

SAORC Newsletter

South Australian Oyster Research Council

April 2014



Spotlight on South Australian Aquaculture

Full Article **Page 4**

Page 5

POMS Disease Response Plans Now Available

Page 7

Native Oyster now added to Aquaculture Licences

Page 10

Oysters Australia News

Chair Report

Strategic partnership seems to be the new "buzz word" in R and D circles. One thing is for sure – the domination of "big" government R and D projects seems to be over and our efforts need to be more focussed. We need to be open to these new R and D approaches.

I am mindful that I am straying into the domain of Jill Coates – President of SAOGA and I am wanting to avoid the party political debate but... a word about the independent Member for Frome (Geoff Brock). After the State election handed Mr Brock the balance of power – it did focus the media pack (for

a moment) on the challenges of regional SA, and as the Minister for Regional Development in the new Government, Mr Brock, has secured the funding for the operation of RDA.

The flow on effect from the closure of General Motors Holden in South Australia and Toyota in Victoria is yet to be felt, but I do wonder about the wisdom of "putting all our 'industry assistance' eggs in the one basket".

Federal Government Treasurer – Joe Hockey, recently commented on the announced closure of the Alcoa

Contents

Chair Report
page 1

World Spotlight on SA Aquaculture
page 4

POMS Disease Response Plans
Now Available
page 5

Disease Response Plans
Work Well
page 6

Native Oyster now added
to Aquaculture Licences
page 7

SASQAP Update
page 8

Business Planning Workshop
page 11

Classifieds
page 12



Chair Report *continued...*

Aluminium Refinery in Geelong, (which had benefited from a \$40 million aid package a year or two ago), "Its has basically proved to be money down the drain."

On the other hand, there are lots of examples, (particularly in regional areas), of innovative partnerships. Most recently in the Agriculture sector, in the Wimmera region of Western Victoria, Bayer has launched a new breeding facility in which it has invested \$14M and created 20 jobs.

Agriculture is a field where Australia has an enviable reputation of innovation and competitiveness in spite of high labour costs and the vagaries of "primary production".

The Seafood Industry in general and Oysters in particular, finds itself in a similar situation.

The large government aid packages are disappearing – the Seafood CRC has finished (extended for 12 months – but not rebid) and to a large extent we are being asked to partner direct on smaller more focused research projects

Partnership opportunities abound with FRDC, SARDI, CSIRO, MISA, The hatcheries, ASI, Oysters Australia.

SAORC – Research Priorities

SAORC recently met at the Marine Science Centre in Port Lincoln to look at its business plan – particularly its research priorities over the next 5 years.

Importantly – SAORC priorities will feed into the National plan which is being developed by Oysters Australia. The day was independently facilitated by Bob Ramsay – Eyre Region RDA.

The notes that I made (these may not be the final agreed or the priorities may change) indicated a theme for the next 5 years.

This was that research needed to be focussed on "risk proofing" industry.

The theme of RISK PROOFING INDUSTRY to my mind highlighted 5 main strategies

- Genetics and Breeding
- Bio-Security
- Protect our ability to farm
 - Species Diversity – Angasi
 - Biomass Capacity – What do oysters eat?
- Communication
- Better Returning Market
 - China Export opportunities

Elsewhere in this newsletter, should be a report on the outcomes of that session and on the detailed strategies.

The Challenge for the SAORC board – is to “drill down” into these strategies over the next 12 months and start to put some flesh on the bones. with some SMART goals ie **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-lined.

It was a very productive day.

CRC Rebid

The Seafood CRC has had its mandate extended to June 2015 but a rebid is not going to proceed.

This means no additional funding – but a further 12 months to allow existing projects to be finalised and reported.

Whilst the Oyster Sector was prepared to commit grower funds to projects of National Significance other seafood sectors were more reluctant.

POMS Levy

In September 2012 as a part of my address at the AGM in Coffins, i compared oyster genetics R&D effort with that of the Wool industry.

My take home message was – If we use the same model as the Wool Industry – based on the farm gate value of the oyster industry (as determined by Econsearch), the contribution to R&D for oysters in 2010/11, should have been \$700,000.

