



## **Submission to the Quarantine and Biosecurity Review**

**on behalf of**

Austral Fisheries Pty Ltd  
WA Seafood Exporters Pty Ltd  
Vee Jay Fisheries  
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## Summary of Submission

Imported seafood forms a major component of Australia's seafood consumption. Australia has traditionally exported low volumes of high value seafood and imported high volumes of lower value seafood for local consumption.

This trend is not about to change in the foreseeable future and is expected to actually continue.

Australia therefore needs to ensure that our quarantine and biosecurity activities are sufficient to protect Australia's biota and hence the seafood industry. Australia has traditionally adopted a conservative approach to quarantine imports and this should continue. By way of an example, the writers particularly support the interim measures taken as outlined in Biosecurity Australia Policy Memorandum 2007/16<sup>2</sup> which placed interim quarantine measures on imported prawns and believe that the actions taken to reduce the threats from exotic diseases in prawns are warranted.

This submission to the Quarantine and Biosecurity Review Panel will focus on the effectiveness and efficiency of the current quarantine and biosecurity arrangements to achieve Australia's appropriate level of protection.

Comments will also be made on the public communication, consultation and research and review processes.

Comments are also made as to improvements to seafood importing arrangements to ensure that overseas based production systems are equivalent to those required of Australian seafood exporters.

The writers would further welcome the opportunity to discuss the comments raised in this submission in more detail and would be keen to address the Review Panel at a convenient time and place.

## Background

The gross value of production of the Australian Seafood Industry is \$2.13 billion which is comprised of aquaculture \$748 million and wild catch in state and Commonwealth fisheries \$1.38 billion<sup>1</sup>.

Australia relies on imported seafood to supplement seafood for domestic consumption. In 2006, Australia imported approximately 1,028,500 tonnes of seafood including 23,170 tonnes of prawns<sup>1</sup>.

Viral diseases have emerged during this decade as serious economic impediments to successful prawn farming and potentially the wild catching sector.

While nearly 20 distinct viruses or groups of viruses are known to infect penaeid prawn, only four, White Spot Syndrome Virus (WSSV), Yellowhead Virus (YHV), Infectious Hypothermal and Hematopoietic Necrosis Virus (IHHNV), and Taura Syndrome Virus (TSV), pose a threat to the future of penaeid prawn culture in the Western Hemisphere<sup>6</sup> and in particular to Australia.

To date, these viruses are exotic to Australia but they are widespread throughout South East Asia and other prawn producing countries (see [Information on the Viruses](#)).

A scientific study was undertaken to determine if WSSV and YHV were present in Australia<sup>11</sup> and if importation of prawns posed a risk. The results of this survey showed that WSSV and YHV were present in frozen prawn products imported into Australia for human consumption from South East Asia. The conclusion of the study was that Importation of frozen infected products may present a risk of transferring virus to wild and farmed populations of crustaceans in this country.

On 24 July 2007, Biosecurity Australia released Memorandum 2007/16 which placed interim measures on the importation of prawns and prawn products. These interim quarantine measures were designed to reduce the risk of exposure of the crustacean aquaculture industry and the wild caught sectors to the target viruses.

As stated in the Issues paper<sup>3</sup>

- The rapid growth and changing patterns in international trade mean Australia faces increased risks that exotic pests and diseases can be accidentally introduced by passengers, imported commodities, packaging material and transport vessels (such as cargo containers). The Review will be examining these risk pathways. Australia has contributed to this growth in international trade as an exporter, and its pest and disease status and access to overseas markets is an important consideration.
- Australia is fortunate to be relatively free of many of the serious animal and plant pests and diseases that exist in most other countries. This favourable situation provides Australia's export-oriented agricultural industries with an advantage in global markets. It is also important for maintaining the unique characteristics of Australia's natural environment. Managing threats is an essential function of the quarantine and biosecurity system.

The writers agree that Australia should retain its conservative low risk approach to quarantine and in particular with this statement that the interim quarantine measures outlines in 2007/16 should remain to ensure that Australia's biota is protected and it remains free of the common penaeid viruses.

## Support for Revised Interim Quarantine Import Measures

As stated in Biosecurity Australia Policy Memorandum 2007/16<sup>2</sup>, measures needed to be implemented to manage the altered quarantine risk associated with the importation of prawns and prawn products.

It is known that the target viruses are immobilised by cooking. The thrust of the interim quarantine measures is therefore all designed to ensure that the target viruses are immobilized before landing in Australia thus reducing the risk.

