Aquaculture production report

2021-2022

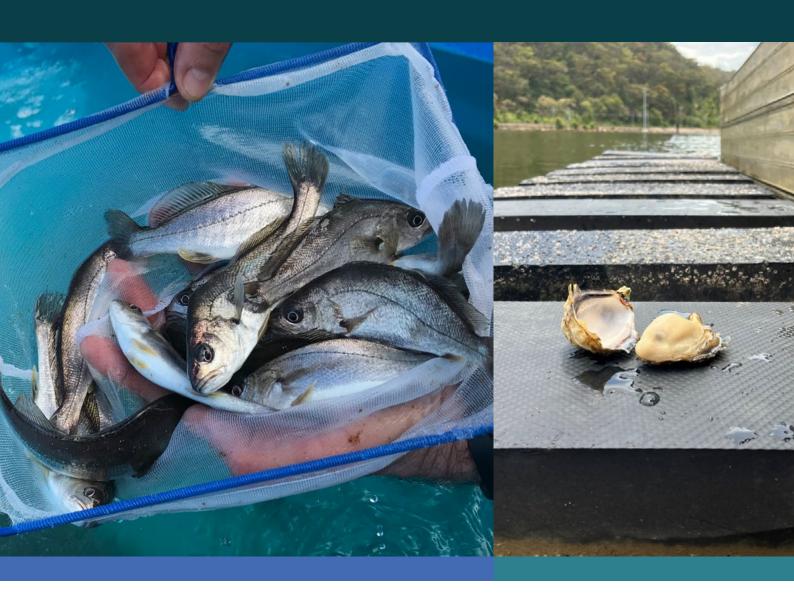




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Published by the NSW Department of Primary Industries

Aquaculture Production Report 2021 - 2022

First published February 2023

RDOC22/2326

More information

Authors: Raelene Trenaman and Edith Gippel, Aquaculture Unit, Port Stephens Fisheries Institute

www.dpi.nsw.gov.au

Acknowledgments

Project Manager: Edith Gippel, Aquaculture Unit, Port Stephens Fisheries Institute

Data: Raelene Trenaman, Edith Gippel

Tables and Graphs: Raelene Trenaman, Edith Gippel

Photo: Alistair Becker. Mulloway.

John Stubbs. Pacific Oyster.

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Table 1 - Snapshot of total aquaculture production for 2021/2022

Grouping	Common name	Scientific name	Production kilograms	Production dozens	Average price per kilogram	Value (\$)
Crustaceans	Black Tiger Prawn	Penaeus monodon	721,815		\$19.01	\$13,720,774
	Yabby	Cherax destructor	3,157		\$40.30	\$127,237
	Yabby (bait)	Cherax destructor	4,251		\$83.68	\$355,741
Subtotal						\$14,203,752
Freshwater fish	Barramundi	Lates calcarifer	68,591		\$14.18	\$972,367
	Murray Cod	Maccullochella peelii	719,069		\$20.54	\$14,772,745
	Rainbow Trout	Oncorhynchus mykiss	228,923		\$13.85	\$3,170,631
	Silver Perch	Bidyanus bidyanus	134,834		\$13.94	\$1,879,303
Subtotal						\$20,795,046
Hatchery	Hatchery species**					\$10,516,796
Subtotal						\$10,516,796
Molluscs	Sydney Rock Oyster	Saccostrea glomerata		5,313,901		\$52,492,892
	Pacific Oyster	Crassostrea gigas		172,901		\$2,602,796
	Native Oyster	Ostrea angasi		608		\$10,926
	Oyster spat***					\$3,320,903
Subtotal						\$58,427,517
Others*						\$1,279,372
Total value (\$)						\$105,222,483

^{*} Not available for confidentiality reasons (≤ permit holders authorised to cultivate species). Species include: Australian Paratya (*Paratya autraliensis*), Blue Mussel (*Mytilus gallopovincialis*), Brown Trout (*Salmo trutta*), Eel Tailed Catfish (*Tandanus tandanus*), Floodplain Mussel (*Velesunio ambiguus*), Golden Perch (*Macquaria ambigua*), Moreton Bay Bug (*Thenus autraliensis*) and Tube Worm (*Diopatra dentata*).

