sydney Rock Oyster	243,369	\$3,947,445	71,749	\$979,374	32,223	\$317,397	347,341	\$5,244,216
Wagonga Inlet	Sydney Rock Oyster	50,899	\$825,582	256,256	\$3,497,894	43,062	\$424,161	350,217	\$4,747,637
Wapengo Lake	Sydney Rock Oyster	27,656	\$448,580	195,284	\$2,665,627	52,571	\$517,824	275,511	\$3,632,031
Merimbula Lake	Sydney Rock Oyster	328,059	\$5,321,117	608,768	\$8,309,683	127,287	\$1,253,777	1,064,114	\$14,884,577
Pambula River	Sydney Rock Oyster	86,533	\$1,403,565	140,874	\$1,922,930	74,261	\$731,471	301,668	\$4,057,966
Wonboyn River	Sydney Rock Oyster	31,032	\$503,339	58,063	\$792,560	23,285	\$229,357	112,380	\$1,525,256
Others*	Sydney Rock Oyster	28,645	\$464,622	72,130	\$984,575	95,013	\$935,878	195,788	\$2,385,074
Others**	Pacific Oyster (triploid)	910	\$16,699	4,178	\$59,913	10,676	\$129,713	15,764	\$206,324
Total		1,462,390	\$24,089,466	2,843,484	\$38,958,457	1,472,210	\$14,719,088	5,778,084	\$77,767,011

* Not available for confidential reasons (≤ 5 current permit holders in the estuary). Estuaries include Bellinger River, Botany Bay, Nambucca River, Nelson Lagoon, Richmond River, Tweed River and Wooli Wooli River.

** Not available for confidential reasons (≤ 5 current permit holders in the estuary). Estuaries include Botany Bay, Tweed River and Wapengo Lake.

Table 5 - Sydney Rock Oyster production by year, estuary and grade

Estuary	Large dozens 2021-22	Large dozens 2022-23	Large dozens 2023-24	Medium dozens 2021-22	Medium dozens 2022-23	Medium dozens 2023-24	Small dozens 2021-22	Small dozens 2022-23	Small dozens 2023-24	Total dozens 2021-22	Total dozens 2022-23	Total dozens 2023-24
Nambucca River	10,117			32,074			62,956			105,147		
Macleay River	315	5,089	24,085	676	20,525	27,793	343	3,268	9,893	1,334	28,882	61,771
Hastings River	26,166	25,875	50,977	55,653	69,683	113,955	33,021	34,283	46,999	114,840	129,841	211,931
Camden Haven	16,015	7,261	41,635	53,685	40,969	108,797	83,999	103,570	130,439	153,699	151,800	280,871
Manning River	13,670	11,788	10,719	36,807	13,920	49,808	12,193	10,528	21,797	62,670	36,236	82,324
Wallis Lake	217,170	132,031	126,747	390,587	345,410	318,953	505,705	421,863	231,833	1,113,462	899,304	677,533
Port Stephens	396,909	128,182	85,323	344,022	172,746	125,502	286,210	197,473	235,046	1,027,141	498,401	445,871
Brisbane Water	4,163	14,044	19,609	56,599	29,649	78,661	94,261	88,213	85,005	155,023	131,906	183,275
Hawkesbury River**	12,498	18,327	16,383	6,316	20,092	5,016	1,337	10,633	4,220	20,151	49,052	25,619
Crookhaven River***	16,569	32,798	38,000	42,466	123,552	142,264	107,340	48,366	57,476	166,375	204,716	237,740
Clyde River	46,594	42,848	44,759	127,939	167,445	153,446	162,482	157,056	101,001	337,015	367,349	299,206
Tuross Lake	22,067	124,235	243,369	37,365	76,649	71,749	27,092	52,265	32,223	86,524	253,149	347,341
Wagonga Inlet	73,124	113,278	50,899	255,357	315,267	256,256	55,622	40,817	43,062	384,103	469,362	350,217