The risk strategies outlined in 2007/16 are:

- Product should: be sourced from a country or zone that is recognised by Australia to be free of WSSV, IHHNV, YHV) and TSV) or
- Be 'highly processed', head and shell-off (except for the last shell segment and tail fans), and
- Coated for human consumption by being breaded or battered, marinated in a wet or dry marinade, marinated and placed on skewers or processed into dumpling, spring roll, samosa, roll, ball or dim sum-type product; or
- Have the head and shell removed (except for the last shell segment and tail fans) and, if not from a disease free source, have each batch tested on arrival with negative results for WSSV, IHHNV and YHV; or
- Be cooked.

These measures demonstrate the effectiveness of the existing quarantine and biosecurity continuum with the ability for product to be imported from proven disease free regions and, if this is not the case, to either reduce the risk completely by cooking product or by having product tested at the border.

The writers are, however, aware of situations where loopholes in the legislation have been exploited with reported instances of for example prawns receiving a light dusting of flour or having a light application of olive oil applied thus gaining access to the Australian market as a marinated or breaded product.

## Comments on Part C1 – Issues for Consideration - the Quarantine and Biosecurity continuum

As stated previously, Australia has adopted a very conservative approach to quarantine and in many cases this decision is most appropriate. In this particular case, the interim quarantine and biosecurity measures are conservative but the strategies should ensure that the risk from exotic viruses is minimized substantially.

Australia, because of its unique location and the fact that it is an island, has remained free of many exotic diseases. This unique and envied status should be maintained at all costs. Australia's current conservative approach to quarantine and biosecurity of starting the negotiating at "NO" should be maintained. Relaxation of these control measures could jeopardise Australia's fisheries.

When assessing risks such as the threat to Australia from exotic diseases or viruses, all stakeholders should be consulted during the evaluation phase and prior to the measures being implemented.

In the Import Risk Assessment Handbook<sup>14</sup>, Biosecurity Australia states that Engagement with stakeholders is an important part of the IRA process. Biosecurity Australia will consult with stakeholders early in, and throughout, the IRA process. Consultation will be both formal and informal and will aim to seek stakeholder views on all issues relevant to the IRA.

This process should in theory ensure that all stakeholders are involved in the Risk Assessment process – if stakeholders have been made aware that a Risk Assessment is actually taking place.

Biosecurity Australia does have a relatively user friendly web site although it is a little inaccessible unless you know where to look. Stakeholders can register to receive information although the link was inaccessible at the time of writing.

When undertaking an Import Risk Assessment, Biosecurity Australia

- identifies the pests and diseases of quarantine concern that may be carried by the good;
- assesses the likelihood that an identified pest or disease or pest would enter, establish or spread; and
- assesses the probable extent of the harm that would result.

If the assessed level of quarantine risk exceeds Australia's allowable level of protection (ALOP), Biosecurity Australia will consider whether there are any risk management measures that will reduce quarantine risk to achieve the ALOP. If there are no risk management measures that reduce the risk to that level, trade will not be allowed<sup>14</sup>.

It is agreed that the quarantine and biosecurity measures that are implemented must be science based and must be capable of withstanding any international challenge (e.g. WTO).

The Biosecurity Australia approach does appear to be science based while being fair and equitable and working – albeit quite slowly. There is often what appears to be a lengthy time frame between the commencement of a biosecurity review and the implementation of changed quarantine arrangements.

If the measures outlined in 2007/16 are to be taken as an example, a risk assessment has been undertaken and the threat to Australia from certain exotic viruses determined to pose too great a risk. Measures have therefore been implemented to reduce the risk to an acceptable level.

The writers therefore would not support any relaxation of existing quarantine and biosecurity procedures.

We are, however, of the view that additional safeguards should be implemented for imported foods.

All seafood exporters are now required to have AQIS approved export arrangements in place<sup>15</sup> for the preparation of seafood. Registered establishments must demonstrate how the relevant conditions and restrictions set out in the Export Control (Dairy, Eggs and Fish) Orders 2005<sup>16</sup> will be met. Seafood exporters are required to have auditable food safety and traceability systems and procedures in place which give assurance to overseas customers.

No such assurances are required for seafood importers with assurances from trading partners virtually taken at face value. AQIS should consider arrangements whereby overseas based production systems are inspected or are required to have equivalent audited food safety and traceability systems which will provide assurances to Australian consumers and to further protect Australia's biota.

## Comments on Part C5 Communication and Consultation

AQIS have a number of active forums where quarantine and biosecurity issues affecting the seafood industry can be debated. The Seafood Exporters Consultative Committee (SECC) and the Imported Foods Consultative Committee (IFCC) are two such forums.

