

Oyster News

South Australian Oyster Growers Association

August 2015

Nearshore Habitat Monitoring

By Sam Gaylard, Matt Nelson & Warwick Noble from the EPA

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2015 Seminar

3rd & 4th September
Stansbury

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Industry congratulated for vigilance

President's Report

There have been some significant challenges and fantastic opportunities for our industry in the last six months with some exciting times ahead.

Cost Recovery

PIRSA Aquaculture Workplan

The PIRSA Workplan for 2015/16 has been negotiated and fee reductions negotiated accordingly. Thanks to all growers who supported our letters to Ministers on this matter.

At the SAOGA Meeting 26 June 2015, and after (email) consultation with all

growers, the SAOGA Executive resolved to accept the fee proposal outlined by PIRSA for a period of 4 years subject to PIRSA's commitment to the following:

1. At the commencement of the 4th year the stated review includes
 - a commitment to full transparency and accountability for Workplans over the three year period and
 - a review of the efficacy and efficiency of current programs, and potential cost reductions, which may be possible through more innovative approaches

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and effective co-management with SAOGA (and subject to acceptance by Industry as a whole) including for example, but not limited to, potential interface with improved Industry IT capabilities, and overlap with Industry credentialing.

2. In the event of significant variances in recorded Timewise data, SAOGA reserves the right to seek an Independent review of the standards applied by PIRSA (including staff understanding and training) of recording time against Industry related activities.

We have received confirmation of the reduction in fees from the Acting Chief Executive Don Frater, and assume these conditions have therefore been accepted by the Chief Executive, PIRSA.

The 2014/15 Workplan included some big items which should be completed if not by end of June 2015, soon after.

These include the Aquaculture Regulations Review and Zone Reviews for Cowell and Ceduna/Denial Bay. Consultation with growers by PIRSA staff has been ongoing and we trust Industry perspectives are being well considered. Your Association is here to support you in these matters so make sure your views are heard through your Bay Representatives and Trudy.

Marine Interaction Strategies/ Marine Debris

Growers have made great progress developing and implementing strategies and new production technology which will enhance our social licence and compliance with the regulator with regard to minimising potential marine interactions.

Marine debris clean-ups have occurred in partnership with DEWNR staff in some instances and growers have been hugely supportive of this need and each other. Trudy has developed forms, collated the data and a recommendation for regular events has been put to PIRSA for consideration.

Thanks in particular to Trudy, Bill Stenson, Judd Evans (previously James Boylan – great to have you on board again Judd!), Gordon Gardner and other members of Executive for the leadership shown on this matter.

I'd also like to thank PIRSA Aquaculture and Fisheries staff and DEWNR who have provided constructive support and guidance along the way.

Aquaculture Regulations

Industry was pleased to be able to provide input at several stages of this review and is comfortable with the way the review is headed.

The 3 key areas which were examined as part of the review were.

- Administrative changes (including navigational marking requirements)
- Aquatic animal health (including unexplained mortality reporting requirements)
- Environmental programs (including adverse interactions with marine animals)

It is my understanding that some of the detail previously included in regulations will be developed through the Standard Lease and Licence condition Policy and as such will provide more scope for Industry to impact change as we innovate and work towards more cost effective self-regulation.

SASQAP Cost Recovery

The Shellfish Industry (*bivalve molluscs* including cockles, clams, mussels, oysters, pipis and scallops) has united on this matter, sending numerous co-signed letters to Ministers indicated its unwillingness to accept the 2015/16 proposed SASQAP fees. At the point of writing we have received no satisfactory response.

The issue is simple.

Cost recovery requires those who create the need or benefit from regulatory activity to pay. We do not create the need which is created by pollution sources identified through sanitary surveys (a considerable part of the program). Levies

are collected by a number of government agencies including EPA and NRM Boards to address potential pollution sources into the marine environment. Local government also has a responsibility.

We will no longer be seen as a “soft target” on this matter – it is simply not sustainable to expect Industry to pay for a monitoring program, and one which it has no ability to impact further up the pollution chain.

State Taxation Review

We have written to the Treasurer thanking him for the concessions made with regard to stamp duty announced in the recent budget. It will be very beneficial for those growers seeking to rearrange their ownership structures or attract investment to regenerate and increase production that stamp duty has been abolished from aquaculture lease and licence transfers effective 1 July, 2015.

At the consultation session with the Treasurer held in Port Lincoln in April this year, Industry representatives also raised cost recovery as an area warranting significant review. The Treasurer listened and undertook to consider it.

IT Project/Environmental data

This project quite simply promises to be a “game changer” for our industry. Thanks to all growers who got behind this – more than 50% support for this project recorded in less than a week!

Ken Rowe will Project Manage and help to design the software required to enable us to more effectively manage our data and meet compliance/regulatory requirements with PIRSA. Huge thanks to Ken for maintaining the vision and offering to be the grower and the IT expert. This will be a project which is built by growers for growers and you will have the opportunity to be very much involved along the way.

A Steering Committee, comprised of SAOGA Executive members/PIRSA/ Department of State Development staff will monitor the project and an Advisory Committee of growers/R and D representatives/IT expert will be formed to enable an “Agile” style of

methodology for software development. Please register your willingness to be involved in the Advisory Committee with Trudy, and your first main opportunity to input is at the Stansbury Seminar – see you all there!

Coupled with an environmental probe pilot project on Coffin Bay (and seeking grant funding for probes in all bays), ultimately data could be streamed “real time” to your hand held devices as well. Paul van Ruth will be “ground truthing” this data and then conducting workshops for growers/PIRSA and DEWNR staff to interpret it.

Credentialing

I am delighted to report we have gained grant funding to obtain third part certified credentials which will include redevelopment of the Codes of Practice, Marine Management, Food Safety, Work Health Safety. More details will be provided at the Seminar.

Riding on Barges

Huge thanks to Phil Foreman, Trudy and all growers and Executive who have worked with Phil to enable him to present the best case he can to support this for Industry. We hope to have an update for the Seminar.

