

# THE GOOD NEWS ABOUT OYSTERS

## HISTORY OF OYSTER FARMING IN NSW

AUSTRALIA'S INDIGENOUS PEOPLE HAVE USED OYSTERS AS A VALUABLE FOOD SOURCE FOR MANY THOUSANDS OF YEARS. OYSTER MIDDENS (PILES OF SHELLS) IN THE SYDNEY AREA HAVE BEEN CARBON-DATED TO AROUND 10000BC.

European settlement and a rapidly growing population saw the demand for oysters, as a food source and a source of lime for cement production, severely deplete wild oyster stocks. As a result, systematic cultivation of oysters in Australia started in the 1870s.

With 2016/17 annual production of 5.8 million dozen oysters worth \$47.3 million, oyster farming is the oldest and most valuable aquaculture industry in NSW. (Source: #1)



Source: OceanWatch Australia

# OYSTER BASICS

## SYDNEY ROCK VS PACIFIC

Sydney Rock oysters (*Saccostrea glomerata*) are endemic to Australia and are found between Hervey Bay (QLD) and Wingan Inlet (VIC). Sydney rock oysters are farmed extensively throughout NSW, and account for over 90% of oyster production in the state. It can take 3-4 years for a Sydney Rock oyster to reach market size.

Pacific oysters (*Crassostrea gigas*) were originally introduced into Australia from Japan in the 1940s, and are now grown in South Australia, Tasmania and in select estuaries in NSW. Pacific oysters grow quicker than Sydney rock oysters, and can reach market size in just 18 months.

## THE OYSTER LIFECYCLE

### BABY OYSTERS OR 'SPAT'

Oysters spawn into their surrounding waters between December and June each year. Each female oyster may release up to 20 million eggs, but only about 0.1% survive. Once the eggs are fertilised, they drift around in the water for three-to-four weeks seeking suitable places to attach themselves and grow. Oyster farmers provide purpose-built underwater slats or racks that provide a comfortable and convenient home for the larvae to settle and also protect them from predators such as birds and fish. Once the larvae attach themselves to the slats, they are then known as spat.

### GROWING

Once the spat reach about 10mm in size, oyster farmers lift the spat from the water, remove them from the slats, sort them into similar size ranges and place them back into the water in oyster containers. There are four different systems used to grow out the oysters to maturity; (1.) the traditional 'rack and rail' system, (2.) the long-line system, (3.) the floating bag system, and (4.) the raft system. The choice of method is dependent on the specific lake and river systems, their local environmental conditions, lease location and personal farmer choice driven by the best outcomes for growth and animal husbandry etc.

Oysters are graded once or twice per year, sorted into similar sizes, and then returned to the water for further growing.

### HARVESTING

The harvesting of oysters takes place when a majority of the oysters for that season have reached a size and condition considered to be ready for market. The grading process is completed by hand or using a computerised machine and sorts the oysters by size, into:

- Plate (Very Large)
- Bistro (Large)
- Bottle (Medium)
- Cocktail (Small)



Source: OceanWatch Australia

## SEASONALITY OF HARVEST

Sydney Rock Oysters across NSW are harvested at various times of year, dependant on their location. South Coast oyster farmers traditionally harvest and sell from prior to Christmas to the start of Winter or early July, while Georges Basin and Sydney estuaries and North Coast NSW Sydney Rock Oysters supply from the end of Winter to late February.



Source: OceanWatch Australia



Source: Tathra Oysters

## WHERE DO THEY GROW?

Currently there are around 2238 oyster leases in NSW covering an area of approximately 2798ha. (Source: #2)

Leases are administered by the NSW Government Department of Primary Industries. Commercial production occurs in 32 estuaries between Wonboyn on the far south coast of NSW to the Tweed River in the north. (Source: #1)



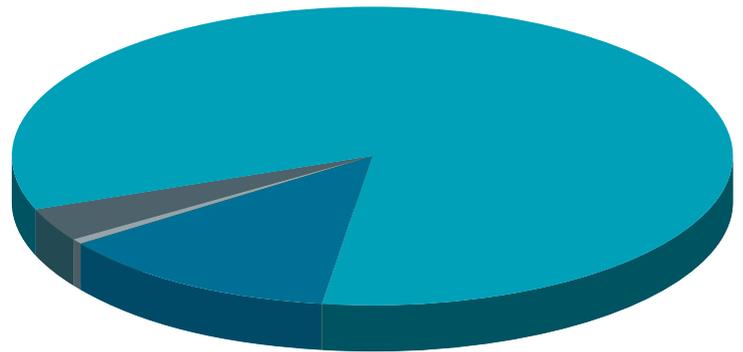
## WHAT ARE THEY WORTH?

The NSW Department of Primary Industry reports that the oyster industry in NSW in 2016/2017 is worth \$47.3m at the farm gate. This is an increase of 6% on 2015/2016 figures.

