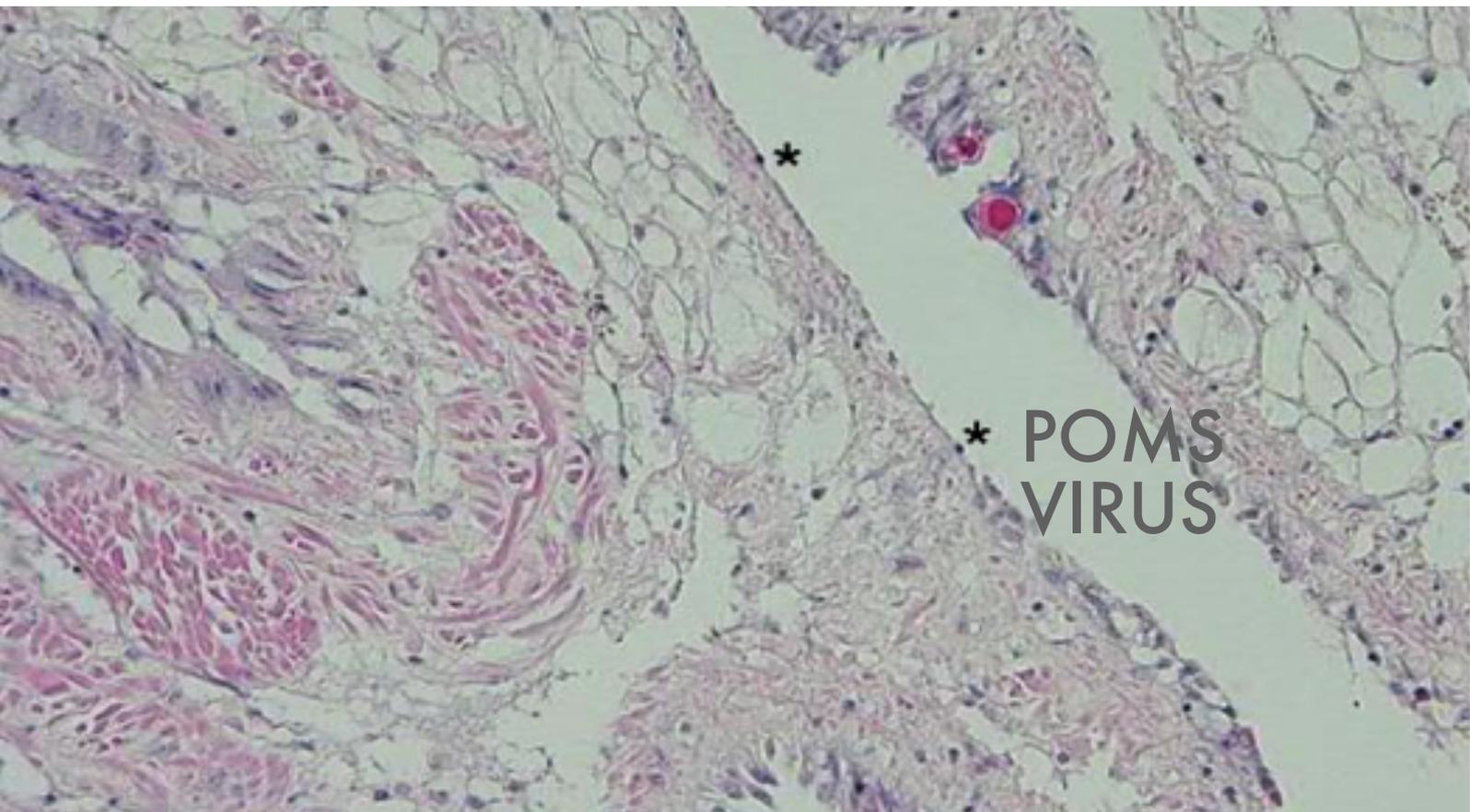




LEVY TO SUPPORT APPLIED BREEDING FOR POMS RESISTANCE

“The ultimate solution to POMS is applied breeding” with no other effective strategy being identified globally, applied breeding is showing promising results, and has shown to be effective for other oyster industries impacted by disease.