^{**} Refer to table 3; *** Refer to table 7

Table 2 - Fish, crustacean, and mollusc production 2021/2022

Grouping	Common name	Scientific name	Production kilograms	Average price per kilogram	Value (\$)
Crustaceans	Black Tiger Prawn	Penaeus monodon	721,815	\$19.01	\$13,720,774
	Yabby	Cherax destructor	3,157	\$40.30	\$127,237
	Yabby (bait)	Cherax destructor	4,251	\$84.68	\$355,741
Subtotal					\$14,203,752
Freshwater fish	Barramundi	Lates calcarifer	68,591	\$14.18	\$972,367
	Murray Cod	Maccullochella peelii	719,069	\$20.54	\$14,772,745
	Rainbow Trout	Oncorhynchus mykiss	228,923	\$13.85	\$3,170,631
	Silver Perch	Bidyanus bidyanus	134,834	\$13.94	\$1,879,303
Subtotal					\$20,795,046
Others*					\$552,080
Total value (\$)					\$35,550,878

^{*} Not available for confidentiality reasons (≤ 5 permit holders authorised to cultivate species). Species include: Australian Paratya (*Paratya australiensis*), Brown Trout (*Salmo trutta*), Eel Tailed Catfish (*Tandanus tandanus*), Floodplain Mussel (*Velesunio ambiguus*), Golden Perch (*Macquaria ambigua*), Moreton Bay Bug (*Thenus australiensis*) and Tube Worm (*Diopatra dentata*).

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

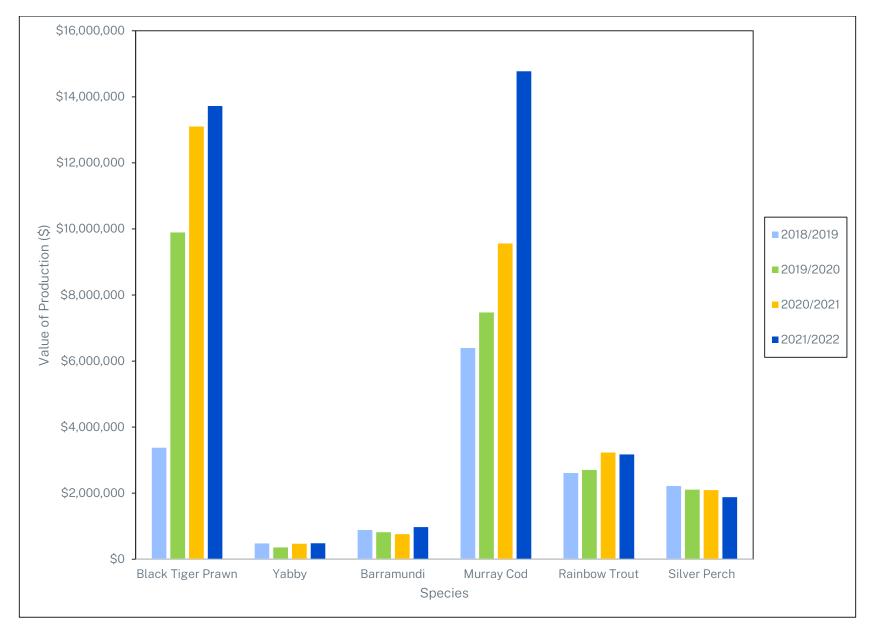


Table 3 - Commercial hatchery production 2021/2022

Grouping	Common name	Scientific name	Production (individuals)	Average price per production unit	Value (\$)
Aquarium species	Aquarium species		**	**	\$289,396
Subtotal					\$289,396
Freshwater fish	Australian Bass	Macquaria novemaculeata	578,619	\$0.90	\$519,122
	Golden Perch	Macquaria ambigua	2,822,847	\$0.45	\$1,261,040
	Murray Cod	Maccullochella peelii	3,842,243	\$0.78	\$2,977,875
	Rainbow Trout	Oncorhynchus mykiss	2,118,414	\$1.34	\$2,830,810
	Silver Perch	Bidyanus Bidyanus	849,943	\$0.53	\$453,391
Subtotal					\$8,042,238
Others*					\$2,185,162
Total value (\$)					\$10,516,796

