



Aquaculture News

Issue 15 December 2013

Aquaponics workshop

On 21 September 2013 the NSW Aquaculture Association, in collaboration with Fisheries NSW and Pentair Aquatic Ecosystems, held a two-day Recirculating Aquaculture and Aquaponics short course at the Soldiers Point Bowling Club. The event attracted over 70 attendees from across Australia and New Zealand.

Speakers included Dr Tom Losordo, Director of Aquaculture Systems Engineering for Pentair Aquatic Eco-Systems, USA and Dr Wilson Lennard, Director of Aquaponic Solutions, Australia. Dr Losordo provided information on the critical considerations in recirculating aquaculture systems (RAS): planning and building production systems; designs and layouts; management; and operation. Dr Lennard presented on: the theory of aquaponics; protected cropping; aquaponic system design and construction; aquaponic plant production; and aquaponic system management. Not only did the course provide valuable advice on RAS and aquaponic systems it also addressed the myths, realities and fallacies associated with these types of enterprises.



Contact: Graeme Bowley Management 4916 3845
Rob McCormack rob@nswaqua.com.au

AQUAPLAN

On 16-17 September 2013, industry and government representatives met at a workshop in Melbourne to discuss development of Australia's third national strategic plan for aquatic animal health, AQUAPLAN 2014-2019.

The workshop was jointly chaired by Pheroze Jungalwalla, Chairman of the National Aquaculture Council, and Dr Mark Crane, Leader of the Fisheries Research and Development Corporation (FRDC) Aquatic Animal Health Subprogram. There were thirty-one workshop participants from aquatic animal industries, and government.

Participants identified a number of priority issues and supporting activities to enhance Australia's aquatic animal health management capability. These priority issues will form the basis of AQUAPLAN 2014-2019 and include:

- Enhancing surveillance and diagnostic services;
- Strengthening emergency preparedness and response arrangements;
- Improving regional and enterprise level biosecurity;
- Improving availability of appropriate veterinary medicines; and
- Improved education, training and awareness.

A draft AQUAPLAN 2014-2019 document has been prepared for formal industry and government endorsement. It is anticipated that activities under AQUAPLAN 2014-2019 will commence on 1 July 2014.

See <http://daff.gov.au/animal-plant-health/aquatic> or contact the Department of Agriculture on aah@daff.gov.au

Oyster industry promotions

Congratulations to Southern Rivers Catchment Management Authority, Broadwater Oysters (Destination NSW and Sapphire Coast) and Australia's Oyster Coast who have produced some outstanding promotional videos. They highlight sustainable farming practices and how the industry contributes to coastal communities.

'Healthy Estuaries, Healthy Oysters' is a seven minute documentary showcasing works to improve the environmental performance of the south coast industry and the health of its estuaries. The other videos are marketing initiatives to showcase fresh oysters from "one of the world's most pristine and environmentally sustainable oyster farming regions - the South Coast of NSW". The videos are being promoted Australia wide, if not further afield.

See <http://vimeo.com/76913593>

<http://www.timgreen.com.au/#Broadwater-Oysters-1>

<http://vimeo.com/71318029>

Risk management

Southern Rivers Catchment Management Authority is developing a risk management training course for 2014. Adam Gietzelt is working to develop an accredited course to look at financial and business planning, oyster and ecosystem specific assessment, communication and marketing. From 2014, the Catchment Management Authority will be incorporated into a broader Local Land Services (LLS) group.

Contact: Adam Gietzelt LLS 4429 4455



For details on the 5th Congress of the International Society for Applied Phycology 22 June 2014 in Sydney see www.isap2014.com

OISAS review.

Twenty submissions were received in response to the recent public exhibition of the 2013 version of OISAS. Ten submissions were from one community progress association. The final version will now be prepared then go through approvals before being published.

Contact: Tim Gippel Management 4916 3823

Changes to the Schedule of Aquaculture Fees and Charges

Fisheries NSW has recently introduced the following application fees:

- Multiple applications to sublet leases - \$73
- Permit variation application - \$144
- Lease variation application - \$144

Contact: Aquaculture Administration 4982 1232

Jervis Bay shellfish leases

The EIS and draft Environmental Management Plan for 50 hectares of shellfish lease went on exhibition in October. Fisheries placed mussel buoys on two of the leases to assist the community gauge visual impact and held community "drop-in" information sessions. Fisheries NSW are preparing a response to the submissions received during the exhibition period for the Minister for Planning and Infrastructure to determine the application.

