



shellfish culture

shellfish culture newsletter Autumn 2012

POMS latest

Research has intensified into POMS (Pacific Oyster Mortality Syndrome) with Sydney University now 12 months into an FRDC funded project in collaboration with the Broken Bay Group and Drake's Oysters in the Georges Bay.

Shellfish Culture has joined this group by donating 100,000 spawnless oysters, including 50,000 standard spawnless oysters and 50,000 ASI cross spawnless oysters. This is one of the lines showing no viral load during early experimentation.

The aim is to:

1. implement outcomes of the federally (FRDC) funded French industry tour undertaken last year by Australian industry representatives. You can read a report at <http://oysterstasmania.org/news/frdc-poms-project-study-tour-to-france-final-report>
2. assess resistance of spawnless oysters to POMS

As we've previously reported in this publication, the POMS virus is currently isolated to the Georges and Parramatta River systems.

Latest POMS research

Sydney University researchers Dr Ika Paul-Pont, Dr Navneet Dhand and Prof Richard Whittington are working to understand the virus in the field and potential management strategies to control it at the farm level. They have supplied Shellfish Culture with this update on their work.

POMS emerged in NSW in 2010, wiping out Pacific Oyster farms in Woollooware Bay within Botany Bay. Biosecurity measures, national surveillance and concerted research and diagnostic test development have been



Dr Ika Paul-Pont and Mr Len Drake (oyster farmer)

undertaken on this disease for the last two years. The latest activity concerns an epidemiological study conducted in Woollooware Bay during summer 2011/2012 by researchers from the University of Sydney.

This project involved high frequency monitoring of oysters (spat and adult), pathogens and environmental parameters at three different sites in Woollooware Bay in order to identify major risk factors responsible for disease emergence and spread.

Additionally, a trial of new husbandry techniques has been performed by lifting oysters to a higher height (+ 300 mm) in order to assess whether a lower immersion time, leading to a lower exposure to the virus, may prevent mortality. The aim was to identify new husbandry practices allowing Australian oyster farmers to grow Pacific oyster in the presence of the virus.

Two POMS outbreaks were detected so far, in November 2011 and February 2012. The outbreaks were sudden and highly clustered within the bay but also within each site. This patchy distribution pattern suggests an environ-

mental trigger for the release of POMS virus as well as a biological vector for POMS transmission in the water. Analysis of environmental parameters (biotic and abiotic) is currently underway to validate these hypotheses.

Promising husbandry outcomes came out of this trial as significantly better survival of adult Pacific Oysters was demonstrated in higher height trays - 60% vs. 30% survival at high and low height, respectively. Additional future trials are being designed to confirm the present findings and evaluate other cultivation systems.

A blog has been created by the researchers to share the results of this trial with all oyster industry stakeholders (<http://www.oyster-healthsydney.org/>).

In this issue

Stock levels at historic highs
Tetraploid breeding program
Barilla Bay Oysters

High stock levels

Shellfish Culture is enjoying a period of strong growth, coupled with high production levels.

"We're experiencing our best stock levels in the history of the company with a good spread of standard, spawnless and ASI oysters," says Kerry Wells, General Manager of Shellfish Culture.

"It places us in an excellent position for spring sales. We have fulfilled all our customers' orders, and order forms for 2012-2013 have been sent out."

Shellfish Culture Limited continues with its participation in the oyster health surveillance program to ensure the health of our own stock. We have taken this a step further and all batches this season have been tested for the POMS virus and have returned negative results.

"We would like to thank Animal Health Laboratories in Launceston for fast tracking PCR testing

facilities for POMS in Tasmania."

Major renovations at the Bicheno Hatchery were completed recently, in time for the first spawning in May.



Renovations nearing completion at Bicheno

Chairman's Report



Chairman, Greg Goodman

The Board is close to finalising a strategic plan for Shellfish Culture to take us forward for the next three years.

The strategic plan will take Shellfish Culture to the next level of growth following the two best years for our operations since the inception of the company.

I'm indebted to my fellow directors for their proactive and enthusiastic approach to the development of this new strategy. All directors and senior managers were interviewed as part of the planning process to ascertain their views on the operational, market, and capital investment priorities of the company in the years ahead.

The strategic plan will be finalised by the end of this financial year and won't be placed on a shelf to gather dust. It will be under regular review by the board as our operating environment and market conditions change.

We're all very proud at Shellfish Culture that our General Manager, Kerry Wells, has been selected to take part in the National Seafood Industry Leadership Program. Kerry has been a key player in the industry for many years and is nationally known and respected by his industry peers.

The leadership program is funded through the Fisheries Research and Development Corporation and is the only national industry specific leadership program for the Australian seafood industry.

Now in its 11th year the program has delivered graduates from all sectors of the industry, ranging from processing and fishing to exporters, importers, and marketing.

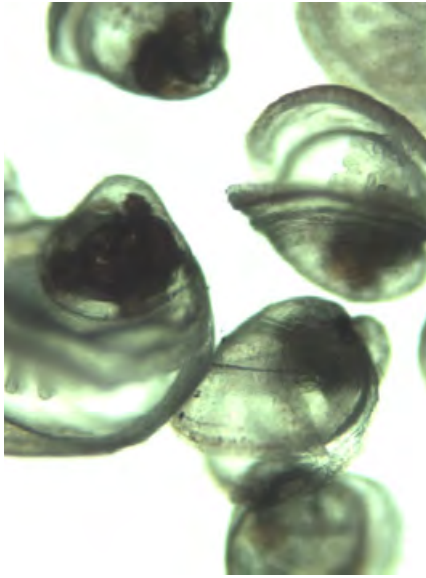


Australasian Aquaculture conference

The fifth biennial Australasian Aquaculture Conference is being held in Melbourne in May (2012). Scott Parkinson will be representing Shellfish Culture and looks forward to catching up with customers and industry colleagues.