^{*} Not available for confidentiality reasons (≤ 5 hatcheries authorised to cultivate species). Species include: Akoya (Oyster) (*Pinctada imbricata*), Atlantic Salmon (*Salmo salar*), Black Tiger Prawn (*Penaeus monodon*), Brook Trout (*Salvelinus fontinalis*), Brown Trout (*Salmo trutta*), Dusky Flathead (*Platycephalus fuscus*), Eel Tailed Catfish (*Tandanus tandanus*), Estuary Perch (*Macquaria colonorum*), Floodplain Mussel (*Velesunio ambiguous*), Sydney Rock Oyster (*Saccostrea glomerata*), Tiger Trout (hybrid) (*Salmo trutta x Salvelinus fontinalis*), Trout Cod (*Maccullochella macquariensis*), Yabby (*Cherax destructor*) and Yellowfin Bream (*Acanthopragus australis*).

^{**} Quantity and average price not recorded due to range of species.

Table 4 - Sydney Rock Oyster and Pacific Oyster production by estuary and grade 2021/2022

Estuary	Species	Large dozens	Large value (\$)	Medium dozens	Medium value (\$)	Small dozens	Small value (\$)	Total dozens	Total value (\$)
Nambucca River	Sydney Rock Oyster	10,117	\$126,766	32,074	\$326,193	62,956	\$479,095	105,147	\$932,054
Macleay River	Sydney Rock Oyster	315	\$3,947	676	\$6,875	343	\$2,610	1,334	\$13,432
Hastings River	Sydney Rock Oyster	26,166	\$327,860	55,653	\$565,991	33,021	\$251,290	114,840	\$1,145,141
Camden Haven	Sydney Rock Oyster	16,015	\$200,668	53,685	\$545,976	83,999	\$639,232	153,699	\$1,385,877
Manning River	Sydney Rock Oyster	13,670	\$171,285	36,807	\$374,327	12,193	\$92,789	62,670	\$638,401
Wallis Lake	Sydney Rock Oyster	217,170	\$2,721,140	390,587	\$3,972,270	505,705	\$3,848,415	1,113,462	\$10,541,825
Port Stephens	Sydney Rock Oyster	396,909	\$4,973,270	344,022	\$3,498,704	286,210	\$2,178,058	1,027,141	\$10,650,032
Port Stephens	Pacific Oyster (diploid)	618	\$7,292	1,368	\$14,131	2,326	\$21,120	4,312	\$42,544
Brisbane Water	Sydney Rock Oyster	4,163	\$52,162	56,599	\$575,612	94,261	\$717,326	155,023	\$1,345,100

Estuary	Species	Large dozens	Large value (\$)	Medium dozens	Medium value (\$)	Small dozens	Small value (\$)	Total dozens	Total value (\$)
Hawkesbury River	Sydney Rock Oyster	12,498	\$156,600	6,316	\$64,234	1,337	\$10,175	20,151	\$231,008
Hawkesbury River	Pacific Oyster (triploid)	1,565	\$28,342	1,044	\$14,814	136	\$1,650	2,745	\$44,806
Crookhaven River	Sydney Rock Oyster	16,569	\$207,610	42,466	\$431,879	107,340	\$816,857	166,375	\$1,456,346
Crookhaven River	Pacific Oyster (triploid)	4,261	\$77,167	6,062	\$86,020	5,587	\$67,770	15,910	\$230,957
Clyde River	Sydney Rock Oyster	46,594	\$583,823	127,939	\$1,301,140	162,482	\$1,236,488	337,015	\$3,121,450
Clyde River	Pacific Oyster (triploid)	57,705	\$1,045,038	51,232	\$726,982	32,041	\$388,657	140,978	\$2,160,677
Tuross Lake	Sydney Rock Oyster	22,067	\$276,500	37,365	\$380,002	27,092	\$206,170	86,524	\$862,672
Wagonga Inlet	Sydney Rock Oyster	73,124	\$916,244	255,357	\$2,596,981	55,622	\$423,283	384,103	\$3,936,508
Wapengo Lake	Sydney Rock Oyster	36,029	\$451,443	124,420	\$1,265,351	62,596	\$476,356	223,045	\$2,193,150
Merimbula Lake	Sydney Rock Oyster	244,926	\$3,068,923	544,706	\$5,539,660	133,033	\$1,012,381	922,665	\$9,620,964

