Women’s Industry Seafood Network Community

FRDC Sponsored Scholarship - Anni Conn

Good evening Ladies and Gentlemen,

My name is Anni Conn and I am honoured to have been invited here this evening to the WINSC AGM dinner, generously sponsored by Sydney Fish Market, to speak to you about my recent study tour overseas.

I’ll start by giving you a brief overview of my background and how I came to undertake the WINSC scholarship.

I’ve been in the commercial side of the Australian Aquaculture industry for ten years now, starting out in trout farming and moving to prawn farming in 2007. During that time I have worked mostly in the post harvest and business administration sectors and am currently the Business Manager for Seafarm which is one of Australia’s leading prawn farming companies.

In January this year I put in an application for the FRDC sponsored WINSC professional development scholarship. I had just finished a very busy Christmas season at Seafarm and was contemplating the year ahead when I received the message from Anne Whalley telling me that I had been successful and had been awarded the scholarship. I was of course completely bowled over and couldn’t believe my luck at the opportunity to self plan and undertake a personalised professional development study tour in my field of interest – which is post–harvest operations. That same week I also found out that I had been accepted onto the National Seafood Industry Leadership Program for 2009. That was 10 months ago and this evening really marks the culmination of a tremendous year for me that has been full of new experiences, challenges, self development and learning, and the forming of new and productive relationships with others across our industry, both within Australia and overseas. My experience is a reflection of the fantastic professional development initiative run by the FRDC providing funding for skilling and learning opportunities to people throughout the Australian seafood industry and I can only encourage others to take advantage of the FRDC people development program wherever and whenever possible.

My talk this evening will consist of the four following parts:

Tour Objectives

Sites Visited

Summary of Findings

Recommendations

Tour Objectives

My overall objective was to get a bigger picture view of the global prawn and shrimp industry with respect to post harvest operations. (By the way I will refer to the cold water variety as shrimp and the warm water variety as prawns). I undertook my study from a prawn farming industry perspective, however much of what I learnt is relevant to the wild caught prawn industry also.

The rationale behind my study was this. In Australia, we are generally very good at producing a high quality HOSO prawn product, whether wild caught or farmed. High quality, however, is not enough any more. The domestic market is very competitive and Australian producers are struggling to maintain prices against lower priced imports. Although it hurts me to say this, it is clear that there is a strong market for imported prawn products and that this demand is only likely to grow with time. We still rely heavily on the high quality aspect of our HOSO products to set our prawns apart from these lower priced imported products but we cannot continue to rely on this point of difference to sell our prawns.

By moving to greater diversify within our product ranges and increased processing and packaging efficiencies, we will be able to open doors to new markets both within Australia and overseas and will then be able to decrease our reliance on the consumer perception that our domestic prawns are the "better prawns". For the Australian prawn industry to continue to grow sustainably and to be able to compete in a global market, we as producers will not only need to aim for continuous improvement in finished product quality and strive to employ best practice in the processing and delivery of our products but also focus on increased efficiencies, producing products that meet consumer demand, reducing energy / fuel costs, and reducing labour costs.

To help to do this we should take lessons from areas of the world where some of these issues have already been tackled and where shrimp and prawn production volumes and market size greatly exceed ours.

My aim for the study therefore was to head away from Australia and broadly investigate the following:-

Market trends and consumer preferences

Processing and packaging technology and efficiencies

Sites Visited

I researched the largest prawn / shrimp processors and distributors worldwide. I also spoke with many people throughout the seafood industry both here in Australia and overseas and took on board their advice on where and whom they thought would be worthwhile visiting. The hardest thing about the whole experience was deciding upon an itinerary that could fit into four weeks – I could have gone for a whole year!

I decided to target Northern Europe because of the proximity of several large processing plants, the high cost of living and labour and the significant volumes of farmed prawns that are imported into this part of the world.