“ASI will deliver this ultimate solution to the threat of POMS”



“ASI is owned by industry to service the needs of industry for applied breeding”

“The spat/POMS levy will support enhanced efforts in applied breeding for POMS resistance, and deliver a ‘professional’ governance model with a remunerated skills based board”

“The hatcheries expected this applied breeding to cost \$5/1,000 spat, the ASI business plan is delivering this for \$2.80/1,000 spat, with a clear focus on getting results while minimising the costs to growers”

“If each hatchery was to pursue applied breeding it would cost industry more overall, and disadvantage smaller hatcheries (and their customers) that don’t have the resources to pursue applied breeding”

“The spat/POMS levy is \$2.80/1,000 Pacific Oyster spat. This is 0.28 cents/oyster or 3.4 cents/dozen oysters. That’s ONLY 0.57% of a farm gate price of buffet oysters that sell for \$6.30. If your farm only achieves 80% recovery to sale, it still only represents 4.2 cents/dozen or 0.67%. LESS THAN 1% of farm gate sales price!”

“No viable solution exists to POMS, expect 80-100% mortality if it strikes. That’s a \$504,000 to \$630,000 reduction in revenue for a 100,000 dozen farm (selling those \$6.30 buffets), the opportunity to reduce this threat through applied breeding exists, and the cost in this example would be \$3,600 to \$4,500 (@80% recovery) – Pretty sensible investment against the down side in revenue losses, not to mention capital values, livelihoods etc.) Pacific oysters in Broken Bay/Hawkesbury River has gone from \$5 million/yr to less than \$100,000 /yr”

“ASI is owned by industry through TORC, SAORC/SAOGA, industry will be able to hold to account the progress of ASI against its annual targets”

“Industry/shareholder review of ASI and the levy collection continuation (Go On/No Go) assessing the progress and outcomes of ASI’s breeding progress and current benefits and prospects for industry.

- Concluded by start of year 4, and year 7.”



Peter Kosmeyer
General Manager
Southern Cross Marine
Culture
and managing the current
purchases of over 15 million
Pacific Oyster seed per year
for farming in Tasmania, South
Australia and NSW

“I’m not against paying the \$2.80/1,000 seed levy as the alternatives aren’t available and the consequences of not having something in place are too horrible to think about.

We know ASI are looking at survival with a view that includes POMS resistance while keeping the advances made in survival, growth commonality, meat to shell, shell shape and shell colour. Achieving POMS resistance may be vitally important to Industry and the hatcheries one day. Ditto SAMS and PSMS and whatever is next and what’s after that.

Without ASI we could of course adopt the French and New Zealand model of supply to the Farmers - buy 3 or 4 times what they need and let POMS kill the rest. I’m just a little unsure that the hatcheries would only charge 25% of the current prices for supply.

Maybe \$2.80/1,000 worth of insurance/investment in ASI (an industry based organisation – owned by us) would be cheaper”

Executive Overview of ASI

Business Plan

The Australian Pacific Oyster industry is facing unprecedented threats from disease that cause significant mortality to stock and risks the financial sustainability of the whole industry. Other industries in France, Ireland, New Zealand and closer to home in estuaries in New South Wales (Georges River, Botany Bay, Port Jackson, Parramatta River and the Hawkesbury River) have been impacted significantly by the Pacific Oyster Mortality Syndrome (POMS). Survival rates have been as low as 1% through to 40% of stock affected by POMS. Many businesses have left these industries not able to survive the dramatic impact this has on their financial capacity to remain in operation.

Breeding for resistance has been identified by all those industries impacted as the only practical solution to remaining viable. Australian Seafood Industries Pty Ltd (ASI) is Australia's best option for dealing with this threat, and the future risks that disease and a changing climate present. Applied breeding also presents a significant opportunity for the industry, just as it has in agriculture with plant and animal breeding programs offering gains that improved the economical sustainability of these industries.

It was bringing this applied breeding to the Australian Pacific Oyster industry, seeking these gains in product, for growth, survival, uniformity and other characteristics that brought about the start of ASI, following on from a University of Tasmania, FRDC, CSIRO and South Australian and Tasmanian joint project. The model for this com-

mercialization was difficult though, and ASI has continued to rely largely on securing on-going research money to continue its development of family lines for applied breeding.