Exports

China and South East Asia presents a tremendous opportunity for us, both for trade and investment. Keep an ear/ eye out for workshops and opportunities which can guide your thinking and planning in this area. As always we will keep the information coming!

Volunteers – thank you!

The well known expression “our country runs on the backs of volunteers” – certainly holds true for this Industry. I know you all join me in thanking our hard working group – all members of both Executives – SAOGA and SAORC. We do reimburse them for their out of pocket expenses and some of those, in particular travel, have been significant over this last 12 months especially with the range of issues needing to be addressed –

however we could never adequately reimburse them for their valuable time out of their own businesses – and we thank you all most sincerely for giving that time for the benefit of all growers.

Thanks also to Trudy. She has convened and managed countless difficult and exacting Executive Meetings (far more than the norm over the last 12 months) skilfully, knowledgeably, and tactfully – and more importantly artfully and accurately recording the minutes of robust discussion reflecting the views of all members. She has attended numerous bay meetings and represented Industry views with agencies and at conferences. We value her in the Executive Officer's role!

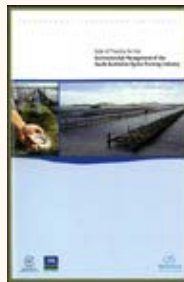
I look forward to seeing you all at the Seminar – we have a really informative agenda and more importantly we have a very important task – to ensure that Steve Bowley gets the best send off yet for his fantastic contribution over the last eight years. Come and help us celebrate. See you all there!

Jill Coates

President
South Australian Oyster Growers
Association

Review of the EPA Oyster Code of Practice – Still!

As you may recall, the EPA has been undertaking a review of the EPA Code of Practice for the past few years. The Code provides a tool which assists industry in meeting their environmental obligations by relating EPA legislation to industry practices.



At the last SAOGA Seminar, it was agreed for the EPA Code to be amalgamated with the SAOGA Code of Practice that is currently being drafted. Since

then, Trudy and I have worked together with the amended EPA section being provided to SAOGA for consideration. Unfortunately due to unforeseen circumstances, the finalisation of the SAOGA Code has been delayed therefore at this stage, we have decided that it would be more efficient to complete the EPA Code as a stand alone document with the intention of incorporating the relevant sections into the SAOGA Code at a later date. This will enable the EPA Code to be available for all oyster growers and will still provide the opportunity for SAOGA members have access to a single industry Code that will incorporate requirements which are specified in the EPA Code. The EPA Code of Practice may also assist with the development of the industry certification program that has recently been funded by the state government.

The aim is to now have a draft EPA Code available for industry to review at the upcoming SAOGA seminar. You will find that the content of the Code hasn't changed too much however the structure has been altered to reflect the operational practices of industry rather than environmental aspects. This was agreed to via previous consultation conducted back in 2013. Any comments / suggestions etc. will be greatly appreciated to ensure the Code is practical for industry and easy to use.

Look forward to catching up with you all at the Seminar in September.

Tara



presents

The South Australian Oyster Industry 2015 Seminar, AGM & Annual Dinner

Stansbury Institute Hall

Thursday 3rd & Friday 4th September 2015

Program Features

- Research Project Updates – Integrated Farm Management System, Environmental Monitoring Program, Trace Metal Accumulation in Pacific Oysters & Oyster Feeding Fielding Experiment
- ASI – POMs Resistant Breeding Program "What Traits should we be Breeding For?"
- Why Credentialing - A case study from the Southern Rock Lobster Industry.
- Updates – Basket Recycling, Riding on Barges, Coastline Clean-up Program and Exploration in the Great Australian Bite.
- Growers working sessions on – how to write a grant application and use a microscope, animal husbandry, R&D tax incentives, Growing Angasi's and Retail Marketing.
- Regulatory update

SAOGA Membership

The South Australian Oyster Industry Seminar can be attended by both SAOGA members and non-SAOGA members. The cost to attend the seminar for members (full members & associates) is \$90 and for non members is \$120. The cost of the Annual Dinner is the same for both members and non members.

Thursday 3rd September 2015

Seminar

Time: 10.00am to 3.00pm.

Venue: Stansbury Institute Hall

Annual General Meeting SAOGA and SAORC

Time: 3.30pm to 5.30pm.

Venue: Stansbury Institute Hall

Dinner "Wood Fired Pizzas"

Time: 6.00pm until not too late.

Venue: Stansbury Institute Hall

All food supplied, drinks BYO.

Friday 4th September 2015

Seminar Continued

Time: 9.00am to 3.00pm

Venue: Stansbury Institute Hall

Trade Show & Sausage Sizzle

Time: 3.00pm to 5.30pm

Venue: Stansbury Institute Hall (inside & outside)

Annual Dinner

Time : 6.30pm until late.

Venue: Dalrymple Hotel.

Entertainment: Oyster Competition, Auction & Guitarist Damian Dee

The South Australian Oyster Industry 2015 Seminar, AGM & Annual Dinner

Stansbury Institute Hall

Thursday 3rd & Friday 4th September 2015

Registration Form & Tax Invoice

Name: Business Name:

Address:

Email: Phone: Fax:

SAORC & SAOGA Industry Seminar

Thursday 3rd & Friday 4th September 2015

Stansbury Institute Hall

(Includes Morning & Afternoon Tea & Lunch)

Members Number Attending: people @ \$90.00

\$90.00 per person (gst inclusive)

Non Members Number Attending: people @ \$120.00

\$120.00 per person (gst inclusive)

Subtotal: \$

"Wood Fired Pizza"

Thursday 3rd September 2015

Stansbury Institute Hall

(Food supplied/Drinks BYO)

Number Attending: people

Annual Dinner

Friday 4th September 2015

Dalrymple Hotel

(three courses, oyster comp, auction and entertainment included/Drinks to be purchased)

Number Attending: people @ \$65.00

\$65.00 (gst inclusive) per person

Subtotal: \$

Total: \$

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Please call Trudy McGowan 0407 88 3333 with queries

SAORC ABN (23 083 574 001)