Contact: Ian Lyall Management 4916 3856

Swap logbooks for the IVR!!!!

A pilot group of Hastings River growers has been using the oyster shipment IVR or Interactive Voice Recognition system (like paying bills by telephone) since May this year. The system allows growers to avoid having to submit paper shipment log sheets to the department or phone fisheries offices as the data is recorded automatically into the department's Shipments Database. Fisheries Officers are alerted by SMS and email notification each time a shipment is lodged. A new function has been developed in the database which allows printed shipment reports to be produced for growers who require them for accounting purposes. Sample reports have been recently sent to all growers in the pilot group. The roll out of the system to all NSW permit holders will be offered shortly.

Contact: Phil McCarthy Compliance 6331 9490

SOCo dispatches 10 million spat

The Select Oyster Company (SOCo) is pleased to report that the latest hatchery produced line of Sydney Rock Oysters selectively bred for QX disease resistance and Winter Mortality resistance has resulted in over 10 million spat being distributed to six nurseries in 2013. This line of oysters is commonly called B2s, being resistant to both diseases. In October, 2013, the Port Stephens Fisheries Institute (PSFI) Bivalve Hatchery spawned progeny from fifth generation dual resistant Sydney Rock Oysters. The parents of this progeny are part of a large scale mass selection breeding research program, managed by the Fisheries NSW.

Selection has been very successful, and over the course of the program, B2s have experienced significantly reduced mortality rates, and increased growth rates compared to non-selected oysters. SOCo is committed to future hatchery runs, broodstock supply and conditioning. Since its incorporation in 2004, SOCo has been a not-for-profit, wholly owned subsidiary of NSW Farmers Association that manages the commercialization of industry access to disease resistant stock. Through collaboration with Fisheries NSW and CSIRO, SOCo aims to improve the breeding program, continue to expand the disease resistance breeding program, and meet industry needs. Feedback from hatcheries, nurseries, growers and the community is highly valued by the Board, and SOCo invites any enquiries, orders or general comments you may have.

NSW Farmers Association and SOCo are assisting in the roll out with a \$50,000 industry wide subsidy announced in 2014 by the Minister for Primary Industries for the purchase of disease resistant Sydney Rock Oysters -Editor

Contact: Emma Wilkie SOCo 0402 677 534

selectoysterco@gmail.com
www.selectoysterco.com.au

Derelict oyster lease clean up

Fisheries NSW is continuing to take action against leaseholders who do not clear cancelled, surrendered or expired oyster leases of all infrastructure. During 2013, the department engaged contractors to undertake clean up work in Brisbane Water, Tuross Lake, Wagonga Inlet and Hawkesbury River. Clean up costs have then been pursued from former lessees.

A recent policy change means that cancelled, surrendered or expired oyster leases must now be cleared of all infrastructure within three not six months. New lease transactions will not be progressed if the applicant has outstanding clean up responsibilities.

Contact: Katie Sachs Management 4916 3913

World focus on Adelaide in 2014



“For the first time in modern history the world produces more farmed fish than farmed beef. This shows that aquaculture is playing an increasingly important role in meeting the challenge of global food security,” said Roy Palmer, Director, World Aquaculture Society and member of the organizing committee for World Aquaculture Adelaide 2014. “WAA14 takes place from 7-11 June 2014 at the Adelaide Convention Centre. It will provide an opportunity for several thousand people from the international aquaculture community to present their work and develop a vision for the future” said Mr Palmer.

- FAO’s World Aquaculture 2010 report found that global production of fish from aquaculture grew more than 60 per cent between 2000 and 2008, from 32.4 million tonnes to 52.5 million tonnes.
- The upcoming conference will highlight the challenge and opportunity for Australia, with Oceania producing 0.3% of total farmed seafood versus 88.5% for Asia in 2011 (FAO).

Contact: Sarah-Jane Day 0437 152 234

sarah-jane.day@aquaculture.org.au

www.aquaculture.org.au

Aquaculture production returns

A new revised production return and report is planned for 2014. It will make the return much easier to complete and result in a clear, more concise report on the industry. We are also asking

farmers to respond to a survey about using email to receive the Provisional Annual Production report.