Like all pioneers the project has run down some blind allies, an example is the initial search for growth was too successful, the oysters grew more rapidly than growers could manage, and losing other important characteristics. These lessons and the very lean budgets have made ASI focus very strongly on the core of its business that is applied breeding, but like any successful business, it takes more than this to succeed. The fundamentals and science is held up as being the model for other oyster breeding programs around the world, in the USA, New Zealand and France. However, more is needed to bring stability and sustainability to this industry owned business.

ASI has been operating on the good will of dedicated volunteers on its board, a board that likes its budget has been very small and focused on the applied breeding. It's been recognised for some time that this model of governance needed to change, that a larger board with specific skills was needed to address what is a very challenging technical and business environment. This also means taking it from relying on the good will of volunteers and providing remuneration for this work by professionals with specific skills. This was the conclusion of an international review of the program by Dr Morten Rye a world renowned geneticists that brought a successful breeding program to the Norwegian salmon industry.

This business plan and its funding model of an industry levy is the beginning of taking ASI forward. Any business is a living entity, and so are

the plans for its future. This plan as presented is the beginning of the process to transition ASI, it isn't the final word. It's a conservative picture of the future operations, and has deliberately left out some of the opportunities for further refinement, as this needs to be the role of the expanded skills based board of ASI, following a full strategic review by its shareholders and other stakeholders as described in the 'Seven Point Plan'.

The resulting strategic plan will flesh out the opportunities and industries view on these opportunities and provide guidance to which direction it wants ASI to proceed. As an example the current research and development tax incentives provide an significant opportunity for ASI, this could allow a buffer to be built to counter fluctuations in levy collections, and allow for additional special projects or in fact a reduction in the levy charged. This is also an example of the conservative position in this business plan, we all know that government policies and programs change frequently, to have included this as a core of the plan was seen as too big a risk. The opportunities to write into the plan research grants that maybe successfully received was also avoided, even though ASI has continued to operate essentially through this mechanism to date. The point here is that there is large potential uplift in this plan for the new expanded skills based board to consider, and deliver immediate savings or other opportunity back to its shareholders – industry.

The recommended structure for this new extended skills based board, which underpins the future governance and operations of ASI, is for an experienced and well-connected independent chairperson that can seek out opportunities for the business and ensure that the mechanisms

and support is in place for these to be well executed. Two additional skills based board members, with specific technical or business skills will be appointed, rounding this up its also suggested that two further board places are drawn from the ranks of industry, from its shareholder representatives at SAOGA/SAORC and TORC. This change to the governance and expansion of the board to have paid professionals will ensure that policies are in place to ensure strong communication with ASI's shareholders, provide review and direction to ensure it delivers outcomes that industry are seeking.

This new extended skills based board is what will underpin the future of ASI, it will build upon this business plan, develop a thorough strategic plan through consultation with industry (shareholders), and be responsible that the milestones and achievement planned are achieved. The Australian Pacific Oyster Industry is facing a very serious risk from POMS, we are well placed to respond to this threat through applied breeding, the only credible industry response. We as an industry need this challenge to be addressed and this business plan for ASI is the start of this process to move forward.

For further information check out the website with full business plan and current updates

www.asioysters.com.au

*or give **Matt Cunningham** the General Manager of ASI a call: 0417 965 405*

QUESTIONS & ANSWERS

Q: Why do we need ASI for this, why can't the hatcheries do it?

A: The commercial hatcheries and ASI use a different breeding approach.

- Hatcheries use mass selection which means that pedigree is practically untraceable. They would be unable to track performance based on pedigree and therefore unable to make any gains in POMS resistance

- ASI uses a pair mating breeding design where all pedigree is known. We can expose families to POMS in NSW and then breed from the best performers relatives in Tasmania. This approach is measurable, reproducible and most importantly can achieve genetic gains for POMS resistance.

Q: Is ASI technically equipped to do the job?