Estuary	Large dozens 2021-22	Large dozens 2022-23	Large dozens 2023-24	Medium dozens 2021-22	Medium dozens 2022-23	Medium dozens 2023-24	Small dozens 2021-22	Small dozens 2022-23	Small dozens 2023-24	Total dozens 2021-22	Total dozens 2022-23	Total dozens 2023-24
Wapengo Lake	36,029	41,384	27,656	124,420	211,444	195,284	62,596	53,935	52,571	223,045	306,763	275,511
Merimbula Lake	244,926	262,455	328,059	544,706	636,953	608,768	133,033	140,520	127,287	922,665	1,039,928	1,064,114
Pambula River	53,854	71,033	86,533	104,692	117,730	140,874	76,718	88,917	74,261	235,264	277,680	301,668
Wonboyn River	30,216	28,316	31,032	53,560	68,634	58,063	16,941	32,980	23,285	100,717	129,930	112,380
Others*	17,179	28,884	28,645	63,235	74,058	72,130	24,312	82,425	95,013	104,726	185,367	195,788
Total	1,237,581	1,087,828	1,254,430	2,330,159	2,504,726	2,527,319	1,746,161	1,567,112	1,371,411	5,313,901	5,159,666	5,153,160

* Not available for confidential reasons (≤ 5 current permit holders in the estuary). Estuaries include Bellinger River, Botany Bay, Nambucca River, Nelson Lagoon, Richmond River, Tweed River and Wooli Wooli River.

** Hawkesbury River data for 2022-23 and 2023-24 includes Patonga Creek data. For 2021-22, Patonga Creek data was added to Others.

*** Crookhaven River data for 2022-23 and 2023-24 includes Shoalhaven River data. For 2021-22, Shoalhaven River data was added to Others.

Table 6 - Pacific Oyster (diploid and triploid) production by year, estuary and grade

Estuary	Large dozens 2021-22	Large dozens 2022-23	Large dozens 2023-24	Medium dozens 2021-22	Medium dozens 2022-23	Medium dozens 2023-24	Small dozens 2021-22	Small dozens 2022-23	Small dozens 2023-24	Total dozens 2021-22	Total dozens 2022-23	Total dozens 2023-24
Port Stephens	618	13667	71,178	1,368	29,176	73,243	2,326	11,480	26,283	4,312	54,323	170,704
Brisbane Water	0	300	350	0	500	500	0	100	700	0	900	1,550
Hawkesbury River**	1,565	8,463	28,557	1,044	21,882	83,838	136	16141	12,394	2,745	46,486	124,789
Crookhaven River***	4,261	5,365	16,136	6,062	15,682	20,268	5,587	14,529	14,552	15,910	35,576	50,956
Clyde River	57,705	80,785	90,829	51,232	86,155	134,138	32,041	73,802	36,194	140,978	240,742	261,161
Others*	908	10,843	910	4,731	3,216	4,178	3,317	1,152	10,676	8,956	15,211	15,764
Total	65,057	119,423	207,960	64,437	156,611	316,165	43,407	117,204	100,799	172,901	393,238	624,924

* Not available for confidential reasons (≤ 5 current permit holders in the estuary). Estuaries include Botany Bay, Tweed River and Wapengo Lake.

** Hawkesbury River data for 2022-23 and 2023-24 includes Patonga Creek data. For 2021-22, Patonga Creek data was added to Others.

*** Crookhaven River data for 2022-23 and 2023-24 includes Shoalhaven River data. For 2021-22, Shoalhaven River data was added to Others.

Table 7 - Oyster spat production by spat source for 2023-24

Original source of spat	Large spat (\$)	Medium spat (\$)	Small spat (\$)	Total value (\$)
Hatchery stock	\$0	\$63,000	\$1,529,531	\$1,592,531
Wild caught stock	\$774,484	\$1,270,157	\$659,921	\$2,641,563
Total value (\$)	\$774,484	\$1,270,157	\$2,189,453	\$4,234,094

Includes figures for Sydney Rock Oyster and Pacific Oyster (diploid and triploid).