Estuary	Species	Large dozens	Large value (\$)	Medium dozens	Medium value (\$)	Small dozens	Small value (\$)	Total dozens	Total value (\$)
Pambula River	Sydney Rock Oyster	53,854	\$674,791	104,692	\$1,064,718	76,718	\$583,824	235,264	\$2,323,332
Wonboyn River	Sydney Rock Oyster	30,216	\$378,606	53,560	\$544,705	16,941	\$128,921	100,717	\$1,052,233
Others*	Sydney Rock Oyster	17,179	\$215,253	63,235	\$643,100	24,312	\$185,014	104,726	\$1,043,367
Others*	Pacific Oyster (triploid)	908	\$16,444	4,731	\$67,133	3,317	\$40,235	8,956	\$123,812
Total		1,302,638	\$16,681,173	2,394,596	\$24,606,798	1,789,568	\$13,807,718	5,486,802	\$55,095,688

^{*} Not available for confidentiality reasons (≤ 5 current permit holders in the estuary). Estuaries include: Bellinger River, Botany Bay, Nelson Lagoon, Patonga Creek, Richmond River, Shoalhaven River, Tweed River, Wooli Wooli River.

Slight discrepancy due to rounding.

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

Estuary	Large dozens 2019/20	Large dozens 2020/21	Large dozens 2021/22	Medium dozens 2019/20	Medium dozens 2020/21	Medium dozens 2021/22	Small dozens 2019/20	Small dozens 2020/21	Small dozens 2021/22	Total dozens 2019/20	Total dozens 2020/21	Total dozens 2021/22
Nambucca River	12,442	12,115	10,117	30,798	32,121	32,074	39,086	63,697	62,956	82,326	107,933	105,147
Macleay River	6,749	958	315	39,068	1,374	676	11,224	1,385	343	57,041	3,717	1,334
Hastings River	34,760	48,611	26,166	118,966	100,277	55,653	81,429	58,524	33,021	235,155	207,412	114,840
Camden Haven	59,497	36,300	16,015	68,173	46,765	53,685	104,380	71,073	83,999	232,050	154,138	153,699
Manning River	14,903	12,483	13,670	19,825	21,974	36,807	31,686	18,960	12,193	66,414	53,417	62,670
Wallis Lake	329,970	172,497	217,170	428,078	425,806	390,587	483,502	498,282	505,705	1,241,550	1,096,585	1,113,462
Port Stephens	479,404	334,531	396,909	292,532	308,514	344,022	248,461	273,687	286,210	1,020,397	916,732	1,027,141
Brisbane Water	10,322	20,836	4,163	41,453	55,490	56,599	75,688	69,486	94,261	127,463	145,812	155,023
Hawkesbury River	46,436	35,226	12,498	52,879	18,859	6,316	60,385	8,991	1,337	159,700	63,076	20,151
Crookhaven River	31,496	31,350	16,569	44,282	84,492	42,466	45,340	65,186	107,340	121,118	181,028	166,375
Clyde River	82,187	100,381	46,594	239,728	216,026	127,939	161,849	120,578	162,482	483,764	436,985	337,015
Tuross Lake	34,022	30,635	22,067	38,584	36,694	37,365	16,546	24,476	27,092	89,152	91,805	86,524
Wagonga Inlet	117,048	81,879	73,124	97,063	174,502	255,357	118,858	28,081	55,622	332,969	284,462	384,103