Contact: Raelene Trenaman Admin 4916 3843

Bass production at PSFI

The 2013 winter/spring Australian Bass production season has seen a record number of Bass stocked in to NSW impoundments. Funded by the Recreational Fishing Trust, a total of 413,000 fingerlings were produced and went to 21 freshwater impoundments as far south as Danjera Dam near the Shoalhaven River and north to Toonumbar Dam in the Richmond Valley.

Contact: Stewart Fielder Research 4916 3902

New mollusc research program

A \$1.5 million Australian Centre for International Agricultural Research (ACIAR) grant to support the development of mollusc production in Vietnam and NSW is underway. The research, to be conducted by staff at PFSI, will take place over 5 years and will provide an opportunity to look at improved production techniques for species other than Sydney Rock and Pacific Oysters that could be used by the NSW industry. Along with the development of improved production technology for Native (Flat) Oysters, researchers will also continue investigations into the production of pipis and clams.

Contact: Wayne O'Connor Research 4916 3906

Aquaculture compliance link



Lee Burdett has recently been appointed to the position of Supervising Fisheries Officer – North Coast Zone and is coordinating state-wide aquaculture compliance.

Lee has a long career with Fisheries NSW, which includes being located at both the Sydney North and Sydney South Fisheries Offices, the Port Stephen’s Fisheries office and as the District Fisheries Officer for the Hastings. She has a degree in Fisheries Management and Aquaculture. In her role of coordinating state-wide aquaculture compliance, Lee will be assisting district fisheries officers with managing triennial oyster lease

inspections, whole of estuary audits and work requests. As well as providing advice and training on best practice for aquaculture compliance. “I am looking forward to getting around to all the major oyster growing estuaries in the next 12 months and getting to know the local oyster farmers and the unique situations of each estuary. I am well known by those oyster farmers in the Hastings, Camden Haven and Macleay estuaries, and I participated in the Manning/ Wallis Lake audits. I hope to get down to the South Coast in the very near future”

Contact: Lee Burdett Compliance 0408 517 441

Selling a land based farm?

In the last couple of years a number of land based farms have been sold to new entrants. To assist with sales negotiations it may prove useful to consider or have at hand:

- the development consent/s along with copies of related documents and plans for your aquaculture farm;
- copies of all current licenses or permits from other government agencies;
- plans of the farm’s infrastructure including tanks, ponds, pipelines, and pumps and make sure that this infrastructure is consistent with the development consent;
- documents that show that the conditions of the development consent have been complied with.

Contact: Graeme Bowley Management 4916 3845

Marine estate reforms

In May 2011, the NSW Government commissioned an Independent Scientific Audit of Marine Parks in NSW. This was to explore stakeholder concerns about the effectiveness of marine parks and ways to achieve better management of the NSW marine estate in total.

The NSW Government is implementing its response to the Audit and has reorganised management of the marine estate, including marine parks, under a single new authority – the Marine Estate Management Authority (MEMA). It has also established an independent scientific expert panel to support evidence based decision making, as cornerstones of the new approach to marine estate management in NSW.

On 21 November 2013, MEMA released a key paper which outlines a vision for the NSW marine estate and the underpinning principles that will be used to guide management. The first principle is effective community engagement. As part of this, an estate-wide community survey will be undertaken in early 2014 to seek community and industry views on the threats to those values, both now, and in the future.