Figure 2 - Comparison of oyster aquaculture value of production by species and year

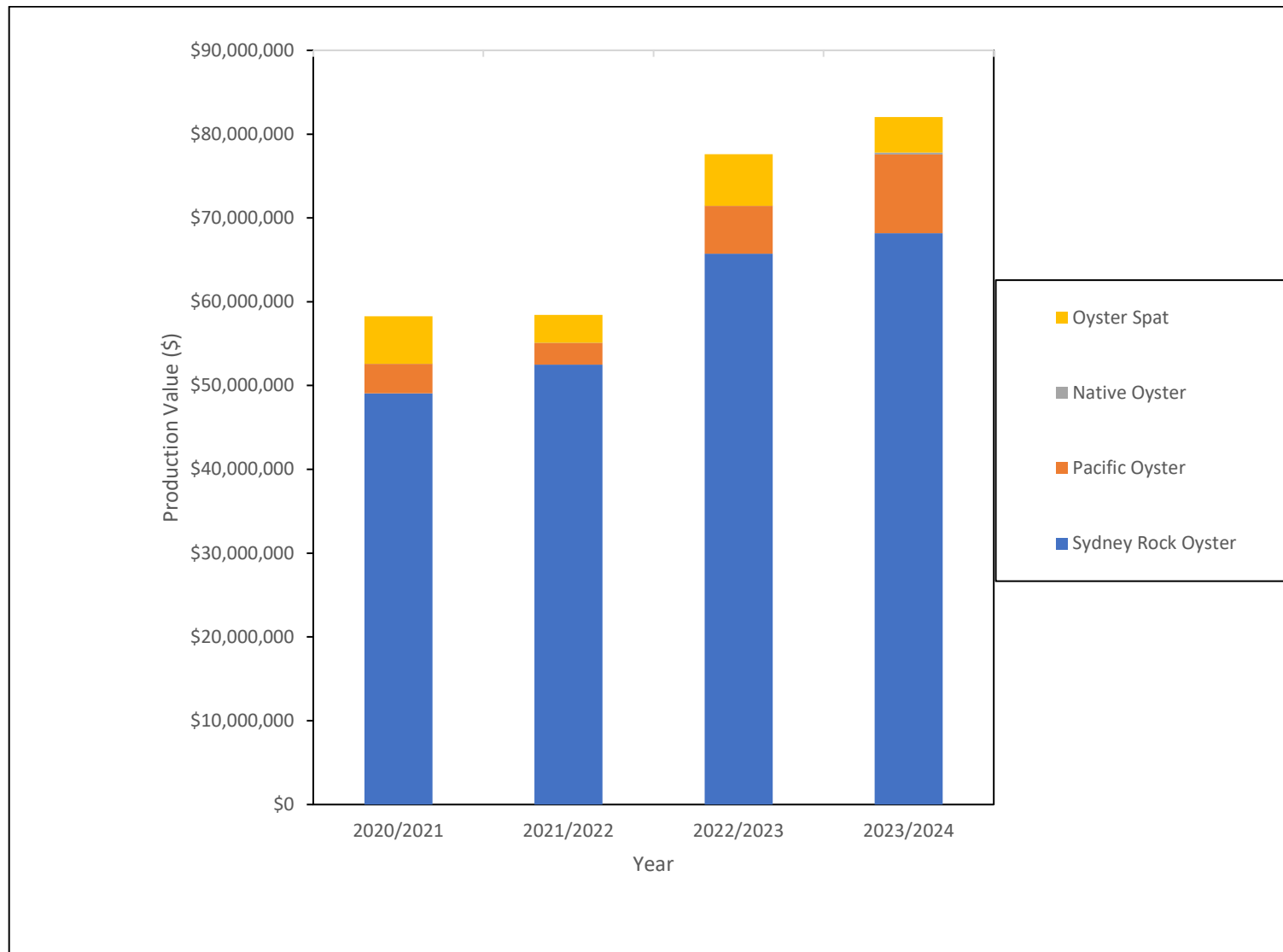


Table 8 - Total oyster production by permit holder for 2023-24

Production range	Nil production	1 - 5,000 dozen	5,001 - 35,000 dozen	>35,001 dozen	Total
Number of permit holders*	46	42	99	39	226
Percentage of permit holders	20%	19%	44%	17%	100%
Quantity produced (dozens)	0	93,352	1,610,458	4,090,140	5,793,950
Percentage of production	0%	2%	28%	70%	100%
Total value (\$)	\$0	\$1,235,503	\$21,750,414	\$55,019,083	\$78,005,001

* Does not include the class A permit holders who did not submit a production return for 2023-24. Does not include oyster spat production.

Table 9 - Average farm gate price per dozen for 2023-24 by species and grade

Grade	Sydney Rock Oyster	Pacific Oyster (diploid)	Pacific Oyster (triploid)	Native Oyster
Large	\$16.22	\$14.31	\$18.35	\$15.00
Medium	\$13.65	\$12.15	\$14.34	
Small	\$9.85	\$11.24	\$12.15	

