TURNING THE LIGHTS ON IN THE SEAFOOD CHAIN

Ridley Australian Prawn Farmers Association 2019 Symposium
Today:

- We will talk a lot about trust and the importance of transparency in building and maintaining trust.
- Food Fraud
- Reputation and the value of provenance
- Tech. options
- This project (SCI and Prawn Industry)
- The future - where to next?
through real verification of provenance we connect consumers to where their food has come from, building confidence and trust
Meat supplier Russell Hume collapses with loss of up to 300 jobs

Administration comes weeks after firm halted production due to food standards scare

THE SYSTEM IS FRAGILE - REPUTATION MATTERS

Jan 12 - failed inspection due to use-by-date labelling non-compliance. Breach is widespread.

Jan 20 - banned from selling meat by the Food Standards Agency (FSA). Supplier to restaurants - Jamie Oliver’s Italian, Wetherspoons etc.

Feb 5 - Liverpool site resumes production.

Feb 16 - Media reports whistleblower claims substitution.

Feb 19 - Company enters administration.
& WHOLE OF INDUSTRY

Provenance matters

Authenticity matters

If it is not about the consumer and ensuring they get what they pay for it certainly underpins our food safety systems.
Your lifestyle defines who you are – so why limit your choices? Clara Gluten-Free Water is about creating choices for your health and well-being while giving you absolute peace of mind that your life choices are being respected. Clara Water – Because you can never be too sure.

THE MARKETPLACE IS CONFUSING

Still, we wonder why we are having a conversation around consumer trust ....

Information Asymmetry?
THE MARKETPLACE IS CONFUSING

this happens in every part of the shop for consumers
**What is Food Fraud?**

**Just about anything?**

Food Fraud v Crime in Supply Chain?
TRANSPARENCY

It is coming.

Consumers expect it and are going to demand it.

It is critical that stakeholders control who turns the light on.

It doesn’t need to be a threat.
SOCIAL LICENSE

Transparency.

Let’s connect and communicate.

There is only one authentic story.

If you can’t share it, change something so you can.

That reputation is not guaranteed.
DIFFERENT TYPES OF TRANSPARENCY

How will this be mediated?

Regulated
Technology

What can keep pace?

THE REALLY BIG QUESTIONS;

WHAT DO WE SHARE?
WHAT DON'T WE SHARE?
WHEN DO WE SHARE IT?
HOW DO WE SHARE IT?
WHAT MATTERS?

Real integrity - will people pay for integrity in the supply chain? Maybe. Will it matter if it is critical to maintaining social license and freedom to operate? Should you have to pay extra for the truth?
The supply chain connects consumers to the source of their food and all of the promises being made.
THE PROJECT

INTEGRITY AND TRANSPARENCY

AUSTRALIAN PRAWNS

2016-261: Investigating the use of trace element profiles to substantiate provenance for the Australian prawn industry.

Dr Janet Howieson
Curtin University

SOURCE CERTAIN INTERNATIONAL

FRDC

AUSTRALIAN PRAWN FARMERS ASSOCIATION

AUSTRALIAN COUNCIL OF PRAWN FISHERIES

Curtin University
A REAL STRATEGY TO MOVE TO MORE TRANSPARENCY IN THE SUPPLY CHAIN

- Industry led strategy to build confidence and trust through strengthening integrity and mediating transparency in the supply chain.
- Capacity to connect consumers to where their prawns are from - real provenance.
- Real, long term strategy to build overall trust in the 'Love Australian Prawns' Brand.
PROJECT
BACKGROUND

WHAT

- New technology suggested to separate prawns based on geographical harvest location (trace metals from environment). Previously used by pork industry (Physitrace, TSW Analytical) and other sectors.
- Traditional methods (eg DNA) not good for prawns because these cannot be used separate same species.
- 150 different samples analysed in Masters Project (2015, TSW Analytical Pty Ltd), suggested technology was fit for purpose.
- Joint ACPF/APFA FRDC project developed and approved, led by Curtin University (2017-2020)

WHY

- Detect substitution of product by lower value varieties
- Protect the Love Australian Prawns
- Verification of product to Protect MSC certified areas.
- Biosecurity....Verification of product sourced from disease-free zones.
- Fisheries management implications
LEGAL OPINION OBTAINED ON:

- Definition of different types of food substitution;
- Identification and application of the regulatory implications for food substitution in each Australian jurisdiction, including consideration of relevant legislation, industry standards and regulatory body materials;
- Identification of relevant examples of enforcement actions; and
- Development of a framework for successful regulatory enforcement of unlawful food substitution, including consideration of the standard of evidence required and the scientific methods available to obtain such a standard.

Applicability to findings of FRDC 2016/180.
2. SERVICE PROVIDER SELECTION

ROBUST SELECTION (RFP) PROCESS UNDERTAKEN


- Three laboratories accepted invitation: Selection based on written and face to face verbal presentation in February 2018.

