Australian Apple & Pear Industry Fireblight Taskforce

Submission to the Senate Rural and Regional Affairs and Transport Committee

on

Importation of Apples from New Zealand

Submitted by Australian Apple and Pear Industry Fireblight Taskforce

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EXECUTIVE SUMMARY

It is important to establish at the outset of this submission that members of the Australian Apple and Pear Industry have a wealth of knowledge and experience in relation to pests and diseases. They deal with them on a daily basis and have learnt from experience that scientific theory and opinion is often found to be wanting when applied in the practical world. There would be few growers that could not give you an example of pest and diseases behaving in ways other than those that the experts had declared they would do.

From our reading of the lengthy I.R.A. document and with the experience of having our first workshop with Biosecurity on the 7th of April we believe the following is a precise of Biosecurity deliberations in relation to Fireblight.

- There is no Fruitgrowing area in New Zealand that is free of Fireblight.
- The Fireblight bacteria will be present on up to 3% of apples harvested (workshop of the 7th) – New Zealand in its submission to the previous draft stated that between .03% and 5% of apples would have the Fireblight bacteria present.
- If New Zealand is granted access to the Australian market 200 million apples will be imported into Australia.
- One Fireblight bacteria can produce one million bacteria in 10 hours
- Between one and five bacteria have been demonstrated to be sufficient to cause an infection in a flower.
- Australia has ideal climate conditions for the establishment and spread of Fireblight.
- Australia has sufficient insects that could act as vectors for the transmission of Fireblight.
- There are a large number of hosts for Fireblight in Australia including many located in residential backyards.
- A severe outbreak in Australia would result in a 50% reduction in commercial pear production and up to 20% in apple production.
- Once established in a country Fireblight cannot be eradicated.
- A 3 step protocol will reduce the presence of Fireblight to an acceptable level that meets Australia's Appropriate Level of Protection
- There is conflicting scientific evidence as to the effectiveness of each of the 3 protocols.

Members of the Fireblight Taskforce are convinced that if Biosecurities ruling is adopted Australia will experience an outbreak of Fireblight.

We have now reached a point where irrespective of common sense and the conflicting scientific evidence, Biosecurities opinions will determine the outcome. Our meeting on the 7th of April demonstrated to us that Biosecurity personnel have a perocial level of ownership of this I.R.A, and even on the most farcical points will defend their opinions. For example the Biosecurity senior scientist on the panel was of the firm view that now trash was not a high-risk vector of Fireblight. This view is clearly at odds with internationally accepted opinion and science.

We also have the instance of a senior member of Biosecurity telling a Local Government delegation that the importation of New Zealand apples would, in his opinion achieve what New Zealand stonefruit imports had and make the Australian Apple Industry more efficient. What this has to do with science is beyond our understanding. It appears to be a statement about trade, which is supposed to a separate issue and is not this individual's field of expertise.

The Apple and Pear Industry is convinced that given an independent forum they can scientifically demonstrate that Biosecurities conclusions are flawed and do not achieve Australians Appropriate Level of protection.

We are equally convinced that the outcome is predictable with the present status. With Biosecurity only has to say, "we have considered your argument and we disagree". We have had four years experience of this.

Presently the only course open to us with this outcome is to appeal to a risk assessment panel who's members would normally be excluded in a dispute process, due to their related party status with Biosecurity and its parent body, AFFA. In this situation our position is further prejudiced by the terms of reference of this panel, which exclude the right to question or investigate the scientific merit of Biosecurities conclusions.

We request that the Senate Committee ensure that the present position, that is prejudiced from the outset, is rectified and we the stakeholders are ensured due process.

BACKGROUND TO FIREBLIGHT TASKFORCE

The Fireblight Taskforce is removed from the day to day work of the National Body (A.P.A.L). It is not a recipient of Government funding and as such is not compromised by any agro-political, or statutory constraints.

The Taskforce is made up of industry members, from each production State, and has access to the networks and technical expertise of all sections of the Apple and Pear Industry.

The Fireblight Taskforce was established to ensure that the maximum resources and expertise are brought to bear to protect the industry from any introduction of Fireblight, or other pests and diseases, that would cause economic harm to the Australian Apple and Pear Industry.

Fireblight The Disease

Fireblight is a bacterial disease which is indigenous to North America. It has now spread to over 40 countries and once established in any country it has never been eradicated.

It is particularly virulent on pear trees, and has been responsible for destroying the commercial viability of international pear growing area's that have climatic conditions that are condusive to its mode of establishment and spread.

The bacteria has been credited with the ability to colonize non host species and one bacteria can replicate itself every 20 minutes (or 1 to 1,000,000 in seven hours). It is a disease that can remain latent over extended periods of time and is reported to be spread by insects, birds, wind, rain and aerosol droplets.

Economic Impact

Under the W.T.O. agreements Australia has the right to take into account economic factors such as the potential damage in terms of loss of production or sales and the potential cost of control if a disease is introduced (Article 5.3 of W.T.O. S.P.S. agreement).