Estuary	Large dozens 2019/20	Large dozens 2020/21	Large dozens 2021/22	Medium dozens 2019/20	Medium dozens 2020/21	Medium dozens 2021/22	Small dozens 2019/20	Small dozens 2020/21	Small dozens 2021/22	Total dozens 2019/20	Total dozens 2020/21	Total dozens 2021/22
Bermagui River	0	150	0	0	7,882	0	0	327	0	0	8,359	0
Wapengo Lake	33,396	54,303	36,029	71,772	65,130	124,420	53,208	44,307	62,596	158,376	163,740	223,045
Merimbula Lake	201,273	143,260	244,926	318,764	510,375	544,706	189,358	219,417	133,033	709,395	873,052	922,665
Pambula River	58,736	51,937	53,854	135,429	118,656	104,692	79,073	85,290	76,718	273,238	255,883	235,264
Wonboyn River	34,318	42,626	30,216	38,103	37,110	53,560	30,689	29,514	16,941	103,110	109,250	100,717
Others*	29,928	68,480	17,179	50,090	103,129	63,235	39,904	43,606	24,312	119,922	215,215	104,726
Total	1,616,887	1,278,558	1,237,581	2,125,587	2,365,176	2,330,159	1,870,666	1,724,867	1,746,161	5,613,140	5,368,601	5,313,901

^{*} Not available for confidentiality reasons (≤ 5 current permit holders in the estuary). Estuaries include: Bellinger River, Botany Bay, Nelson Lagoon, Patonga Creek, Richmond River, Shoalhaven River, Tweed River and Wooli Wooli River.

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

Estuary	Large dozens 2019/20	Large dozens 2020/21	Large dozens 2021/22	Medium dozens 2019/20	Medium dozens 2020/21	Medium dozens 2021/22	Small dozens 2019/20	Small dozens 2020/21	Small dozens 2021/22	Total dozens 2019/20	Total dozens 2020/21	Total dozens 2021/22
Port Stephens	7,701	1,915	618	5,252	2,452	1,368	1,399	4,460	2,326	14,352	8,827	4,312
Brisbane Water	132	0	0	700	0	0	1,275	0	0	2,107	0	0
Hawkesbury River	11,900	14,873	1,565	14,760	9,464	1,044	2,730	1,328	136	29,390	25,665	2,745
Crookhaven River	2,628	5,577	4,261	4,762	3,565	6,062	2,046	860	5,587	9,436	10,002	15,910
Clyde River	78,236	45,009	57,705	33,600	63,909	51,232	8,280	83,402	32,041	120,116	192,320	140,978
Others*	3,511	2,226	908	4,600	5,402	4,731	6,394	1,829	3,317	14,505	9,457	8,956
Total	104,108	69,600	65,057	63,674	84,792	64,437	22,124	91,879	43,407	189,906	246,271	172,901

^{*} Not available for confidentiality reasons (≤ 5 current permit holders in the estuary). Estuaries include: Botany Bay, Patonga Creek and Shoalhaven River.

^{**} Includes diploid and triploid Pacific Oyster production.

Table 7 - Oyster spat production by spat source for 2021/22

Original source of spat	Large spat (\$)	Medium spat (\$)	Small spat (\$)	Total value (\$)
Hatchery stock	\$350,597	\$379,590	\$476,406	\$1,206,593
Wild caught stock	\$848,787	\$675,763	\$589,760	\$2,114,310
Total value (\$)	\$1,199,384	\$1,055,353	\$1,066,166	\$3,320,903