The conference is an opportunity to keep up with global developments in the industry and to learn from practical and technical sessions featuring a range of international keynote speakers. It's also a great opportunity for networking.

Interested in attending? Check it out at www.australian-aquacultureportal.com



Freshly settled tetraploid spat from this year's production

Tetraploid breeding program

Shellfish Culture's research and development specialist, Andy Day, has been working closely with leading world expert Dr. Stan Allen of the Virginia Institute of Marine Science on a tetraploid breeding program. The work continues the long standing relationship between Shellfish Culture and Dr. Allen. Andy Day supplied this report to our newsletter

We have had a very successful year in terms of commercial triploid production, producing seven separate triploid batches, two of which have been produced using ASI family lines crossed with our tetraploids.

Over the next season we will be working closely with Dr. Stan Allen (VIMS) and Penny Miller (University of Tasmania) to enhance the tetraploid breeding program with relation to producing a high quality commercial triploid product. Part of the work we will continue doing is exploring ways of incorporating desirable genetics into our tetraploid populations and we will be working closely with ASI especially in regards to their work looking for any potential disease resistance to OshV-1 in their family lines.

Our people

Michel Bermudes

Area Manager, Bicheno

Michel Bermudes travelled to Tasmania from his native France as an exchange student. He ended up staying, and is now in charge of Shellfish Culture's Bicheno hatchery.

Michel was born well away from the ocean, but since he was a youngster, he's been attracted to working and living by the sea. "I started in the industry from the ground up, and spent time working in places such as Ireland where I was employed on a mussel farm.

"I finished my PhD while I was in Tasmania. I also met Debbie, my wife, in Tasmania. She was a fellow traveller in the industry, being involved in aquaculture research."

Michel began working for Shellfish Culture nearly five years ago as a research officer. After three years in the position he moved with Debbie to Bicheno to become Bicheno Area Manager for SCL.



"I'm responsible for managing the Bicheno Hatchery, its operations, staff and budgets," says Michel. "My goal is to develop consistent and growing levels of productivity in the hatchery."

In the last 12 months, Bicheno hatchery has produced 260 million 500-micron spat. "That's more than 30 million spat in each of eight larval runs which is a very good, productive outcome." In fact, in more than 30 years of operation, it's the third best year for Bicheno's output.



US study tour

Chairman Greg Goodman and General Manager Kerry Wells visited the United States recently. Their itinerary was organised by Dr Stan Allen of Virginia Institute of Marine Science (VIMS). The main purpose of the trip was to meet with Dr Allen and Tom Rossi to continue to build our relationship with 4C's, our spawnless oyster breeding program partners.

The group visited other aquaculture facilities, including Oyster Seed Holdings and Chesapeake Bay Oyster Company, Taylor Shellfish and

Cherrystone Aqua Farms to mention a few.

They were able to bring back to Australia a solid appreciation of trends and challenges in the US and international markets, together with the latest information on the global market penetration of the spawnless oyster technology that forms a central part of Shellfish Culture's own operations in Australia.

We would like to specifically thank the following people for their kind hospitality and open and frank communication, Paul Taylor and David DeAndre of the world renowned Taylor Shellfish, Greg Coates of Cherrystone Aqua Farms and of course our good friend Stan.



Barilla Bay Oysters' Justin Goc

Taste of the Sea

Aircraft on take-off or making their final approach to Hobart airport often fly over a large basin of water called Pittwater. It's home to millions of oysters that ultimately make their way to restaurant tables all over Australia and overseas.

Barilla Bay Oysters is a long established Tasmanian business with leases in Pittwater containing 10-12 million oysters. Nearby, on the foreshore, Barilla Bay Oysters operates a sophisticated restaurant and retail sales complex.

General Manager Justin Goc says that over 70 percent of income derives from the supply through wholesalers of Barilla Bay oysters to markets in Melbourne, Sydney and Brisbane.

"Branding is very important in this business, together with a great location for your farm. Over the years our reputation has been built and carefully nurtured to reflect the high quality product we grow and farm in Pittwater.

"The structure of the bay where you farm is also important. At one end of Pittwater we have a river spilling into the bay and at the other end the bay has access to the sea and tidal flows. It is also quite shallow which keeps the water temperature warm. The result, according to the feedback we receive, is that our oysters are plump, creamy, and taste of the sea.

"We buy the majority of our spat from Shellfish Culture. They are mainly standards with the spawnless oysters filling the hole in our production cycle in the February and March periods." Justin is Tasmanian born and has been involved in fishing and aquaculture all his life, including



many years working with farmed tropical species in northern Queensland.

Disease – particularly POMS - is the biggest threat facing the shellfish industry, according to Justin. "But then you tell me what industry is free of risk. We're very confident of both our product and our market in the years ahead and we're planning to increase our total oyster population in Pittwater to 15 million or more as we explore further market penetration in both Australia and overseas."

*(Top to Bottom):
Barilla Bay Restaurant
Oyster operations in Pittwater
Pittwater – A Barilla Bay tractor working well off shore*