In 2010/11 the South Australian Industry paid for R&D:

- Spat levy – \$130,000.
- FRDC levy \$60,000

Whilst I am not advocating a 2% R&D levy – it illustrates that the oyster industry generally and SAORC in particular has some way to go.

Beside our investment in the Seafood CRC (which is coming to an end), the other major investment that SAORC has made involves ASI – Australian Seafood Industries, that runs the thoroughbred oyster breeding programme.

ASI is jointly owned by TORC (Tasmanian Oyster Research Council) and ourselves.

Over the years ASI has attracted substantial FRDC and Seafood CRC money particularly for genetics research and is partially funded by a royalty – \$1.00 per '000 charged on ASI stock.

Regrettably, ASI failed to commercialise. Whilst we continue to support ASI, SAORC and TORC requested a review of the viability of the the business model.

That review highlighted the value of the science and the breeding programme to industry, but recommended a move away from a commercial business model where growers were the “customers” to one in which the hatcheries are the “customers” and industry pays a levy on **all** spat purchased to fund genetic research.

Currently this levy is looking to be in the order of \$2.80 per '000.

Whilst there is lots of water to flow under the bridge before its a “done deal”, growers have told the board in no uncertain terms that POMS is the biggest threat to the viability of our industry and we must be prepared to pay for an “insurance policy” against POMS.

There will be a major campaign rolled out in a bay near you....

World Spotlight on SA Aquaculture

South Australia's world-renowned aquaculture sector will be under the spotlight in June as Adelaide plays host to the World Aquaculture Conference.

Executive Director of PIRSA Fisheries and Aquaculture, Professor Mehdi Doroudi, said winning the hosting rights was a coup for South Australia, with between 2,000 to 3,000 delegates expected to attend and inject up to \$11.5 million into the State's economy.

"Hosting the conference presents a fantastic opportunity for us to showcase to the international industry our world leading production techniques, regulatory frameworks, and the research and innovation that occurs in the Aquaculture sector here in South Australia, as well as the growing connection between aquaculture and tourism," Professor Doroudi said.

It is anticipated that the conference will be one of the largest ever held in South Australia.

He said with South Australian aquaculture production at the farm gate valued at over \$241 million and the sector now making up more than 54% of the state's seafood production, the industry is a significant employer, particularly in regional areas.

"Aquaculture is one of the great success stories of regional employment and innovation, directly generating 1,147 full time jobs and another 1,510 indirectly, 65% of which are based outside the greater Adelaide area," he said.

Chair of the conference steering committee and President-elect of the World Aquaculture Society, Dr Graham Mair said with aquaculture one of the fastest growing food producing sectors in the world, the conference and its theme of 'Create Nurture Grow' will showcase industry success stories.

"World Aquaculture Adelaide 2014 will bring together the results of research, industry know-how and the latest technological advances in one place, combined with one of the largest aquaculture trade shows in the world," he said. "It really does provide a unique opportunity for the exchange of ideas".

"Almost half the global consumption of seafood now comes from fish farms, and for the first time in modern history the world is producing more farmed fish than farmed beef, representing a historic shift in food production.

"As a result, aquaculture is playing an increasingly important role in meeting the challenge of global food security, making an event such as this highly significant for the future of the industry."

More information on the conference can be found at www.aquaculture.org.au.

POMS Disease Response Plans Now Available

As part of the efforts to mitigate and minimise the impact of an outbreak of Pacific Oyster Mortality Syndrome in South Australia, Primary Industries and Regions SA (PIRSA) and the South Australia Oyster Growing Association (SAOGA) have been working closely together on prevention, preparedness and response strategies.

While POMS has not been detected in South Australia to date, the disease has decimated oyster growing regions in Europe, New Zealand and New South Wales. Early detection of POMS is critical for an effective emergency response. An important element of this approach is the development of the PIRSA Disease Response Plan for POMS, finalised in October 2013.

Drafted in collaboration with SAOGA, Oysters Australia and SARDI aquatic sciences, and reviewed by a number of scientific experts, the Plan is in line with the draft national (AQUAVETPLAN) response plan for POMS.

It provides an operational and technical framework for PIRSA and industry personnel, including oyster growers, in responding to POMS.