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

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

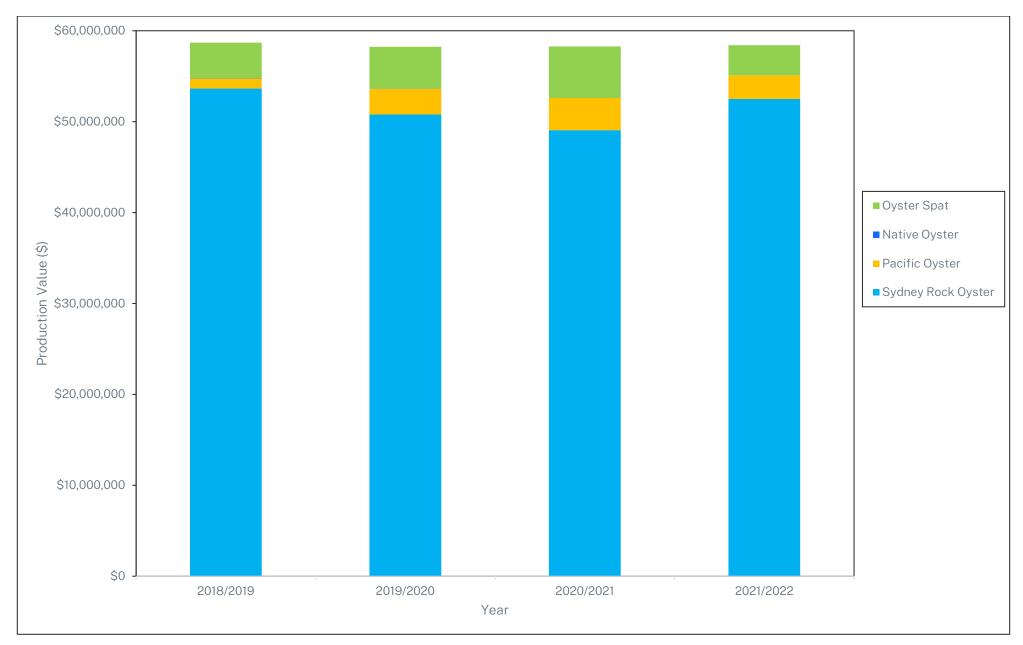


Table 8 - Total oyster production by permit holder for 2021/22

Production range	Nil production	1 - 5,000 dozen	5,001 - 20,000 dozen	20,001 - 35,000 dozen	35,001 - 50,000 dozen	> 50,001 dozen	Total
Number of permit holders*	66	47	76	23	16	21	249
Percentage of permit holders	27%	19%	31%	9%	6%	8%	100%
Quantity produced (dozens)	0	97,930	840,474	635,472	674,473	3,239,061	5,487,410
Percentage of production	0%	2%	15%	12%	12%	59%	100%
Total value (\$)	\$0	\$1,083,489	\$8,457,069	\$6,528,130	\$6,982,349	\$32,055,578	\$55,106,614

^{*} Does not include the Class A permit holders who did not submit a production return for 2021/2022. Does not include oyster spat production. Slight discrepancy due to rounding.

Table 9 - Average farm gate price per dozen for 2021/22 by species and grade

Grade	Sydney Rock Oyster	Pacific Oyster (diploid)	Pacific Oyster (triploid)	Native Oyster
Large	\$12.53	\$11.80	\$18.11	\$18.00
Medium	\$10.17	\$10.33	\$14.19	\$12.00
Small	\$7.61	\$9.08	\$12.13	N/A