Figure 3 - Percentage of class A permit holders by production group

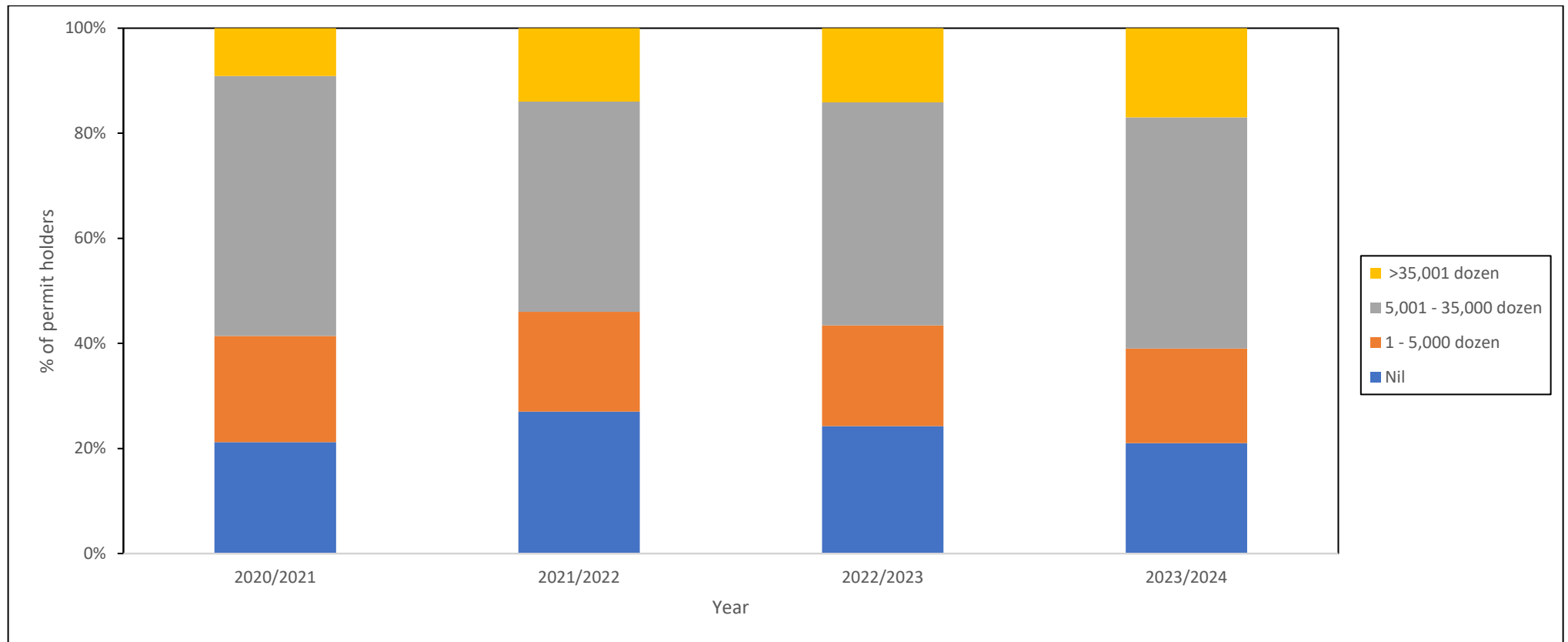


Table 10 - Average farm gate price for 2023-24 by estuary and species

Estuary*	Species	Large grade	Medium grade	Small grade
Macleay River	Sydney Rock Oyster	\$16.20	\$13.62	\$11.00
Hastings River	Sydney Rock Oyster	\$16.32	\$13.40	\$9.21
Camden Haven	Sydney Rock Oyster	\$15.00	\$12.50	\$8.25
Manning River	Sydney Rock Oyster	\$15.78	\$13.56	\$9.19
Wallis Lake	Sydney Rock Oyster	\$14.31	\$12.15	\$11.24
Port Stephens	Sydney Rock Oyster	\$15.13	\$12.72	\$10.11
Port Stephens	Pacific Oyster (diploid)	\$14.31	\$12.15	\$11.24
Port Stephens	Pacific Oyster (triploid)	\$14.61	\$12.37	\$10.83
Brisbane Water	Sydney Rock Oyster	\$15.90	\$16.60	\$8.95
Brisbane Water	Pacific Oyster (triploid)	\$18.00	\$14.00	\$12.00
Hawkesbury River/Patonga Creek	Sydney Rock Oyster	\$19.29	\$13.38	\$8.50
Hawkesbury River/Patonga Creek	Pacific Oyster (triploid)	\$19.82	\$17.04	\$14.40
Crookhaven/Shoalhaven River	Sydney Rock Oyster	\$15.05	\$12.89	\$7.57
Crookhaven/Shoalhaven River	Pacific Oyster (triploid)	\$24.00	\$15.13	\$13.50
Clyde River	Sydney Rock Oyster	\$17.27	\$13.74	\$10.16
Clyde River	Pacific Oyster (triploid)	\$19.31	\$13.65	\$11.26
Tuross Lake	Sydney Rock Oyster	\$15.20	\$13.90	\$10.88