Any detection of POMS in South Australia would initiate an emergency response by PIRSA, coordinated with industry (SAOGA), with the aim to minimise the socioeconomic impact of the disease on the industry as a whole. Important aspects of a response include:

1. A response to POMS cannot be conducted without the assistance and willingness from industry;
2. Immediate state wide standstill of oyster livestock between growing regions for up to one week, possibly longer, dependent on laboratory results;
3. PIRSA will require all farmers from suspect sites to provide oyster samples if requested and immediately provide recent mortality and stock movement records to assist in tracing and surveillance; and

4. If POMS is confirmed, a decision on a response strategy will be made with industry representatives, which will be one of three options:

- a. Eradication (e.g. hatchery).
- b. Containment (e.g. an infected growing area).
- c. Mitigation (e.g. POMS found throughout the State, with the response aimed at preventing and managing disease outbreaks).

If you would like a copy of the PIRSA POMS Response Plan, or further information, please contact SAOGA Executive Officer Trudy McGowan: 0407 883 333 or PIRSA's aquatic animal health officer Dr Shane Roberts on (08) 8226 3975.

For further information on POMS, visit:

www.pir.sa.gov.au/aquaculture/aquatic_animal_health

Disease Response Plans Work Well

South Australia's freedom from many significant aquatic diseases provides advantages in seafood production and market access.

As a result, PIRSA's aquatic animal health program aims to safeguard South Australia's aquaculture, fisheries and natural resources from the impact of aquatic diseases to maintain their clean, green image.

In recent years, PIRSA and the aquaculture industry have worked towards minimising and mitigating the risk of disease, particularly Pacific Oyster Mortality Syndrome (POMS) and Abalone Viral Ganglionitis (AVG) – the two diseases considered to pose the highest risk to South Australian aquaculture.

PIRSA aquatic health emergency response capabilities have been put to the test during the past summer (2013-2014) with at least nine investigations taking place (which is not unusual for this time of year). Two oyster mortality investigations at Cowell and Coffin Bay prompting an activation of the PIRSA response plan for POMS; while an isolated marine die off (including abalone, rock lobster, fish and echinoderms) due to a harmful algal bloom initiated PIRSA's fish kill investigation protocol.

PIRSA's Aquatic Animal Health Officer Shane Roberts said all investigations found environmental conditions to be the likely cause, with infectious and notifiable diseases being ruled out from samples collected.

"The oyster mortalities were isolated to one or two lease sites, with the likely cause being a combination of handling stress and unfavourable environmental conditions," he said. "The heatwave spells experienced this Summer meant that by early February seawater temperatures in shallow waters, including bays, were already high (more than 23°C) while other environmental factors considered to contribute to the event included dodge tides and run-off from heavy rainfall.

"The fish kill investigation outside of Coffin Bay was an isolated incident caused by a bloom of a harmful algae; *Karenia mikimotoi*. This is a known cause of fish kills worldwide and has no known human health issues."

Dr Roberts said PIRSA's SA Shellfish Quality Assurance Program (SASQAP) monitored the algal bloom and confirmed the absence of shellfish biotoxins.

"Again in this instance, the primary causes were favourable environmental conditions for the development of the algal bloom including large upwelling of nutrients, warm waters and still conditions from dodge tides. Industry stakeholders were kept informed throughout the investigation, particularly oysters and abalone sectors where the bloom posed a potential threat to stock.

"While disease was not a factor in these incidents, implementing PIRSA's and industry's disease response plans ensured coordinated and timely investigations with the likely cause determined as quickly as possible.

"Feedback from these incidents will enable us to further fine tune the plans to ensure an even more effective and efficient response to future incidents."

Native Oyster now added to Aquaculture Licences

The identification of the native oyster (*Ostrea angasi*) as an alternative culture species has led to PIRSA and the oyster sector to work together to not only reduce the risk of Pacific Oyster Mortality Syndrome (POMS) but to also cut red tape and costs to growers.

The native oyster is endemic to southern Australia, ranging from Fremantle in Western Australia to south-east NSW and around Tasmania with recent trials in New South Wales showing the native oyster not susceptible to POMS.