Seminar Program

Thursday 3rd September 2015

| | |
|---------------------|--|
| 9.30am to 10.00am | Registrations & Morning Tea |
| 10.00 am to 10.05am | Welcome to the SAORC/SAOGA Seminar <i>Steve Bowley, Chairman SAORC & Jill Coates, President SAOGA</i> |
| 10.05am to 11.00am | ASI – “POMS Resistant Oyster Breeding Program – what traits should we be breeding for?” <i>ASI staff & Peter Kube, CSIRO</i> |
| 11.00am to 11.05am | Sponsor |
| 11.05am to 11.45am | Environmental Monitoring Program – “Probes in Coffin Bay” <i>Ben Smith, DEWNR & Xiaoxu Li, SARDI.</i> |
| 11.45am to 11.50am | Sponsor |
| 11.50am to 12.20am | “Trace metal accumulation in Pacific Oysters” & Oyster feeding fielding experiment. <i>Shaun Henderson, PHD student Flinders University</i> |
| 12.20am to 1.00pm | Lunch |
| 1.00pm to 2.15pm | Integrated Farm Management System – Presentation & Growers Input <i>Ken Rowe, KI Bay Rep & Growers</i> |
| 2.15pm to 2.20pm | Sponsor |
| 2.20pm to 3.10pm | Credentialing – The Clean Green Program case study. <i>Ross Hodge, Southern Rock Lobster Industry</i> |
| 3.10pm to 3.30pm | Afternoon Tea |
| 3.30pm to 4. 15pm | SAOGA Annual General Meeting <i>Jill Coates, President SAOGA</i> |
| 4.15pm to 5.00pm | SAORC Annual General Meeting <i>Steve Bowley, Chairman SAORC</i> |
| 6.00pm onwards | Wood Fired Pizza at the Institute Hall. |

Friday 4th September 2015

| | |
|--------------------|---|
| 9.00am to 9.20am | EPA – Codes of Practice Update <i>Tara Ingerson EPA.</i> |
| 9.20am to 9.35am | TAFE SA–Training Opportunities <i>Richard Horgan, TAFE SA.</i> |
| 9.35am to 9.40am | Sponsor |
| 9.40am to 10.00am | PIRSA Updates–zoning, rock endorsements and the 2015/16 work-plan <i>Sean Sloan, PIRSA</i> |
| 10.00am to 10.20am | Regulatory Costs Update. <i>Jill Coates, President SAOGA</i> |
| 10.20am to 10.40am | Morning Tea |
| 10.40am to 11.00am | Oysters Australia Update <i>Rachel King, Oysters Australia</i> |
| 11.00am to 11.05am | Sponsor |
| 11.05am to 11.30am | “How to use your own Microscope” <i>Clinton Wilkinson, SASQAP</i> |
| 11.30am to 11.35am | Sponsor |
| 11.35am to 11.55am | Reef Restoration Project <i>Heidi Alleway, PIRSA</i> |
| 11.55am to 12.00pm | Sponsor |
| 12.00pm to 12.30pm | Update – Basket Recycling, Riding on Barges, Clean up Beach program, Exploration in the Great Australian Bight <i>Trudy McGowan, SAOGA/SAORC & Kirsten Rough, ASBTIA</i> |
| 12.30pm to 1.10pm | Lunch |
| 1.10pm to 1.40pm | Workshops – running concurrently 1. Grant Writing <i>Andrea Broadfoot & Jack Ritchie, JCam Creative</i> 2. Retail, Marketing, Sales <i>TBA</i> |
| 1.40pm to 2.20pm | Workshops – running concurrently 1. R&D Tax Incentives–a case study <i>David Mason, Griffith Hack Consulting & Jill Coates</i> 2. Growing Angasi's <i>Adam Butterworth, Sustainable Aquatic Industries & Xiaoxu Li, SARDI</i> |
| 2.20pm to 3.00pm | Current Animal Husbandry Techniques <i>Growers discussion</i> |
| 3.00pm to 5.00pm | Afternoon Tea & Oyster Industry Trade Show inside & outside Stansbury Institute Hall. |
| 6.30pm until late | Annual Dinner at the Dalrymple Hotel, featuring: • Local Guitarist & Vocalist ‘Damian Dee’ • Annual Oyster Competition • The Unforgettable Industry Auction |

Monitoring and reporting on nearshore habitat condition: a focus on seagrass

Sam Gaylard, Matt Nelson & Warwick Noble
Environment Protection Authority

Seagrass in South Australia

In South Australia, our waters are extremely nutrient poor (termed oligotrophic), this has resulted in our biota being adapted to this very low nutrient environment. In sheltered waters, the two dominant seagrass species *Posidonia* (tapeweed) and *Amphibolis* (wireweed) are extremely slow growing and can thrive as seen by our extensive seagrass meadows, some of the largest in the temperate world. When nutrients are added to waters (from sewage, agricultural and urban runoff and some industries) they cause an overgrowth of fast growing filamentous algae (epiphytes) which, in high or prolonged densities, will result in a reduction of the light available to seagrass leaves and can cause seagrass to be lost. In some areas other factors also contribute to the seagrass loss including sediment from agricultural or urban runoff. These process has resulted in the loss of nearly 10,000 hectares of seagrass from the South Australian coastline. When these seagrass species are lost, they may takes decades to recover, if at all. As an example: seagrass and the fibrous root system (rhizome matt) was harvested from Port Broughton starting in 1908 for the textile industry, the holes from this mining are still visible today. There are many consequences of lost seagrass such as losing their stabilising effect of sand, wave attenuation, fish and invertebrate habitat and the nutrient and carbon cycling properties they provide. For the oyster culture industry, lost seagrass could change sediment erosion or deposition affecting water flow (and food transport)

through or around leases, stable seagrass systems provide a more resilient system which is less prone to disease or invasive species incursion, stability in water quality could provide reliability of food sources and buffering from climate change induced acidification. It is noted that there are faster growing seagrass species which are prevalent in some locations which can come and go over an area much quicker than *Posidonia* or *Amphibolis* (months to years) eg: *Heterozostera* species (eelgrass) can colonise areas relatively quickly, particularly if there are changes to sediment stability through the addition of infrastructure. These faster growing seagrasses also provide many environmental benefits.