Wagonga Inlet	Sydney Rock Oyster	\$15.48	\$13.35	\$8.79
Wapengo Lake	Sydney Rock Oyster	\$16.25	\$14.12	\$10.06
Merimbula Lake	Sydney Rock Oyster	\$16.13	\$13.78	\$10.67
Pambula River	Sydney Rock Oyster	\$15.86	\$13.50	\$10.47
Wonboyn River	Sydney Rock Oyster	\$16.71	\$13.33	\$9.31

* Not available for all estuaries for confidential reasons (≤ 5 current permit holders in the estuary). Estuaries include Bellinger River, Botany Bay, Nambucca River, Nelson Lagoon, Richmond River, Tweed River and Wooli Wooli River.

Table 11 - Size grades for Sydney Rock Oyster, Pacific Oyster and oyster spat

Species	Large	Medium	Small
Sydney Rock Oyster	> 70mm total length or > 50g whole weight	55 - 70mm total length or 30 - 50g whole weight	< 55mm total length or < 30g whole weight
Pacific Oyster (diploid and triploid)	> 85mm total length or > 70g whole weight	70 - 85mm total length or 35 - 70g whole weight	< 70mm total length or < 35g whole weight
Spat (all species)	> 20 mm	10 – 20 mm	< 10 mm

Table 12 – Conversion figures for Sydney Rock Oyster and Pacific Oyster

Species	Large	Medium	Small
Sydney Rock Oyster	50 dozen = 1 bag	60 dozen = 1 bag	65 dozen = 1 bag
Pacific Oyster (diploid and triploid)	20 dozen = 1 bag	25 dozen = 1 bag	30 dozen = 1 bag

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