The terms of Reference of SECC are:

SECC will effectively liaise between AQIS and the export fishing industry. Furthermore the Committee will advise, as required, the Minister for Agriculture, Fisheries and Forestry, the Australian Seafood Industry Council and the Quarantine and Export Advisory Council:

- on financial matters relating to levels of apportionment of AQIS' charges to the export fish sector
- on matters relating to the production, processing, packaging and transportation of fish and fish products for export
- on any food safety matter which may directly impact on the industry and/or their markets
- on the interpretation and application of importing countries' requirements and requirements under the Export Control Act and relevant Orders
- on matters relating to certification, documentation and labelling requirements for fish
- on inspection matters relating to common Australian standards for the production and processing of fish; and
- on any relevant matter between the Australian export fishing industry and the Australian Quarantine and Inspection Service (e.g. the impact of imports on exports).

The Imported Food Consultative Committee (IFCC) is a consultative forum for the Australian Quarantine and Inspection Service (AQIS) and the food and beverage importing industry. The seafood industry is not directly represented on the IFCC.

The objective of the IFCC is to be an effective consultative forum, involving other relevant stakeholders, that

- assists AQIS to improve the effectiveness and efficiency of AQIS controls on food and beverage imports.
- promotes the coordination of the activities of AQIS and industry to facilitate the clearance of food and beverage imports.
- provides technical input into policy development and regulatory changes required to ensure that the recommendations of the National Competition Policy on the Imported Food Control Act 1992 are implemented.

The scope of the IFCC is:

- technical and operational issues arising out of the administration of the Imported Food Control Act 1992
- technical and operational issues arising out of the application of quarantine legislation to food commodities

- matters related to the issuing of import permits for food commodities.

These two committees should in theory ensure that all stakeholders remain informed of relevant and emerging quarantine and biosecurity issues.

An issue that can potentially cause a gap in the information flow is the absence of the Australian Seafood Industry Council or a similar peak body to provide an effective conduit to the seafood industry. This can have the effect that some potential stakeholders are not aware that risk assessments are being undertaken or changed quarantine arrangements are to be implemented.

There is an avenue for a regular Seafood Industry Quarantine and Biosecurity Forum which would allow all emerging issues whether relating to seafood exports or imports to be raised.

## Information on the Viruses

### **White Spot Syndrome Virus**

White spot syndrome (WSS) is a viral infection of penaeid prawns. The disease is highly lethal and contagious, killing prawns quickly. Outbreaks of this disease have wiped out the entire populations of many prawn farms throughout the world within a few days. The virus is also reported to affect other crustaceans.

The first reported epidemic due to this virus is from Taiwan in 1992 however, reports of losses due to white spot disease came from China in 1993 where it led to a virtual collapse of the prawn farming industry. This was followed by outbreaks in Japan and Korea in the same year, Thailand, India and Malaysia in 1994 and by 1996 it had severely affected East Asia and South Asia. In late 1995, it was reported in the USA, 1998 in Central and South America, 1999 in Mexico and in 2000 in the Philippines.

Currently, it is known to be present in all prawn growing regions except Australia.

Losses of up to 90% of farms stock have been identified.

The virus is predominantly associated with *Penaeus monodon* farms but there is evidence that other crustacean can contract the disease.

Many writers have spoken of the spread of the disease through intensive aquaculture farming areas through Asia and Crayfish farms in America.

There are no procedures listed to eliminate the disease. There are management strategies which include:

- Not buying stock from a source that could be or is infected with the virus.
- Hatcheries must maintain good biosecurity measures and examine each batch of animal. The hatchery needs to be constructed to prevent the introduction of the virus from the ocean.
- Sample hatcheries at least twice during the production cycle and retain samples for later testing (three weeks post shipping).
- Only buy PCR screened and stress tested animals. Starting out with no or a very low virus load is important.
- Minimize the stress on the prawn wherever possible
- Increase acclimation times before stocking
- Stock at lower densities
- Sample your ponds frequently. Assure that sick and dying animals and any unusual patterns of mortality are sampled as a routine by PCR and/or histopathology. At the first sign of a problem, harvest the prawn if you can.

### **Infectious Hypothermal and Hematopoietic Necrosis Virus (IHHNV)**

IHHNV is a single stranded DNA virus that has caused severe mortality and stunted growth in penaeid prawns.

The virus appears to be of Indo-Pacific origin but is now widely distributed, primarily through introductions into aquaculture facilities worldwide.

It is reported that stock infected with the virus have a huge variation in growth rates

This species is responsible for catastrophic epidemics in aquaculture facilities worldwide and is largely responsible for temporary cessation of Mexican commercial prawn fishing for several years.