Director Fisheries and Aquaculture Policy at PIRSA, Sean Sloan said as a result of identifying *Ostrea angasi* as an alternative culture species, SAOGA approached PIRSA for a co-ordinated across sector licence condition variation to enable it to be added onto oyster growers' aquaculture licences.

"In October 2013 all eligible licence holders were provided the opportunity to participate in the bulk addition of native oyster to their licence in October 2013," he said. "Through a co-ordinated approach by industry, PIRSA and Environment Protection Authority (EPA) this enabled a reduced application fee to be applied, yielding savings to individual licence holders."

A total of 127 licence holders across the state requested to have their licences endorsed with this species.

Mr Sloan said typically an addition of a species to a licence would require PIRSA to conduct an individual licence assessment that identifies and assesses any potential impact to the environment as a result of the addition.

"In this case, the addition of native oyster to multiple licences in multiple bays throughout the state could be assessed at the bay

level (e.g. Coffin, Smoky, Streaky etc), because of the similarities between Pacific and native oysters," he said. "This also helped to speed up and simplify process and as there was no requirement to change the farming systems and the low risk associated with the species all contributed to ensure a cost effective addition of the oyster to licences."

In February this year, all licences requesting the addition of native oysters have now had their licences endorsed with this species.

SASQAP Update

Seasonal Diatom Counts from Oyster Harvesting Areas along the West Coast of Eyre Peninsula

The graph represents the seasonal diatom counts along the west coast, the red line indicates 1 million cells/L.

The results indicate that location is significant but the different calendar years are not significant, this indicates that there is no significant difference between years but the sampling sites vary from one another. On average, Haslam and St Peters have very low levels of total estimated biomass. Even though the calendar year is not significant, it appears that there have been lower levels of algae since 2009. The maximum biomass level post 2009 is 5.6 million cells/L while pre 2009, the highest peak is more than double.

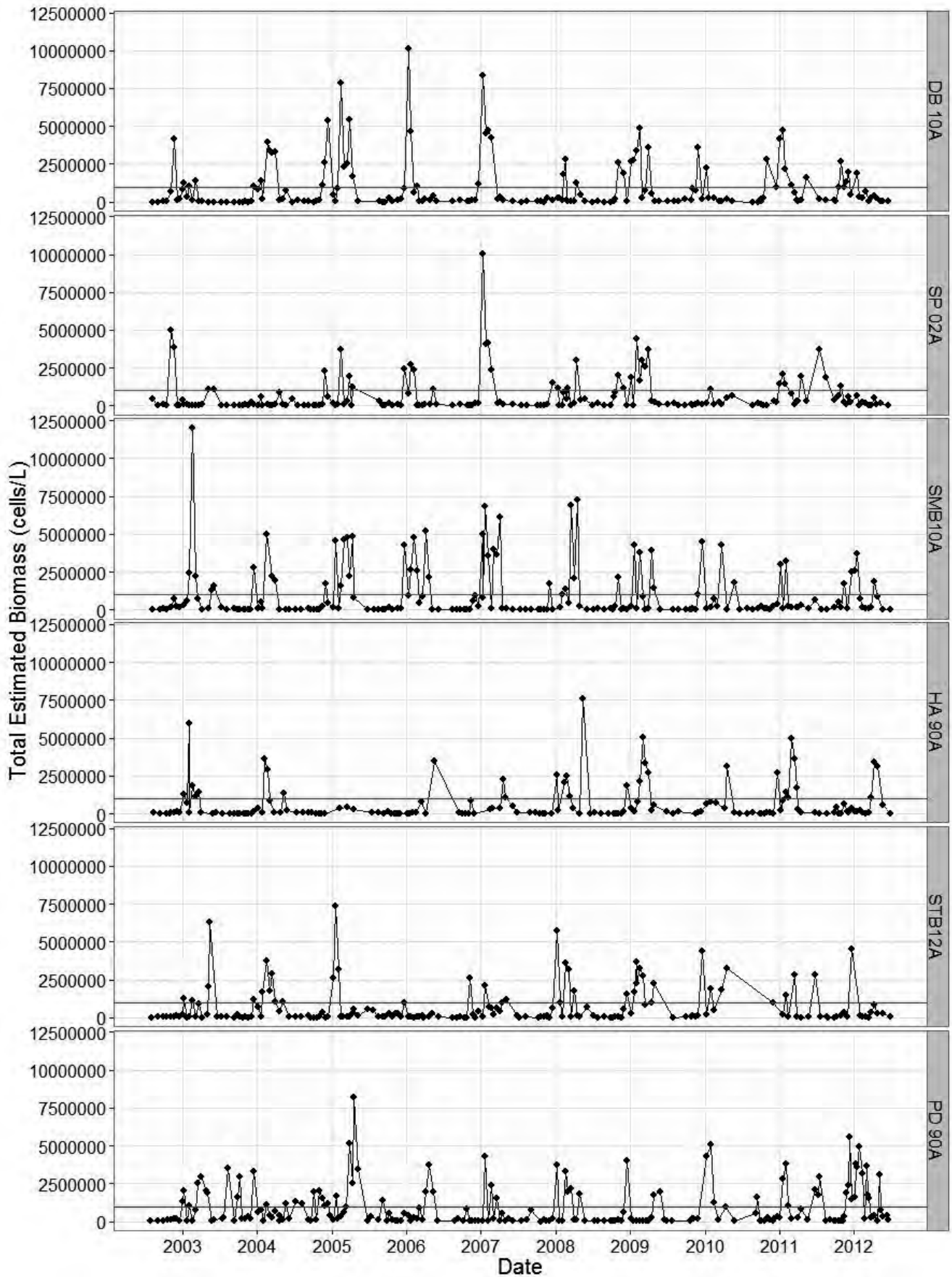
The bays are ordered based on their geographical locations, there is a trend of peaks progressing from DB to PD and occurring later in the year for the later bays, this is reflected in the above plot.