Background

The Environment Protection Authority has reported on the ambient (background) water quality throughout South Australia to provide a benchmark for the condition of our waters. Historically this program constituted a water sampling program which spanned Gulf St Vincent, Spencer Gulf, Coffin and Venus Bays and looked at nutrients, which are the dominant risk to habitats in nearshore waters, and a range of toxicants. The program was sampled monthly and ran for approximately 12 years providing a good baseline of water chemistry information and showed some gross indicators of some of the processes that were occurring in the nearshore waters. In many locations however, observations of the habitats under the water suggested that the water chemistry was not showing us a complete

picture, but was really showing us what was left over after all of the biological components had taken up what they needed.

In 2009 the program was reviewed and improved, including new and innovative methods for monitoring not only water chemistry but the nearshore habitats themselves. The revised program provides a rapid assessment of the cumulative effect of numerous diffuse and point source inputs into our nearshore coastal waters. The multiple lines of evidence approach provides an early warning system aimed at highlighting areas that are impacted, or are under stress from too much nutrients or poor light climate.

It should be stressed that this program is designed to assess the condition of nearshore habitats with a particular focus on seagrass dominated systems and also considers rocky reefs. The program is not designed to determine the suitability or quality of water for aquaculture, food safety and fish health, as this is undertaken in the SASQAP program, which is specifically designed around the relevant aims and threats to those users.

The State has been broken down into 5 main regions, with one region sampled each year. Each region is broken down into smaller "biounits" which have a coastline of around 50-100 km. Since 2010, 266 sites have been monitored, within 18 biounits from 4 regions (South east undertaken in 2015). This constitutes over 25 kilometres of seabed assessed for its habitat condition and 5000 litres



Figure 1 (Left) Dense and continuous *Posidonia* sp. seagrass in very good condition, with very little epiphytic algae growing on leaves (Port Broughton). (Right) Dense and continuous *Posidonia* sp. seagrass heavily under stress due to dense epiphytic algae growing on the leaves (Western Cove KI). If the condition of the habitat on the right is prolonged, it is possible the seagrass will be lost.

of water collected. The condition of habitats have ranged from Very Good through to Poor with areas highlighted as being potentially impacted and under stress from too much nutrients. This information can then be used by many agencies or industries to better inform environmental management procedures, compliance or longer term planning for large scale upgrades of facilities or increased investment in a focused area. It has also significantly added to our understanding of some of the ecological processes occurring enabling better long term decision making for a healthier ecosystem.

Findings

While the program does not assess the quality of waters for aquaculture, there are extensive areas used by aquaculture that are assessed which can provide an overall assessment of the quality of the environment in aquaculture areas. Areas reported to date include:

Franklin Harbour biounit (within lower Spencer Gulf) spanning from Arno Bay through to Lucky Bay including Franklin Harbour was sampled in 2010. The results showed that the area was in Good condition, however there are parts of biounit under stress due to the excess

of nutrients indicated by the presence of snot weed (*Hinckia sordida*) and sea lettuce (*Ulva* sp.).

Oyster growing regions on Yorke Peninsula were reported in the Orontes biounit (within Gulf St Vincent) which were sampling in 2011. The biounit was considered to be in Very Good condition but it is likely that at many locations throughout the biounit the seagrasses are under considerable stress due to excess nutrients, particularly Pine Point, Stansbury and Coobowie and may result in degradation if this stress continues.

Nepean Bay (within Gulf St Vincent) and sampled in 2011 was found to be in Good condition with many areas of dense and intact seagrass, but again the seagrass was covered in a dense covering of epiphytic algae suggesting that they were under stress from too much nutrients, which could result in habitat degradation.

Port Broughton was sampled as a part of the Yonga biounit (within the northern Spencer Gulf) in 2012. This biounit is very large spanning from Point Riley near Wallaroo north to Port Germain and then west to Point Lowly, south to Lucky Bay. The report card details the results for the whole Yonga biounit which was found to be in Good condition but again the whole biounit was affected by too much

nutrients. If this stress is prolonged there may be habitat loss.

In 2014 the EPA sampled the West Coast including the Eyre and Murat bioregions. This included the growing areas of Coffin Bay, Streaky and Smoky Bays and Denial Bay. Data analysis and reporting is currently underway and reports will be released for the biounits in these areas very shortly.

Detailed rationale and methods used in the EPA monitoring evaluation and reporting program are available here:

http://www.epa.sa.gov.au/data_and_publications/water_quality_monitoring/aquatic_ecosystem_monitoring_evaluation_and_reporting