SOURCE CERTAIN INTERNATIONAL SELECTED AS SERVICE PROVIDER
3. SAMPLE COLLECTION

- Rigorous sampling protocols, envelopes, forms, instructions (videos and powerpoints) developed by forensic laboratory...to ensure sampling processes protect chain of custody. All samples delivered to WA (under quarantine permit where necessary).

- Delineation of Agreed Sampling “Sources”....A source is one species from one geographical location.....A second species from the same geographical location is a new source.

- The Selection committee (in consultation with ACPF/APFA) agreed on 35 wild harvest sources and 19 farmed prawn sources.

- Different sample collection routines.

- Shark Bay, Exmouth, Spencer Gulf, West Coast and Gulf St Vincent, NSW Oceanic....collection by Fisheries agencies....MSW DPI; SARDI/PIRSA; DPIRD.

- Queensland, Victoria, NPF, NSW Estuarine and first batch of APFA....collection by skippers/operators.

- APFA (second batch).....JH
4. SAMPLES

**COMPLETED SOURCES**
- 21 of 35 Wild Harvest Sources (Green)
- 17 or 19 Farmed Sources (Green)
- 17 of 19 Farmed Sources (Cooked) (NEW)
- Random samples of Wild Harvest (Cooked) (NEW)

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>YEAR</th>
<th>NUMBER COLLECTED</th>
<th>NUMBER ANALYSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>APFA</td>
<td>2017/2018</td>
<td>51 (8 Farms)</td>
<td>51</td>
</tr>
<tr>
<td>APFA</td>
<td>2019</td>
<td>85 (17 Farms)</td>
<td>46*</td>
</tr>
<tr>
<td>Shark Bay</td>
<td>2017/2018</td>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>Exmouth</td>
<td>2017/2018</td>
<td>26</td>
<td>21</td>
</tr>
<tr>
<td>West Coast</td>
<td>2018</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Spencer Gulf</td>
<td>2017/2018</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>Gulf St Vincent</td>
<td>2018/2019</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>NSW Oceanic</td>
<td>2018</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>NSW Estuarine</td>
<td>2018</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Qld oceanic</td>
<td>2018</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>NPF</td>
<td>2017</td>
<td>45</td>
<td>40</td>
</tr>
<tr>
<td>NPF</td>
<td>2018</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Vic Wild harvest</td>
<td>2019</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>
SUMMARY

- ~200,000 reference data points available to map the wild and farmed sources of Australian prawns.
- Wild fishery discrimination demonstrated including some within NPF.
- Source discrimination between farms and also sources or ponds on a farm.
- Species discrimination - interesting.
- Cooked -v- Green

Provenance verification possible for almost all Australian (claimed) prawns.
**RESULTS**

**WILD CAUGHT**

Cross Validation - 99.7%

A measure of how well the data classifies into the assigned groups.

**FARMED FARMERS**

Cross Validation - 98.5%

A measure of how robust the statistical model is.
RESULTS

FARMED

Statistics
Classification - 100.0%
a measure of how well the data classifies into the assigned groups

Cross Validation - 99.3%
a measure of how robust the statistical model is

SOURCE CONNECT

RESULTS

FARMED TO POND

Statistics
Classification - 100.0%
a measure of how well the data classifies into the assigned groups

Cross Validation - 98.7%
a measure of how robust the statistical model is
RESULTS

SPECIES

Statistics
Classification - 99.1%
a measure of how well the data classifies into the assigned groups

Cross Validation - 98.9%
a measure of how robust the statistical model is

RESULTS

NPF - V - QLD TRAWL MSC CERTIFIED?

Statistics
Classification - 98.9%
a measure of how well the data classifies into the assigned groups

Cross Validation - 98.2%
a measure of how robust the statistical model is
NEXT STEPS

- Finalise the work around cooked v green.
- Complete analytical work associated with outstanding quarantine sources.

THE FUTURE

- A number of options are under consideration and discussion.
- These discussions are centred around the message, communication strategy and then in-market activity that could elevate the success of the work to date.
- What will the industry as a whole do versus say a stakeholder of the prawn supply chain.
LEADERSHIP

- We know that consumers care where their food is from and how it is produced.
- The promises matter.
- The promise though is underpinned by the integrity of the chain that delivers the product to the consumer.
- Transparency is not easy but it will be worth it.
- Those that lead will not be forced to follow!

2019 SEAFOOD AWARDS - "R&D EXTENSION AWARD" WINNER

HEADING TO NATIONAL AWARDS IN OCTOBER 2019.
• Project Industry Champions: Warren Lewis, Brett Hogan and David Carter.
• APFA and ACPF EO’s...Kim Hopper and Rachel King
• Project Steering Committee
• Everyone who has collected or organised collection of samples.
• Warren Lewis who organised APFA sample collation and despatch.
• Industry People in WA who have received and stored samples.
• FRDC

CONTACT US

www.sourcecertain.com
info@sourcecertain.com