Contact: Sarah Fairfull MEMA 66261369

www.marine.nsw.gov.au

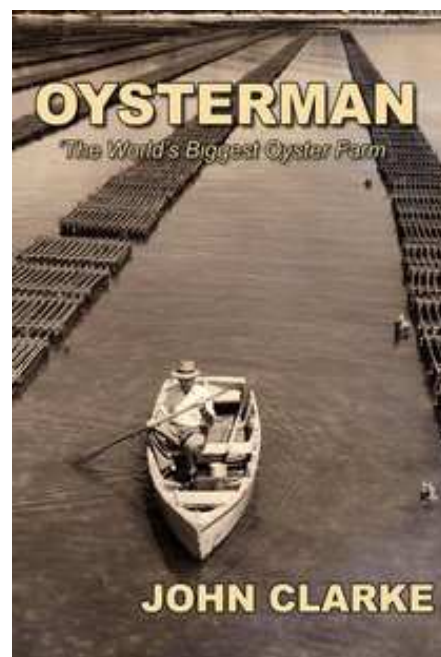
An oyster’s genetic secrets

Scientists from Macquarie University, University of the Sunshine Coast, Fisheries NSW and the Sydney Institute of Marine Science have formed a consortium to sequence the entire genome (the complete set of genes in an organism) of the Sydney Rock Oyster. This would be one of the first times that the complete genome of a native Australian animal had been decoded. Sequencing its complete genome will develop a vast genetic resource that can be used to test crucial questions such as the ability of oysters to respond to environmental stress, as well as understand its reproductive cues and requirements. This work will also help us with the discovery of genes controlling beneficial traits, such as resilience to environmental contamination and disease resistance.

Contact: Wayne O’Connor Research 4916 3906

Oyster history of Port Stephens

The oyster industry in NSW has played an important role in the development of communities in coastal NSW. In most areas this “keystone” history has never been told. Port Stephens fishing identity and author John Clarke has launched his latest book “Oysterman – The Biggest Oyster Farm in the World”. This marvellous book describes the tireless efforts of generations of oyster farmers and their workers who built the oyster industry at Port Stephens going back over 120 years. The book contains a wealth of rare and unique photographs and stories of farming families and farming activities. To quote John “the story of the oyster industry at Port Stephens needed to be written and I regard it as a great privilege to have been able to do it”. Let’s hope John’s book will inspire other stories to be told. See www.stinker.com.au/



OceanWatch

The last few months has seen the completion of the Manning River Oyster Farmers Environmental Management System (EMS). With Greater Taree City Council looking to implement an environmental levy, the local oyster association has been working hard to ensure that the interests of the local industry are reflected in the decision making process. The EMS is playing a key role in these discussions.

Further north, discussions have begun with the Macleay River Oyster Farmers regarding the merits of an estuary-wide EMS for their estuary. Funding support for the development of this has been kindly provided by the Northern River Catchment Management Authority. Andy Myers hopes to get the farmers together for a workshop early in the New Year to progress this further. Elsewhere, OceanWatch has been busy rolling out the 2013 EMS Action Grants. Funding for this round of on-ground improvements was made available by the Australian Government's Caring for our Country – Community Landcare Grants, and will facilitate:

- 30 oyster farmers across NSW implementing best practice marine resource use;
- 150 tonnes of old oyster infrastructure removed from 39 ha of oyster lease; and
- 24 ha of lease returned to production using best-practice cultivation.

Yet again this grant was oversubscribed, indicating the willingness of industry to take advantage of incentive programs.

The Tilligerry Creek EMS is also quite close to completion, and EcoNetwork, a local NGO, has expressed an interest to work with farmers to make environmental improvements in the catchment (*EcoNetwork also submitted a comprehensive submission on OISAS –Editor*). From everyone at OceanWatch, we want to wish you a happy, safe and productive Christmas, and look forward to catching up in 2014!

Contact: Andy Myers OceanWatch 9660 2262

Floating basket oyster cultivation



In recent years the use of floating basket cultivation methods has expanded dramatically, particularly in southern NSW where a wide range

of systems are now in use by industry. These systems range from well thought out and professionally constructed systems to what could be described as “home made” systems. Concern has been raised that in a number of instances substandard systems have failed and have come adrift, are visually inappropriate and often wander well outside the lease area under adverse wind and tidal conditions.

To assist industry to take advantage of the most recent advances in floating basket long line design, rather than “reinvent the wheel” *Best Practice Guidelines for Floating Basket Oyster Cultivation* are now being finalised in cooperation with industry and the NSW Shellfish Committee. The guidelines will be completed and endorsement sought at Shellfish Committee 19 February 2014.

The Oyster Raft Construction guidelines can be found at www.dpi.nsw.gov.au/fisheries/aquaculture
Contact: Steve McOrrie Management 4916 3921

POMS recurs

In late October and early November 2013, Pacific Oyster Mortality Syndrome (POMS/OSHV-1) was once again confirmed in both the Hawkesbury River and Georges River respectively. These detections mark the first observed mortalities of Pacific Oysters in association with POMS for the 2013/14 season. NSW DPI encourages the NSW oyster industry to report any observations of unusual or unexplained mortality of farmed and wild Pacific Oysters.