My first site visit was to The Seafood Company's Cromer site in Norfolk, UK. The Seafood Company supplies a million seafood meals a day to the major UK chilled retailers, their holding company is Findus and parent company is seafood giant Young's Bluecrest. The Cromer plant specialises in processing approximately 20,000 tonnes per year of both UK-caught shrimp and imported prawns. The imported prawns are mostly Asian and Central American Vannamei or Monodon, cooked and peeled at source and bulk IQF or block frozen for secondary processing in the UK.

I headed then to Lyons Seafoods in Warminster. Lyons is part of the Alfesca seafood group and processes around 20,000 tonnes prawns and shrimp per year at its new factory in Wiltshire. Lyons differ from The Seafood Company in that they buy raw peeled bulk IQF or block frozen product comprising again mostly Vannamei from Asia and cook on site to retail demand. They supply all the major retailers in the UK and there is clear debate over who is the larger supplier, Lyons or The Seafood Co!

My aim was to glean market information from both processors. Their strong market presence in the UK and Europe makes both Lyons and The Seafood Company sensitive to consumer demand and changes in market preference. I also wanted to obtain information on processing techniques such as defrosting, cooking and freezing, where yield savings can be maximised.

I then travelled to Denmark to visit the KM Machinery factory in northern Sjaelland. KM Fish Machinery is one of the leading designers and producers of process equipment for the seafood industry and manufacture prawn and shrimp grading, cooking, freezing, glazing and peeling machines. I was interested to visit Engelsviken a Danish shrimp processing company where KM have a pilot peeling line in operation that uses a new and innovative way to remove the shells using a vacuum system.

From there I headed across to Holland to visit the ultra-modern Heiploeg prawn and shrimp processing plant in Zoutkamp. Heiploeg is the biggest supplier of shrimp and prawn products into Europe, processing around 30,000 tonnes per year with a turnover of 350 million Euros. The Heiploeg plant is fully automated yet still employs 350 staff. The scale of the operation was something to behold and my aim again here was to gather information on market and product trends and processing techniques.

My next stop was Agadir in Morocco where I attended the World Seafood Congress hosted by the International Association of Fish Inspectors and co-organised by the Food and Agricultural Organisation of the United Nations and the United Nations Industry Development Organisation. The IAFI members hold a congress every two years. These talks, with 250 delegates from 70 countries and under the theme “Toward building trust in international seafood trade and market access” afforded me the opportunity to get an international big picture view of current global seafood trade issues and to meet key policy makers under the one roof.

I then flew north to Greenland to visit the shrimp processing plant and factory vessel of Polar Raajat and to meet with Royal Greenland. These two companies process the lions share of the 150,000 tonnes of Pandalus Borealis that comes out of arctic waters each year. Their plants again are fully automated and state of the art. Labour costs are high in Greenland and therefore automation is essential for their industry.

My final visit was to Billingsgate fish market in East London. Billingsgate, whose market history dates back to King Edward III’ds reign in the 14th century, handles an average of 25,000 tonnes of seafood each year. Approximately 40% of that tonnage comprises seafood imported from abroad. Billingsgate has been on my list of place to visit for a long time and it was a good place to gauge the type of shrimp and prawn products going into UK fishmongers rather than the supermarkets.

Summary of Findings

So what did I find out? There was so much information to take on board and I have tried to summarise it succinctly here and relay the most relevant parts.

Market trends and consumer preferences

The European market has changed over the past 15 years from being dominated by wild caught cold water shrimp from Atlantic and arctic waters to now showing a strong preference for farmed, warm water prawns. This trend mirrors the massive growth in the farmed prawn industry in Asia that took off in the early 90's. Where cold water shrimp were once considered to be the finest on the market, warm water prawns have now taken over this title and the King Prawn (which used to mean Tiger Prawns but now means Vannamei) is perceived as the superior product and prices have adjusted to reflect this.

For the past couple of years however this trend has been on the reverse and consumers have turned back to cheaper shrimp and frozen product as disposable income has shrunk. The trend at the moment is for value and people are holding off buying premium products; however the consensus is that this is a temporary blip and that once people start spending again, they will be buying warm water prawns.