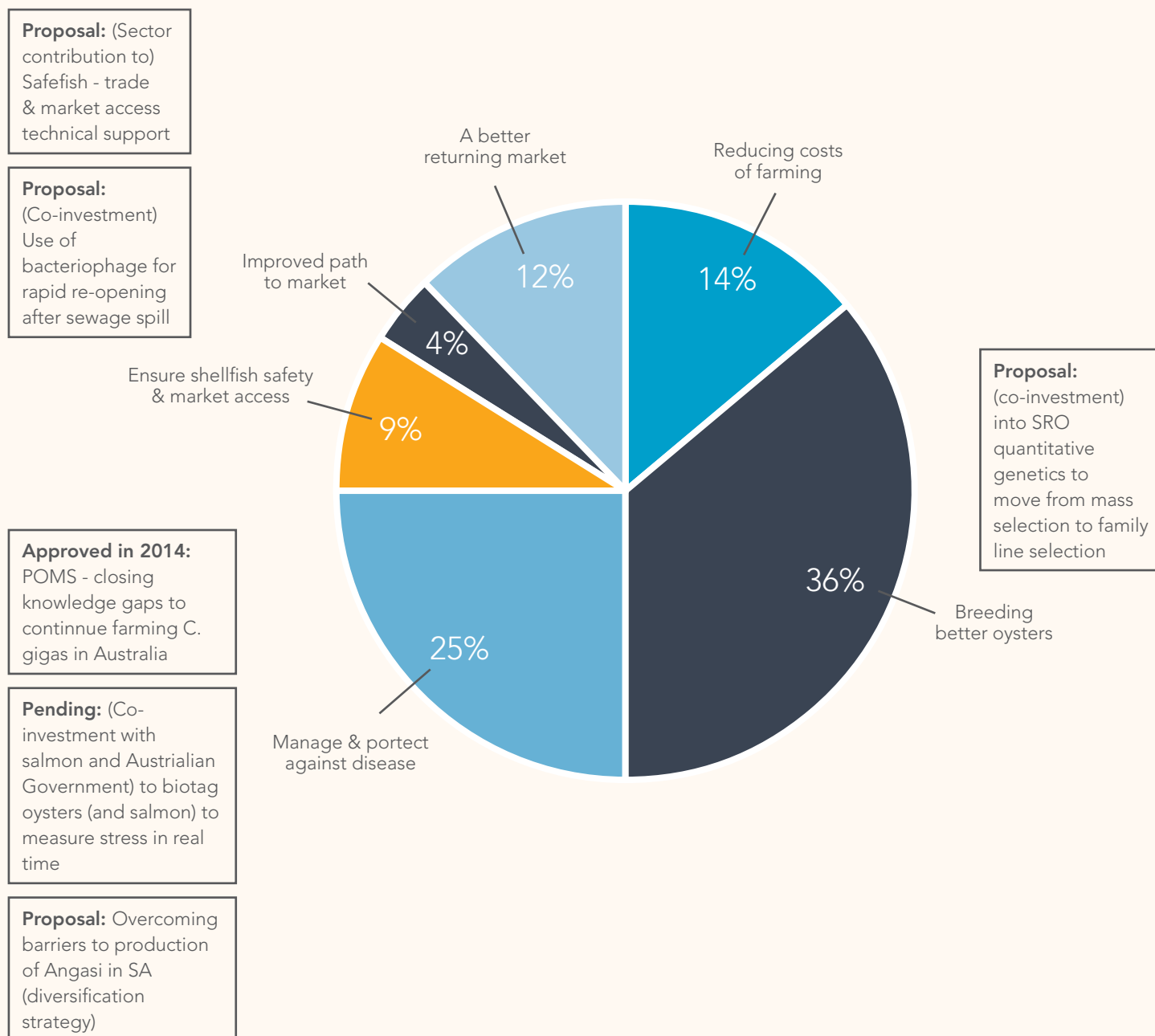
If you have any queries about the program or results please contact Sam Gaylard on 82042068 or sam.gaylard@epa.sa.gov.au

Update – Oysters Australia R&D

Oysters Australia met on 20-21 April and prioritised a number of proposals on the table.

There are a number of questions of the proposals that still needing working out but Oysters Australia has shortlisted proposals to work with. The shortlisted proposals are shown below alongside NSW/Qld, SA and Tas' combined spending priorities for 2014-2019.

Investment benefit from 2007 to 2014 was estimated at 35% SRO, 65% Pacific. The latest proposals tally at 43% benefit to SRO, 57% PO bringing the cumulative benefit to 36% SRO, 64% PO. Industry value is approximately 36% SRO, 64% PO to 2014 with a drop expected for PO value due to heavy mortality in SA.





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Industry congratulated for vigilance

PIRSA has thanked growers for their continued vigilance in reporting oyster mortalities.

PIRSA's primary objective for investigating unusually high mortalities is to rule out notifiable and infectious disease, which pose a threat to sustainability of South Australia's oyster industry.

During 2014, PIRSA investigated seven oyster mortalities that were reported by farmers between February and June. Of those reports, four investigations warranted samples to be submitted to the laboratory for testing.

Of the 183 samples tested by the Australian Animal Health Laboratories using PCR (a DNA based test), all were cleared of the virus that causes Pacific Oyster Mortality Syndrome (POMS). Obvious signs of other infectious disease were also ruled out using another laboratory test called histopathology.

PIRSA Aquatic Animal Health Officer, Dr Shane Roberts, said the passive surveillance approach of reporting and investigating mortalities was a good early detection strategy.

"This strategy provides ongoing evidence of South Australia's disease-free status with regard to POMS," Shane said.

"It also reinforces the need for continued vigilance in the prevention and preparedness for POMS, while negative laboratory results also provide continued confidence for trade and market access opportunities."

While investigations during 2014 successfully ruled out notifiable and infectious disease, likely causes were attributed to environmental conditions, husbandry and / or in some cases South Australian Mortality Syndrome (SAMS). Infectious disease has previously been ruled out as a primary cause of SAMS, however, PIRSA have been storing oyster samples from SAMS cases to contribute to any future co-ordinated research efforts.

Oyster growers are reminded of the following steps if they experience unusually high and unexplained mortalities (e.g. greater than 10% mortality at grading):

1. Collect at least 30 live oysters from the mortality site (e.g. same baskets / line)
2. If you have immediate access to another batch of oysters (e.g. at the grader or another vessel is out tending to another site) where mortalities are not occurring, collect another 30 samples.
3. Determine the percentage of oysters that have died (e.g. 10%, 15%, 30% etc)

4. Separate samples, bag, label and place samples on ice ready for courier to lab (within 24 hours)
5. Notify PIRSA immediately on the 24 hour Fishwatch hotline on 1800 065 522 or contact PIRSA's aquatic animal health officer (Shane Roberts) on 8226 3975 or 0402 049 286
6. Report the event to your Bay representative (or SAOGA)
7. Decontaminate personnel and equipment with the use of a disinfectant (e.g. chlorine-based) within EPA guidelines.