A: Yes. The ASI breeding approach may be relatively new for the Oyster industry but is the norm and has been for a long time for other industries such as cattle, poultry, salmon etc. Whilst ASI is a small company it draws strength through its well established collaborative partnerships with CSIRO, NSW DPI, EMAI, IMAS etc

ASI has been reviewed by Dr Morten Rye from Norwegian salmon breeding company Aqva-forsk. This pioneering aquaculture breeding company has underpinned the growth of the Norwegian salmon industry into one worth \$14 billion per annum.

Of ASI Rye says "Australian Seafood Industry (ASI) now operates a technically well-designed and effective family based selective breeding program for Pacific Oyster, expected to produce significant genetic improvements for traits of key

importance to the Pacific Oysters sector. The program structure is flexible and can also facilitate effective selection for improved resistance to diseases (e.g. POMS)."

Q: Why can't we just keep going along like we have been with ASI using R&D grants to stay alive.

A: Unfortunately we have worn out the friendship in this area. ASI has been very successful in getting R&D grants which have to some extent helped us to stay afloat. The fact is that many of the tasks required to produce a POMS resistant oyster have gone through the R&D phase of development and are as such viewed by R&D providers as core business functions. Tasks such as production of family lines for testing, the actual field and lab based tests, genetic analysis of results etc are no longer able to attract matching federal funds. Unfortunately this means we have to go this one alone from here.

Q: We have heard the figure of \$2.00 for the levy, where did \$2.80 come from?

A: The \$2.00 figure came from very early discussions with hatcheries where it was proposed by ASI that hatcheries form a direct relationship with ASI where we would have essentially become a service provider. This proposal was rejected by the 2 largest hatcheries and was therefore unviable.

The hatcheries suggested:

- Breeding for POMS resistance should be funded by growers

- \$2.00 was insufficient and an estimate of \$5.00 per thousand was suggested

- ASI needed to strengthen governance to maintain the support of hatcheries

ASI then set about writing a fully costed business plan based on achieving 70% resistance in 5 years. The revised levy quantum was calculated to be \$2.80.

Q: We heard that the hatcheries were going to collect the levy?

A: No. The hatcheries have stated that they will not collect the levy on ASI's behalf. At this point it is most likely that a separate invoice will be issued by the hatcheries for the levy amount. The need for an independent 'bagman' for confidentiality reasons is still being discussed.

Q: How will progress be communicated back to growers?

A: We fully understand and accept that this level of investment from industry requires progress to be extremely well communicated to all. This will occur at several levels:

- Research and business progress will regularly communicated to shareholders
- Research progress will be regularly communicated to Oysters Australia R&D committee
- Research progress will be communicated to growers at State conferences, via regular ASI newsletters and via the new ASI website, we also want to hear from you as to how you want communication in the future
- An industry reference group will also be established, which will include hatcheries, to ensure that the pathway to commercialisation for the outcomes of the research is clear.

Most importantly the new business model will allow a much greater emphasis on face to face

farm visits. We expect this to be the most valuable of all forms of communication.

Q: Why has a 10 year levy period been suggested when you are saying it will only take 5? If ASI isn't getting the job done are we stuck in this thing?

A: The fact is that the process to get a levy up is bloody hard work and we don't want to go through that process twice if we don't have to. The alternative was to build in review points over the course of the levy period and this was the option that was taken. The first of these review points comes at 3 years and the second at 7 years. The review will be undertaken by ASI shareholders and will serve as go/no go points. If it is felt that ASI is not hitting KPI's then the levy can be halted. ASI is very confident that even if POMS is put to one side the improvements in other commercial traits in selectively bred lines over the next few years will make our role in industry unquestionable. A good way to think of it is that much of the work that has occurred over previous years is to get the program on a footing, in terms of program design and size, to achieve gains. This has happened and now is time to cash in.

Q: I have heard that the levy maximum is \$2.80 per thousand and it may be less than this.

A: Yes, but in the short term (1-2 years) you should not expect that it will be significantly less than this. ASI directors will absolutely be exploring ways in which the desired outcomes can be achieved but this will take time and there is no guarantee. Whilst the mechanics of the levy allow sufficient flexibility to change the quantum, this will not be done to the detriment of achieving the outcomes that industry has demanded.