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

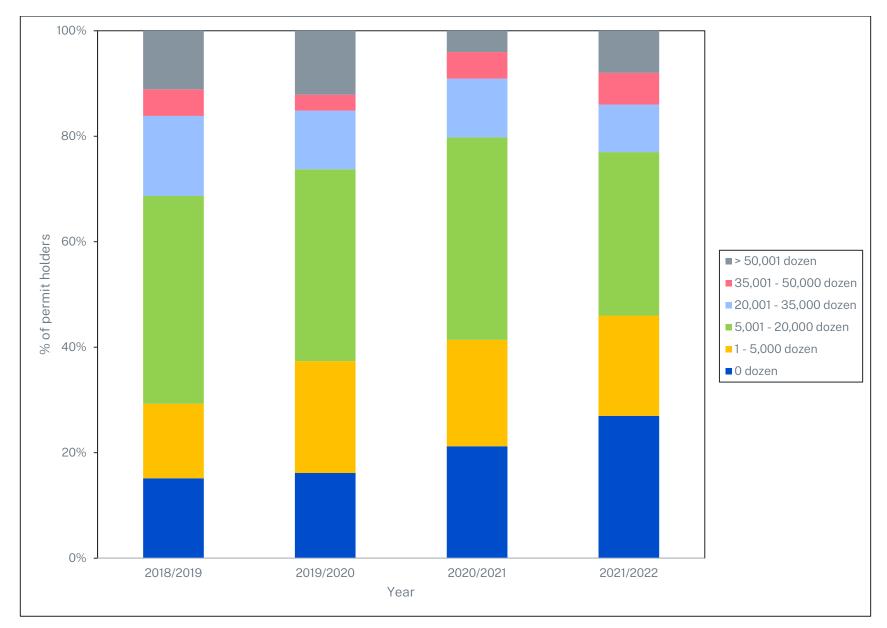


Table 10 - Average farm gate price for 2021/22 by estuary and species

Estuary*	Species	Large grade	Medium grade	Small grade
Nambucca River	Sydney Rock Oyster	\$13.49	\$11.37	\$9.13
Macleay River	Sydney Rock Oyster	\$14.00	-	\$7.00
Hastings River	Sydney Rock Oyster	\$11.22	\$9.36	\$7.43
Camden Haven	Sydney Rock Oyster	\$11.39	\$9.10	\$6.80
Manning River	Sydney Rock Oyster	\$13.67	\$11.35	\$6.64
Wallis Lake	Sydney Rock Oyster	\$11.28	\$9.18	\$6.43
Port Stephens	Sydney Rock Oyster	\$11.38	\$9.12	\$6.79
Port Stephens	Pacific Oyster (Diploid)	\$11.80	\$10.33	\$9.08
Brisbane Water	Sydney Rock Oyster	\$14.00	\$13.09	\$10.25
Hawkesbury River	Sydney Rock Oyster	\$11.63	\$9.50	\$7.50
Hawkesbury River	Pacific Oyster (Triploid)	\$18.33	\$14.00	\$12.00
Crookhaven River	Sydney Rock Oyster	\$12.15	\$9.45	\$7.50
Crookhaven River	Pacific Oyster (Triploid)	\$16.75	\$13.60	\$13.67
Clyde River	Sydney Rock Oyster	\$14.66	\$11.28	\$8.58
Clyde River	Pacific Oyster (Triploid)	\$18.29	\$13.91	\$11.07
Tuross Lake	Sydney Rock Oyster	\$12.28	\$10.30	\$8.00
Wagonga Inlet	Sydney Rock Oyster	\$12.97	\$10.42	\$8.00
Bermagui River	Sydney Rock Oyster	\$13.00	\$11.00	\$8.00
Wapengo Lake	Sydney Rock Oyster	\$13.27	\$10.95	\$8.18
Merimbula Lake	Sydney Rock Oyster	\$12.58	\$10.24	\$7.91
Pambula River	Sydney Rock Oyster	\$11.87	\$9.78	\$7.43
Wonboyn River	Sydney Rock Oyster	\$12.51	\$10.22	\$7.52

^{*} Average farm gate price not available for all estuaries for confidentiality reasons (≤ 5 current permit holders in the estuary). Estuaries include: Bellinger River, Botany Bay, Nelson Lagoon, Patonga Creek, Richmond River, Shoalhaven 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	> 70mm total length or	< 55mm total length or
	> 50g whole weight	> 50g whole weight	< 30g whole weight
Pacific Oyster (diploid and triploid)	> 85mm total length or	70 - 85mm total length or	< 70mm total length or
	> 70g whole weight	35 - 70g whole weight	< 35g whole weight
Spat (all species)	> 20 mm	10 – 20 mm	< 10 mm

Table 12 – Conversion figures for oyster dozens to bags for Sydney Rock Oyster and Pacific Oyster

Species	Large	Medium	Small
Sydney Rock Oyster	100 dozen = 1 bag	110 dozen = 1 bag	130 dozen = 1 bag
Pacific Oyster (diploid)	76 dozen = 1 bag	120 dozen = 1 bag	150 dozen = 1 bag
Pacific Oyster (triploid)	40 dozen = 1 bag	60 dozen = 1 bag	80 dozen = 1 bag