Contact: Aquatic Biosecurity 4982 1232

Oyster mortalities Port Stephens

Between January to May 2013, NSW DPI received a number of reports of mortalities in diploid and triploid Pacific Oysters in Port Stephens, and to a much lesser extent in Sydney Rock Oysters. Since early November 2013, NSW DPI has again received reports of mortalities, with a further four submissions made to the Elizabeth Macarthur Agricultural Institute (EMAI) state veterinary diagnostic laboratory.

In summary, the laboratory findings to-date conclude there is **no** clear evidence of any single infectious or transmissible disease agent from these submissions.

The major laboratory findings, in summary, are:

1. All submissions tested negative for POMS
 2. Inflammation +/- ulceration affecting the gut and external surfaces
 3. Gut filled with undigested food and haemocytes (oyster equivalent of blood cells)
- The NSW DPI investigation into water quality and algal monitoring for submissions received in early 2013 indicated that while conditions may have been stressful at times, including high air temperatures and reduced salinity, no one environmental factor adequately explained the losses observed. NSW DPI is continuing to

investigate these mortalities, and encourages Port Stephens oyster farmers to report any unusual or unexplained shellfish mortality.

Contact: Aquatic Biosecurity 4982 1232

CSIRO feed innovation

The work by Nigel Preston and his team from CSIRO has led to the development of the Novacq prawn feed product. “With the Novacq feed additive, farmed prawns grow on average 30 per cent faster, are healthier and can be produced with no fish products in their diet, which is a world-first achievement in sustainability” says Nigel. The Novacq product is made by transplanting marine microbes into ponds. The harvested microbes are dried and added to feeds as a bioactive ingredient. The first full-scale commercial farm trial started in August last year and was rated highly successful.

See <http://www.csiro.au/Portals/Media/Perfect-food-for-perfect-prawns.aspx>

Proposed amendments

The department has an on-going program of legislative reform to cut red-tape and streamline administrative procedure. The latest proposed Act and Regulation amendments are:

- Allow for the electronic publication of the Aquaculture Permit Public Register;
- Reduce fees for multiple subletting applications and introduce a fee for amending a permit or a lease;
- Introduce a definition for the word “improvement” as it relates to lease infrastructure; and
- Allow for the option of providing a statutory declaration (rather than paying for a new lease plan) if the original document is lost.

Contact: Tim Gippel Management 4916 3823

Native (Flat) Oysters resistant

In research currently being undertaken by NSW DPI at the Virology Laboratory at EMAI and in conjunction with researchers at PSFI, there have been very encouraging results. Testing of young Native Oyster spat at three different ages has provided convincing evidence of resistance to infection with POMS. While POMS quickly caused death in Pacific Oyster spat that were used as controls, no deaths due to the virus were observed in the Native Oysters. Further, there was no evidence that the Native Oysters had become infected. This research is being jointly funded by FRDC and NSW DPI under project 2012/052.

Contact: Dr Peter Kirkland EMAI 4640 6331

Permit holder information

For application forms, production reports, newsletters, updates and committee meeting summaries **see**:

<http://www.dpi.nsw.gov.au/fisheries/aquaculture/permit-holder-information>

Pacific Oyster closure update

The new Pacific Oyster Management System has been developed to replace the existing Section 8 Fishing Closure for the management of Pacific Oysters in all NSW estuaries. This will be implemented in December 2013 as a permit condition specified in the *Fisheries Management (Aquaculture) Regulation 2012*.

An underlying objective of this regulation has been the substantial reduction in ‘red tape’ for the NSW Oyster Industry to carry out normal business operations. A six month advisory period is proposed from 1 January 2014. NSW DPI will be engaging with the NSW oyster industry soon after the regulation is formally made.

Contact: Ben Rampano Aq. Biosecurity 4916 3907

Christmas message

On behalf of all Fisheries staff, I would like to wish you and your families a happy Christmas and prosperous New Year.

Geoff Allan Executive Director Fisheries NSW



Season Greetings to one and all

Aquaculture News is a newsletter from Fisheries NSW

Editor: Joyce Paterson

joyce.paterson@dpi.nsw.gov.au

www.dpi.nsw.gov.au/fisheries/aquaculture/publication/s/newsletter

ISSN 1835-2618 (print)

ISSN 1835-2626 (online)