There is a clear distinction between the markets in Northern and Southern Europe. The Northern European market such as the UK, Germany, Holland and Scandinavia, which is dominated by large retailers like Waitrose, Sainsbury, Marks and Spencer, Tescos, Albert Hein etc, has a preference towards cooked and ready to eat foods. This means that most of the prawns sold in Northern Europe are cooked and peeled. The ready to eat sector is worth 2.5 billion pounds in Britain alone and there are 200 – 300 different ready to eat meals on supermarket shelves. Interestingly, the market for ready to cook products is growing even more quickly – pre-prepared meals that give convenience but require some home cooking and are perceived as healthier than ready to eat meals.

Even so, convenience is clearly the driving factor. I was told that average meal preparation time in the UK will decrease over the next 5 years from 8 minutes today to only 4 minutes. This trend for convenience is also happening in the US where 70% of all seafood consumed there is eaten at restaurants.

The Southern European market such as France, Spain, Portugal, Italy etc still prefers raw whole product where culture of selecting fresh produce, food preparation and a savoured dining experience is an important part of everyday life. Warm water prawns arrive frozen raw HOSO and are then defrosted and cooked to order for the chilled fresh produce markets.

Interestingly, the European markets do not have the same negative view of imported Asian prawn products as is commonly found in Australia. The Asian Vannamei is generally held in high regard and perceived as very high quality.

Sustainability and environmental and social responsibility are in the spotlight along the supply chain. The trend towards Ecolabelling continues to grow and so does the great debate around it. The retailers are desperate to demonstrate that they are sourcing responsibly, however they don't pretend to understand fisheries management and the whole thing seems to be more NGO driven than consumer driven. The overall intention of creating a drive towards sustainably sourced seafood is without question a good thing. However there is a need for a minimum standard that is benchmarked and recognized between the many schemes currently being used so that the cost of accreditation is driven down and so that effective consumer education can occur.

I didn't come across any hard evidence that a product with an ecolabel is more marketable than one without. Consumers clearly want to purchase sustainably sourced products but trust that the retailer is making those choices for them. The consumer wants to make less decisions at the supermarket shelf not more and at the moment the whole issue of ecolabelling is more confusing than effective.

In light of this, the need for the large retailers to demonstrate product sustainability is leading to greater emphasis on traceability and for this reason the preference for farmed product is increasing significantly. The clear message from the big processors I spoke to is that aquaculture product represents an increasingly attractive option when considering factors like food safety, quality control, price stability, consistency of supply, ability for buyers to contract and above all traceability.

Processing and packaging technology and efficiencies

I managed to get inside access to the processing plants at Heiploeg, Engelsviken, Polar Raajat and also to the factory shrimp vessel Polar Nattorlik. The plant layouts and handling methods were good to see with process flow being one way and clever use of factory space. Seeing the factory boat, with it's on board automated processing facility and 600 tonne holding capacity was one of my favourite experiences. Another was telling the gentleman at Heiploeg that I am interested in building a freezer at one of our Seafarm sites to which he then he showed me his 7000 tonne freezer. It was like a cathedral, in fact you could have fitted a cathedral inside it! It definitely gave me a twinge of freezer envy.

All of these operations are highly automated and clearly work to within an exceptionally high quality assurance standard. You could eat your dinner off the engine room floor of the Polar Nattorlik!

I saw a large range of automated equipment ranging from defrosters, self filling and emptying maturation tanks, steam and water cookers, peelers, laser sorters, waste separators, freezers, glazers and packers.

It seems that steam cooking is favoured by many processors for achieving consistency in core temperature and reducing yield loss. Rainfall type defrosters, cookers and brine freezers are also being employed which are different to immersion methods as there is no heat transfer from product so the temperature of the liquid being applied over the surface of the product is constant.

The new peeling machine by KM Machinery uses a vacuum system to pop the shells from the shrimp, uses 60% less water than a regular peeling machine and has a better yield output. It is currently being trialled on Pandalus but the next plan is to trial Crangon Crangon (brown shrimp) as many thousands of tonnes are currently being trucked from Europe to Africa and back for hand peeling as there is presently not a more efficient way to do this. Long term plans are for trials on warm water prawns but at present the technology requires the prawns to be cooked or blanched for the process to be effective so the machine would not work on raw product.