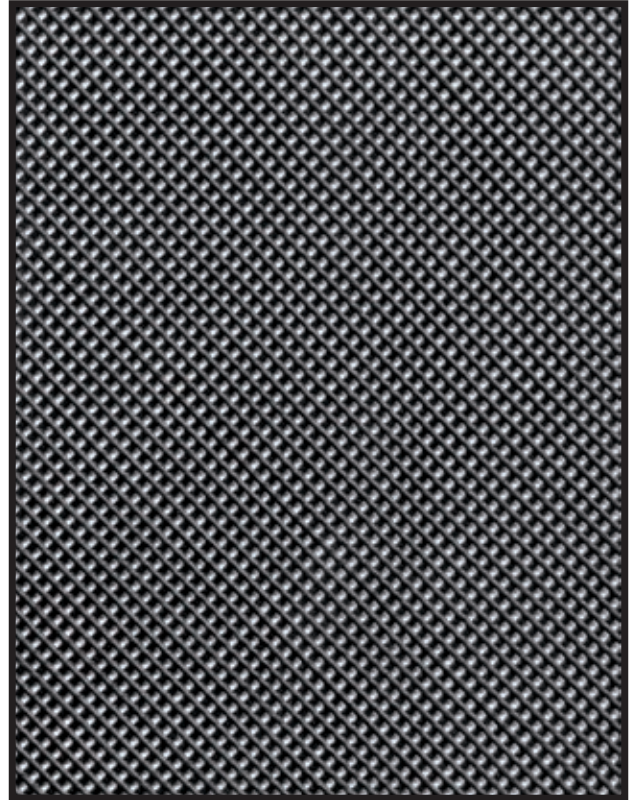
Note, PIRSA will assist with courier, laboratory testing and control strategies to minimise the impact on your farm and industry as a whole.

For further information regarding POMS or other disease concerns, contact PIRSA Aquatic Animal Health Officer, Dr Shane Roberts on 8226 3975 or shane.roberts@sa.gov.au

OYSTER MESH



3.4mm Diamond shape



**1.5mm Diamond shape
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Material: HDPE UV Stabilized.

Colour: Black.

Roll Width: 1000mm Roll Length: 50 metres

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Roll length can be varied upon application

Diamond shape 1.5mm to 25mm



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Environmental & size-dependent trace metal accumulation in Pacific oysters, *Crassostrea gigas*

Author Shaun Henderson who graduated with First Class Honours in Aquaculture would like to thank SAORC and growers Gary Zippel, Paul Dee, Steve Bowley and Lynton Pym for input and support for the research project.

The aim of the project was to raise a question that the South Australian oyster industry would be interested in, that also when applied to the broader field of aquaculture and marine science, has some significance. It was highlighted that micronutrient requirements in South Australian oysters was an area that had received little research, trace metals were chosen to be the focus of the study between two growing regions, Smoky Bay and Stansbury. The sampling involved testing of water and oyster tissue between the two regions and over a range of oyster sizes, and if there was any physiological effect of selected metals on a subsample of oysters. Over 700 oysters were sampled ranging from 6 months of age up to 3 years, and this was compared to 30 water samples across the two bays. Concentrations of 11 trace metals, shown to have both positive and negative effects on oyster health, were analysed in total and soluble forms.

Although only a snapshot, as expected, the results showed that there was a higher total level of certain trace metals in the water on the Yorke Peninsula. Interestingly, the opposite was viewed at Smoky bay for soluble levels of the same metals, most likely the result of a range of differing factors between the two bays. The oyster tissue concentration of essential metals showed varying relationships with size, with generally increasing relationships with size in areas where there seemed to be a higher level of available essential metals. Three important essential metals, Zinc, Copper and Manganese, showed more uptake over time in Stansbury oysters suggesting that more research into why this occurring is needed. A sample of oysters were further tested for their immune strength, with oysters that were exposed to a high zinc level having a better ability to combat stress. This further added to the requirement of more research into these micronutrient with preliminary results showing that oysters with higher essential metal levels may be healthier or more hardy.

These results provide a good starting point to design further studies into micronutrient research in South Australian oysters and get a better idea of the drivers of oyster condition between growing regions aside from food availability. Of course, these results also showed the low metal loading in the oyster tissues of this state in relation to food safety standards, as well as highlighting the nutritional benefit of oysters to people housing vitamins and mineral key to a healthy diet.