Some bays, for example Smoky Bay and Port Douglas seem to have more consistent peaks – once a year for each of the ten years. Some bays have an individual year which does not exhibit a peak at all.

I would like to thank Jessica Tan from SARDI for doing the statistical analysis as part of my Masters by research. I am on track for completion later on in the year, the outcome should be a predictive tool for oyster management strategies, findings so far are showing a good correlation with upwelling events and food counts.

Clinton Wilkinson
Program Leader SASQAP







oysters australia News

Seafood CRC to end in June 2015 & Oysters Australia's next steps.

In February, the Seafood CRC Board decided not to proceed with the application for an extension (re-bid) of the CRC beyond June 2015. The Board agreed that *"there was not a compelling case on which to frame an application that had any chance of success . . . the application must also have significant cash commitments from potential participants. Unfortunately, while there were some organisations and enterprises that were keen to commit, the Board considered that the suite of research proposed lacked sufficient 'breakthrough' elements, and the total of funds offered too low for the application to proceed"*

The Seafood CRC will continue to deliver remaining projects and finish at the end of its 1 year extension in June 2015.

The oyster industry benefited enormously through the CRC; via additional funding leverage, investing alongside other sectors and utilising the expertise of CRC staff.

Oysters Australia is reworking its research budget. It is also working through its strategic plan and post CRC operational costs as part of its plan to begin a FRDC Industry Partnership Agreement in July 2014. Go to <http://oystersaustraliablog.org.au/ep-1-australias-talking-oysters-bruce-zippel/> to hear Bruce Zippel on the topic of Oysters Australia and its future plans.

Big priorities for 2014-2019

Full details are in Oysters Australia's draft 2014-2019 strategic plan. The following is a condensed summary of the top **Research & Development** priorities (excludes Policy and Market) for the next 5 years:

- **Real time oyster stress 'early warning' system.** Enable grower access to technology that provides early warning of oyster stress (ie link with environmental conditions) via real time interpreted data of animal health. This aims to protect the ability to farm, manage and protect against both disease and environment related mortality.

- **POMS resistance & other high Pacific & SRO performance priorities via sustainably commercialised ASI & SOCo.**

Achieve high level resistance to POMS via breeding & husbandry techniques before 2018. Invest in identified priority R&D needs in Pacific & SRO breeding programs. Facilitate sustainable commercialisation of ASI and SOCo. This aims to improve stock performance.