A histopathological survey of the wild caught Blue Prawn *Penaeus stylirostris* from the Gulf of California, Sonora, Mexico, revealed the presence of infectious hypodermal and hematopoietic necrosis virus (IHHNV).

The survey demonstrated that IHHNV had widespread distribution in a region where it had not been previously detected and, presumably, was not present before 1987. These findings suggest that IHHNV has become established in wild populations of *P. stylirostris*, and perhaps in *P. californiensis* and *P. vannamei*, in the Gulf of California<sup>8</sup>.

infectious hypodermal and hematopoietic necrosis virus (IHHNV)-related sequences have been identified in the prawn genome in populations of *Penaeus monodon* from Africa and Australia.<sup>7</sup>

### **Yellowhead Virus (YHV)**

YHV is a virus that causes yellowhead disease to most species of farmed prawns. Affected animals develop white, yellow or brown gills, yellowing of the cephalothorax and general bleaching of body, and yellow, swollen digestive gland makes head appear yellow

Mortalities can be high in affected ponds with mortalities of 100% within 3-5 days from first appearance of symptoms

YHV is known to occur in wild prawn populations but the extent of its distribution in wild populations is not known. YHD seems to be widespread wherever *Penaeus monodon* are cultured and may be the same disease syndrome that has plagued the intensive culture of *P. monodon* for more than a decade in Asia--Taiwan (1986-87), Indonesia, Malaysia, China, and the Philippines<sup>9</sup>. Worldwide spread of the virus is possible given the global exportation and re-processing of cultured prawn products.

At least one incidence of infection occurred in stocks of pond-reared prawn in Texas (1995). The presumed source of virus was from nearby prawn processing plants, known importers of exotic cultured prawns.<sup>10</sup>

The virus is not known to exist in Australia.

### **Taura Syndrome Virus (TRV)**

Taura syndrome is one of the more devastating diseases affecting the prawn farming industry worldwide. Since its first description in Ecuador, it has spread to all prawn-growing countries of the Americas and outbreaks have been described in many South-East Asian regions. It was first thought that the disease had a toxic etiology and was caused by pesticides used on nearby banana plantations. The infectious cause of the disease is now widely accepted.

*Litopenaeus vannamei* is particularly susceptible to this disease. Clinical signs can occur as early as seven hours after infection in some individuals. Infected prawn display anorexia, lethargy, erratic swimming behavior, opacification of the tail musculature, soft cuticle and, in naturally occurring infection, chromatophore expansion (red tail). The acute phase can last up to 7 days and mortality rates up to 95% can occur.

Since first reports of the disease near the mouth of the Taura river in the Guayas province of Ecuador, documented cases of TSV have been reported from prawn culture sites throughout most of Ecuador, the Tumbes region of Peru, the Pacific and

Caribbean coasts of Columbia, Honduras, Guatemala, El Salvador, north-east Brazil, Nicaragua, Belize, the Mexican states of Sonora, Sinaloa, Chiapas, Guerrero, and the North American States of Hawaii, Florida, and Texas.

TSV has been documented in wild post-larval and adult *Litopenaeus vannamei* collected from near-shore and off-shore fisheries of Ecuador, El Salvador, and the southern Mexican state of Chiapas near its border with Guatemala

Preliminary results from more recent studies have found that the prevalence of TSV in wild stock populations was below detectable levels and appear, as yet, to have had a minimal impact on wild prawn populations.<sup>13</sup>

The virus is not known to exist in Australia.

## **Partners to this submission**

This submission has been prepared on behalf of the following Western Australian organisations.

### ***Austral Fisheries Pty Ltd***

Austral Fisheries operate nine trawlers in the Australian Northern Prawn fishery with approximately 20% of the statutory fishing rights in the fishery. Austral Fisheries have been involved in the fishery for over 35 years and operate a vertically integrated business with customers both in Australia and internationally.

### ***WA Seafood Exporters Pty Ltd***

WA Seafood Exporters operates 4 prawn trawlers in the Northern Prawn Fishery. WA Seafoods has been involved in the Fishery since 1982 and has been processing for both the local and export markets together with other seafood products for over 35 years.

### ***Vee Jay Fisheries***

Vee Jay Fisheries has been involved in the Northern Prawn Fishery for over 30 years both in partnership with others with a number of trawlers. They are currently operating 1 trawler in the fishery.

### ***Austfish Pty Ltd***

Austfish Pty Ltd operates 4 prawn trawlers (3360 SFR'S) in the Northern Prawn Fishery and 2 in the Kimberly Fishery. They have been involved in the Prawn fishery for very long time.

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