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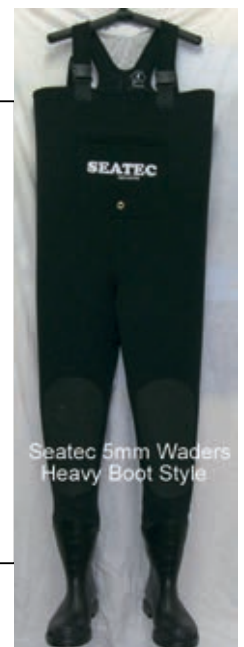
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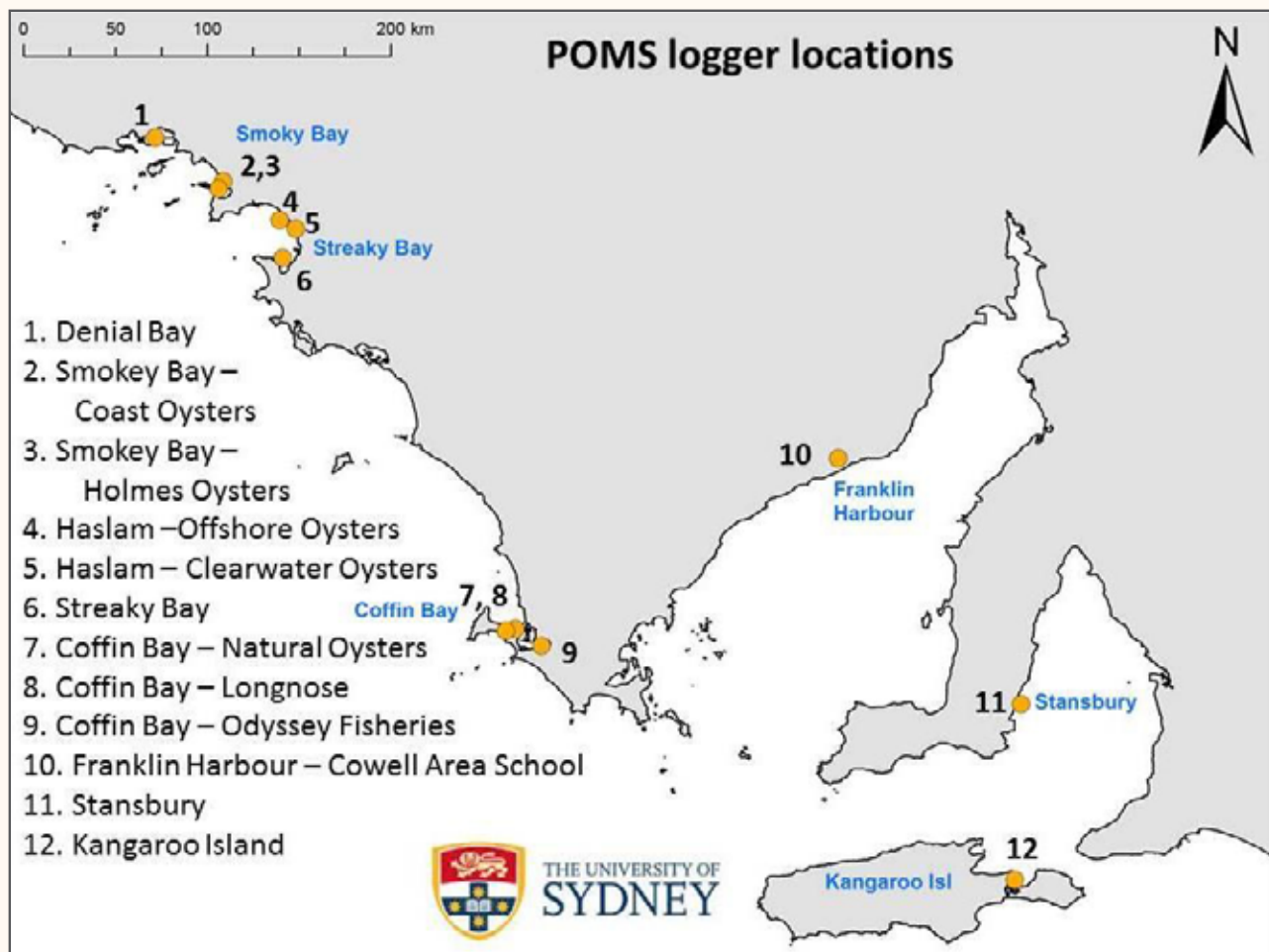
Last October researchers from the University of Sydney working on Pacific Oyster Mortality Syndrome started the first interstate water temperature monitoring program in Australia.

A total of 32 Pacific oyster growing areas are being monitored for near-surface water temperature across SA, TAS and NSW. Water temperature is recorded using little loggers that oyster growers have attached to floating infrastructure in certain leases. Temperature is recorded hourly. The program would not be possible without the assistance of the growers who enthusiastically volunteered to be involved. Loggers are sent back and forward to the researchers at the University of Sydney via Express mail envelopes. So far we have lost only 3

loggers that went floating away! The data collected through this program are assisting researchers to gather baseline information on water temperatures at every growing area where Pacifics are cultivated in Australia. POMS researchers are currently analysing vast amounts of environmental data from NSW to characterise environmental conditions during POMS outbreaks. This information is critical for Pacific growers as it will assist them with the management and long-term planning of their business around POMS. The research team is delighted

that two schools are participating in the research: Cowell Area School SA and Circular Head Christian School at Smithton TAS. This is providing a rich context for science educators in these communities.

Water temperature plots for each of the 32 locations in this monitoring program can be found on our website/blog <http://www.oysterhealthsydney.org>. Any questions? Contact us: richard.whittington@sydney.edu.au or arubio@hornsby.nsw.gov.au



A Letter to ASI Shareholders

Dear ASI Shareholders

First Meeting of the New ASI Pty Ltd Board

As you are aware, the new Board of ASI Ltd is now in operation and our first meeting was held by teleconference on Monday 18 May.

I am very keen to keep an open line of communication between the Shareholders and the Board and as part of that process will endeavour to write to you after each meeting to inform you and your members of the issues being dealt with by the Board.

The first Board meeting was primarily concerned with some important procedural matters, as outlined below.

Insurance

The company has some insurance policies in place and further advice will be sought re the appropriate insurance that needs to be in place for the company and its officers.

Finances

Directors were provided with financial statements for the 2014-15 year, up to 30 April and were able to satisfy themselves that the company has sufficient funds to conduct its business. This is entirely dependent on the ongoing collection of levies. Levy revenue to date is \$436,882, however, there is \$77,509 outstanding by more than 30 days. The Board will determine how to approach debtors at its next meeting and any suggested approaches would be welcome.

Directors Remuneration

The Board discussed this matter in some detail, noting that Directors remuneration has previously been considered by the shareholders and was specified in the public advertisements for the Board appointments. The Board also recognised that the Company Constitution states that Directors' remuneration must be set by a

general meeting of the company. Fortunately, two Directors, namely Ian Duthie and Steve Bowley, are representatives of the ASI shareholders and both carry proxies for use on behalf of their organisations at general meetings of ASI. Consequently, an EGM was convened at short notice to approve the proposed remuneration arrangements. The full minutes of the EGM are attached for the information of your members.

In summary, the arrangements are as follows:

- A maximum of \$60,000 for the annual aggregate remuneration for all Directors was set for a period of three years.
- The proportion of the annual aggregate to be used in the first year would be limited to \$48,000, being \$16,000 for the Chairman and \$8,000 for Directors.
- In line with the Superannuation Guarantee Act, superannuation will be paid in addition to the above amounts.

Changes to the Company Constitution

Two matters that need to be addressed in the constitution include the term of Directors and the process for setting their remuneration in future. Additional matters might include wind-up

provisions and the role of committees. Further details will be provided to Shareholders for consideration after the next Board meeting.