- **Reduce costs of farming.** Via (periodical) benchmarking, communicate profitable production practices. This aims to reduce the cost of farming and facilitate greater production mechanism.
- **Use of IT to improve profitability.** Invest in technology that allows data entry (stock performance, mortality, stock movements) mid operation; moving away from desk based paperwork, enabling data analysis & traceback reliability. Ensure R&D outputs contain an end product that can be readily accessible or the info accessed via a portable device
- **Species diversification.** Investigate alternative species suitable for current lease area & infrastructure
- **Point of sale product quality & safety in new & existing markets.** Identify strategies to maintain traceability & transfer of origin info of oysters along the supply chain. Identify and coinvest in new or adapted methods of reducing oyster processing and improving quality at point of sale. Coinvest in identified R&D needs required for ASQAP international equivalency. Identify priority markets and segments for new supply chain development projects with a market ready partner.
- **Two way communication.** Establish ongoing effective processes for growers to provide input into priorities and project areas. Maintain a strong R&D group, form Advocacy group on inclusion of SICOA to Oysters Australia and form a Market group if funds become available. Communicate R&D, marketing and promotion and advocacy matters via annual state conferences, quarterly enews (including video), and a rotating 'Australian' oyster conference. Ensure linkages are maintained with state organizations.

"POMS resistance breeding update"

Late last year ASI ran a field challenge in the Georges River with Year Class 2012 spat. In this trial mortality rates ranged from 20-80% which results in really good genetic information. In the hatchery, ASI has just completed producing 80 families for the upcoming POMS trials. These are from the second generation of POMS families and the results will be worth watching for.

Field challenges can be difficult so a critical part of our project is the development of a lab based trial. Researchers at EMAI are having success in this area and have recently been able to infect oysters with stored virus.

You may have heard of the syndrome which is causing mortalities in Port Stephens. See <http://oystersaustraliablog.org.au/ep-1-australias-talking-oysters-juliet-corish/> for an update. We use this site as a holding area for oysters on the way to the Georges River and ASI is currently looking at risk mitigation measures for the project. If you require any further information please feel free to contact Matt Cunningham matt@asioysters.com.au or 0417 965 405

For more information on the POMS investment, see the December 2013 enews at <http://oystersaustraliablog.org.au/>.

Dates

Oysters Australia meeting: Saturday 7 June 2014, Adelaide

World Aquaculture Adelaide Conference Sunday 8 June to Wed 11 June. Includes an Oyster day on Sunday 8 June.

Business Planning Workshop

SAORC R & D Business Planning Workshop was held in Port Lincoln on Friday 21st March

Following on from the successful Information Day in February it was agreed to hold a Research & Development Strategy workshop to determine the focus of the next 5 years research spend. The workshop was attended by the following growers Jill Coates, Steve Bowley, Gary Zippel, Carl Jaeschke, Ken Rowe, Simon Turner, Gordon Gardner, Mark Binder and Jamie Sellen as well as , Kirsten Rough and Charles Caraguel (our scientific experts) and facilitated by Bob Ramsay from RDA. It was an extremely interesting and productive session with all growers giving their views on what was the most important focus for research dollars over the next 5 years. This information will now be collated into the next SAORC business plan and a draft will be circulated to all growers for comment in the near future.

Following on from this workshop, on the Saturday morning, Jill Coates Jedd Routledge Ken Rowe and Simon Dick from Realtime Data met to scope out the IT project that Ken has been driving taking into consideration work that had already been done in the Crayfish Industry.

Classifieds

FOR SALE

Heavy Duty 4 Wheel Oysters Punt For Sale

2.34 metres wide x 8 metres long

\$8,500 + GST

Oystek G4 Oyster Grading Machine With Elevator For Sale

In Excellent Condition

\$16,000 or nearest offer.

Phone Tom Evans,

EVANS OYSTERS PTY LTD

PH: 0429862612 or

email: evansoysters@internode.on.net

Coffin Bay Oyster Farm For Sale

2.5 hectares

Land base located in heart of Coffin Bay.

Walk in walk out

Price negotiable

Phone Ande

0427 010 063

Spat trays for sale.

19mm meranti. 3mm mesh. New, never used. Three and four bay.

Price negotiable.

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