At present, most of the peeled warm water prawn products that are distributed throughout Europe are hand peeled off shore in the country or region of origin. It is too expensive to hand peel in Europe and machine peelers are still not comparable in terms of yield and appearance.

The efficiency of these plants is dictated by their throughput and most run 52 weeks of the year. I was lucky to get a look at the factory trawler as it was only in port for 24 hours before heading out to sea again for 2 months. Some of the plants run 24 hours per day, processing up to 60 tonnes per day. It is clear that the European model has moved towards more centralised processing facilities for reasons of efficiency and economies of scale.

Packaging is under scrutiny and steps are being taken to phase out the use of polystyrene boxes. The retailers are demanding less packaging to product ratio and will only accept packaging into their stores that can be recyclable. As yet no one packaging can cope with being microwavable, oven proof, grill proof and bar-bee proof. So both polypropylene and polyethylene are used for supermarket packs however polypropylene cannot be recycled in the UK as yet. Polyethylene (coke bottles etc) can, but only in a few counties. So the push from the retailers is for recyclable packaging materials despite there not being enough recycling centres and only a limited amount of packaging actually getting recycled.

A brilliant initiative is the Cool Blue Box which is a reusable, food grade, antibacterial, insulating plastic box that comes with a lid that incorporates a refreezable gel. These boxes are aimed at chilled product suppliers for use instead of polyboxes. The company rents out the boxes to the seafood supplier, collects them up from the end point user, cleans and sterilises them at their wash plant and then sends clean boxes back out to the producer. They take up less room than poly boxes, reduce the quantity of ice required for cooling as the cooling comes from the lid and are reusable.

There is also a responsible approach to polystyrene being used at Billingsgate where most product arrives packed in polyboxes. The polyboxes are crushed and packed and sent to China where recycled and made into other forms of plastic at no net cost to either party.

I gathered a large amount of information but in summation, the overall take home messages that I left with were as follows:

Convenience food is on the increase but consumers want this to be healthy too
Warm water prawns will continue to dominate as a premium product
Seafood buyers now actively sourcing Aquaculture product as it ticks all their boxes
Great range of automated process technologies available when production volumes justify investment
Difficult to enter European market now as a producer without ecolabel accreditation
Move to all things sustainable – particularly packaging

Going forward – I am certain that I will make use of the information I learnt not just within Seafarm and my role there but also on an industry level wherever possible. Please feel free to ask me any questions later on if you have them about my trip or get in touch by phone or email as I would be more than happy to go through any of the things I've discussed here in more detail.

I would like to leave you with a couple of recommendations.

Attend processing congress in Alaska – First symposium in 30 years on processing. Will be big

Look towards centralising our processing industry - I think that the future will see a reduction in the number of vertically integrated producers who each have a processing facility, to a small number of larger and more efficient processors.

Get behind the SSA initiative for Australian Seafood Brand to be recognised by EU and retailers for both wild caught fisheries and aquaculture in recognition of the stringent management policies already in place – this seems a great initiative and good solution for Australian producers to get around the ecolable minefield if we can work together proactively.

Need to establish where Australia sits in the market – are we more like northern Europe going towards convenience foods or more like Southern Europe where pre-prepared foods are less popular. Are we giving the consumer what they actually want? CRC retail transformation project might shed some light in this area so that we better understand our customers needs.

I would like to acknowledge that I could not have undertaken this study tour without the significant input, advice and support from the following people. As there are many, I have listed them here. I must make a special mention of the extraordinarily kind hospitality and generosity that I was shown by all those I visited and met overseas.

To conclude, I would like to thank the FRDC and WINSC for initiating this scholarship program. For most of us, study is something that finished with school or university and taking time out from work to learn is now something of a luxury that sadly doesn't happen often enough. This scholarship represents that rare gift of a new learning opportunity that can motivate and inspire those who partake in it and I can see that WINSC members and consequently the Australian seafood community will benefit from this opportunity for many years to come.

Thank you