Technical Reference Committee

This will be a very important source of two way communication between the company, hatcheries and growers, so the Board was keen to have the group meet as soon as possible. A meeting has been proposed for 16 June and you will have received correspondence from the company's General Manager, Matt

Cunningham on the location, agenda and attendees for the meeting. Dr Mair was asked by the Board to Chair the committee.

Future Meetings and Agenda Issues

The Board will meet in person for the first time the day after the Technical Reference Committee meeting. This will give new Directors a chance to attend the committee meeting and gain a good insight into the company's operations.

There are many issues to be considered by the Board at future meetings, some of which are:

- Operational improvements
- Updated Annual Operational Plan and KPIs
- Board Charter
- Constitution changes
- Letter of Expectations between the Board and Shareholders
- Directors' position descriptions
- Finance, audit and AGM arrangements
- Company staffing
- Review requirements under the ACCC Levy Determination
- Communication Plan
- Various policies

If there are issues that you and your members believe the Board should be considering I would be very pleased to discuss them with you. Also, I would be pleased if you could share this letter with your members.

Yours sincerely,

Dr Len Stephens Chairman

Bay Representative Reports

Haslam

Haslam has had a good period with good growth and condition. Mortalities have been very low, a pleasant change.

Lewis Rayner, Northbank Oysters has his new Oceantech boat in the water while Angel Oysters nearly has a shed to work in. All in all a good season so far.

Greg Window

Steaky Bay

Streaky Bay continues to enjoy a relatively good season this year with good growth, few mortalities and steady sales. Local oyster growers should have little to complain about other than the cold and possibly the lack of substantial rain. This has been the driest twelve months I can ever remember and it is possibly a record.

Birds seem to be becoming an issue for the growers within Blancheport, with a series of zone closures. The increased bird activity, in particular the European Cormorant, has become the prime suspect, but we are looking at other avenues to be sure.

The seminar in Stansbury is looming, we hope to see you all there.

Regards

Reg Brown

Coffin Bay

Coffin Bay after a blustery May is having a relatively mild winter, very cold but calm. Oyster growth is very good this year, with the added bonus of little mortality. Oyster condition is better this season than the two previous years, we are all expecting a busy spring.

We have 4 new growers into the bay this past 12 months, very little water has changed hands over the past 10 years down here so it's pleasing to see some new growers entering the industry. We wish them all the best and look forward to meeting them soon. The previous owners

are either retiring or moving on to new endeavours, we'd like to thank them for their contribution over the past years.

I'd like to ask all growers to support our local hatcheries, both Adam and Rodney are producing good seed but need support from industry, our success is due to being able to purchase seed, so please give consideration to ordering some local spat.

Bill Stenson

Cowell

All in all it has been a pretty good first half of the year for growers in Cowell. Conditioning and growth were good early on in the season and market demand seemed to follow suit. The lead into winter has been gradual this year with a lot of wind in April and May. I believe these factors are the reason we have seen minimal winter mortality (SAMS) this year. The animals have had the opportunity to slow down gradually rather than the rapid drop in temperature we saw last year. Growth and conditioning have slowed down from the beginning of June. Many growers taking the opportunity to get away for a well earned break while the pressure is off a little. We had a coordinated bay clean up on the 18th of July, covering a large part of the Harbour. A number of baskets were recovered, and unfortunately a trailer and ute load of domestic rubbish was collected from above the high water mark.

Ettian Posthumus has taken over the management of the oyster lease owned by the school. He has a good energy and a practical mind. He will coordinate well the mix of education and the practical running of the farm. We wish him well and offer him whatever support he needs.

Looking forward to a good turnout of growers in Stansbury for the seminar this year. It will be Steve Bowley's final meeting as chair of SAORC. He has done an outstanding job in this role. He has always been thoughtful and considerate

of everyone's opinions. Congratulations Steve for the way you have conducted yourself and led SAORC through some challenging times.

Carl Jaeschke

Denial Bay

The season has been kind to us at Denial Bay so far this year with good growth and conditioning with no alarming occurrences of high levels of unexplained mortalities. This improved result may be due to altered husbandry methods or favourable environmental conditions or both? There does however seem to be a generally observed consensus that our worst SAMS years have coincided with La Niña events and as we are currently (according to BOM) under the influence of an El Niño event and we are seeing minimal losses this observation does seem to have some credence. Yet another piece of the puzzle to consider with SAMS research.

PIRSA Aquaculture is coming to the end of establishing the Ceduna Aquaculture Zone. The draft policy which has been a couple of years in the making not only aims to consolidate existing industry but also shows areas of proposed expansion to both intertidal and subtidal areas. PIRSA is very much aware of the huge benefits that Aquaculture brings to many regional areas (and the government coffers) and as such are looking long term into the future with the zoning process to accommodate a range of different species.

This draft policy has been released for public consultation via PIRSA's website and also via public meetings held at Ceduna. These robust meetings have been well attended by various stakeholders including but not limited to recreational / commercial fisherman, local council and oyster growers with varying levels of concern.

The bay clean ups have been well attended by the growers in the bay getting on top of the back log of industry and fishing debris. The results of this exercise does highlight the need to

routinely check the coast line and remain vigilant with the inspection of our leases especially after storm events.

Looking forward to catching up at Stansbury.

Gordon Gardner

Smoky Bay

Hello all, as you may have heard I am back in the job of Bay Rep for Smoky Bay. James worked extremely hard during some of our recent challenges and got us some excellent results, the extra time

spent on these took many hours out of his many other business interests so it was decided it was my turn to shoulder the load. It is great to see industry moving forward again with many alternatives being approved by PIRSA. Please don't stop evolving though as while this was a huge issue for our industry, it has been great to see growers back in the role of innovators and inventors and finding ways to make our processes more time efficient and streamlined.

Smoky has had a great start to the season with many growers seeing a very early

start to the selling season and super good growth across the bay. Condition has eased slightly through May / June but some wild weather has excited things again and we look set to keep things rolling into the back half of the season.

Hope to see you all at the seminar, and great to be back in the job.

Judd Evans



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