Aquaculture is the fastest growing primary industry in Australia with over 12% growth per year. (Source: #2)

(Source: NSW DPI Aquaculture Facts & Figures - 2017)

## VALUE OF THE OYSTER INDUSTRY



(Source: NSW DPI Aquaculture Facts & Figures - 2017)

The tables below show the scale and density of oyster production across the state. The majority of permit holders produce between 5000-20000 dozen oysters per annum with 10% of large producers generating over 50000 dozen per annum.

Production Range	Nil Production	1 - 5,000 Dozen	5,001 - 20,000 Dozen	20,001 - 35,000 Dozen	35,001 - 50,000 Dozen	> 50,000 Dozen	Total
Number of Permit Holders*	40	50	100	34	9	26	268
Percentage of Permit Holders	15%	22%	37%	13%	3%	10%	100%
Quantity Produced (dozens)		144,006	1,231,967	891,051	359,196	3,186,551	5,812,771
Percentage of Production (dozens)		2%	21%	15%	6%	55%	100%
Total Value (\$)		\$1,142,931	\$10,165,380	\$6,989,985	\$2,884,212	\$24,230,567	\$45,413,075

\* Does not include the Class A permit holders who did not submit a production return for 2016/2017

Grade	Sydney Rock Oysters average price per dozen	Pacific Oysters average price per dozen	Triploid Pacific Oysters average price per dozen	Native Oysters average price per dozen
Large	\$9.74	\$11.90	\$18.56	\$9.75
Medium	\$7.73	\$8.78	\$12.56	\$14.75
Small	\$5.59	\$5.00	\$9.20	\$8.00

(Source: Dept of Primary Industries - Provisional Aquaculture Report - 2016/17)

## HOW DOES IT IMPACT THE COMMUNITY?

A recent study by the NSW Department of Primary Industries estimated that both the NSW aquaculture production and secondary industries have:

- an output of \$226million,
- added value of \$134million,
- generates \$69.3million in household income, and
- creates a total of 1 758 full time jobs across NSW. (Source: #2)

## HOW DOES IT IMPACT THE ENVIRONMENT?

Oysters are considered the canary of the waterway as they are an excellent indicator of estuary health. Oyster farmers are the first people to become aware of water quality problems and are often proactive environmentalists.

All oysters are filter-feeders, straining organic material from the surrounding water. They can filter up to 5 litres of water every hour! Oysters are not fed or treated with any chemicals throughout their lifetime.

The activities of the NSW oyster industry are guided by the Oyster Industry Sustainable Aquaculture Strategy (OISAS). This strategy records the industry's commitment to environmental sustainable practices and describe their duty of care for the environment. In addition, many oyster-producing estuaries in NSW have also proactively, and voluntarily, developed Environmental Management Systems (EMS) that cover their specific waterways. (Source: #1)

## THE GOOD NEWS ABOUT OYSTERS

- Few other foods can compare with the nutritional balance of oysters. The oyster is an easily digestible and nutritious food, rich in minerals (zinc, selenium, magnesium, calcium and iron) and vitamins (A, B1, B2 and C). Oysters are also considered a superfood in terms of their protein and omega-3 content. They are low in cholesterol, containing approximately one quarter of the cholesterol of prawns and squid, equal to most other fish. Oysters are well below the cholesterol levels in red meat and some poultry.
- The Sydney Rock Oyster is unique in its ability to live out of water for up to three weeks in cool moist conditions. This is longer than any other oyster variety in the world. Even in a country as vast as Australia, this means that fresh, unfrozen product can be available almost anywhere throughout the year. (<https://www.dpi.nsw.gov.au/fishing/aquaculture/publications/oysters/oyster-industry-in-nsw>)
- Sydney Rock Oyster displays flavour and provenance characteristics depending on the estuary it is farmed in. They can be sold 12 months of the year with different seasonal flavours and slight changes in colour.
- The Sydney Rock Oyster is 100% organic, with no supplementary feeding required. They can be considered a true 'wild harvest' product appealing to the clean and green demands of the market.
- The Pacific oyster is currently battling POMS (Pacific Oyster Mortality Syndrome) disease which has dramatically reduced their foothold in the market. This provides a clear and solid opportunity to expand the Sydney Rock Oyster industry and grow market share.
- The export market is virtually untapped. It is believed that the Asian market holds huge potential for oyster producers with the scale and systems to supply this market.
- Oyster farmers are great at growing oysters. They also have a range of tourism opportunities to tap into such as farm tours as consumers wish to understand where their food comes from and get closer to the source.



Source: Tathra Oysters

### Further Information:

For further information about the NSW Sydney Rock Oyster industry, check out:

[www.nswoysters.com.au/oyster-farmers](http://www.nswoysters.com.au/oyster-farmers)

[www.dpi.nsw.gov.au/fishing/aquaculture](http://www.dpi.nsw.gov.au/fishing/aquaculture)

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