In 1980 the United States estimated that the annual damage of Fireblight in America alone was between U.S. $200 – 500 million. This was despite regular control of the disease – *I.R.A. page 117*

The estimated loss of production in a worst case scenario for all production area's in Australia has been estimated at 50% for pears and 20% for apples (*I.R.A. page 118*). As 90% of pears are grown in the Goulburn Valley area of Victoria there would be no need for a national outbreak to achieve the 50% loss of pear production.

The farm gate loss in the worst case scenario has been estimated to be $827 million over 5 years – *I.R.A. page 118.* If this is translated using the accepted multiplier effect of farm gate value the cost to the National economy would be $4.962 Billion over a 5 year period. Victoria, Tasmania and New South Wales would account for 80% of this loss.

The cost of chemical cost and pruning associated with Fireblight in the United States of America has estimated at US$700 per hectare – *I.R.A. page 120.* If this additional cost was imposed on Australian growers it would make most orchards unviable.

Biosecurity concludes that the economic consequences of Fireblight incursion would be High (The maximum rating) – *Page 123 I.R.A.*

The Australian Apple and Pear Industry believes that an outbreak of Fireblight would be a National disaster when the exaggerated impact on key regional area's was taken into account.

Revised draft I.R.A. Report on the importation of Apples from New Zealand February 2004

The Fireblight Taskforce has serious concerns in a range of area's with this I.R.A. We are convinced that if the recommendations are implemented Fireblight, and other pests and disease identified, will become established in Australia.

The economic and social impact of the establishment of Fireblight will have a devastating impact on key regional centers, and have a material effect on the National economy.

We also believe that the precedent set in lowering our stringent quarantine requirements, will ultimately impact on other Australian agricultural products.

The submission we are presenting details our concerns under the following headings.

1. Lack of consultation and the inability of stakeholders to have input into critical technical issues.

2. The shortfalls of the matrix established by Biosecurity to establish levels of risk.

3. The failure of Biosecurity to take into account relevant processes and production methods.

4. The failure of recommended protocols to lower the established risk.

5. The failure of the risk assessment to take into account and address other factors that impact on the risks.

6. Inconsistency in addressing trash as a risk.

7. Failure of Biosecurity to address the issue of both non quarantine and identified quarantine insects as vectors in the pathways.

8. Failure to provide sufficient detail for stakeholders to respond in an informed manner.

9. Failure of Biosecurity to adopt equivalent international pytosanintory practices.

10. Failure of Biosecurity to assess the environmental impact of Fireblight and other insects on Australian native species.

11. Failure to adopt a precautionary approach in the use of opinions when using qualitative assessments.

12. Inconsistency of recommendations when applied to existing State quarantine laws.

13. Influence of threatened W.T.O. challenge.

14. Lack of fairness in appeal process.

Background to Risk Assessment

The first stage of the I.R.A. entailed Biosecurity assessing the risk level if fruit is allowed to be exported without any restrictions.

Biosecurity assessed the risks to be higher than Australia's Appropriate Level of Protection (A.L.O.P.). Australia's A.L.O.P. has been described as either very low or negligible. The scale of degrees of risk consists of high, moderate, low, very low or negligible. The unrestricted risk assessment concluded that the risks faced were moderate.

In line with Australia's obligation under its commitments with the W.T.O. agreements, Biosecurity then assessed if there were any measures, which could be put in place that would lower the risk from moderate, to very low, extremely low, extremely low, or negligible.

Biosecurity has proposed that by the implementation of a three step protocol the risks faced by Australia with apples being exported from regions where Fireblight and the other identified pests and disease exists, would fall within Australia's A.L.O.P.

If these protocols are proved to be insufficient in lowering the risk then we are back to the present status quo i.e. prohibition of imports due to the risk being higher than the A.L.O.P. allows.

If the risk matrix used by Biosecurity is demonstrated to be faulty, or insufficiently robust, the risk base from which Biosecurity have started from is underrated and as such the process would have to be started again.

It is relevant to note that under the W.T.O. agreement, Australia has the following rights in relation to undertaking an assessment of a request to export produce to Australia.

2.3 "Measures do not arbitrarily or unjustifiably discriminate between members where identical or similar conditions prevail, including between their own territories."

4.1 "Members shall accept the sanitary and phytosanitary measures of other members as equivalent"

5.2 "Members shall take into account relevant processes and production methods, relevant inspection sampling and testing methods, prevalence of specific diseases or pests."

5.3 In assessing the risks and determining the measures to be applied for achieving the appropriate level of sanitary or phytosanitary protection, members shall take into account as relevant economic factors, the potential damage in terms of loss of production or sales, the cost of control or eradication and relative cost effectiveness of alternative approaches to limiting risk.

5.7 In cases where relevant scientific evidence is insufficient, a member may provisionally adopt sanitary or phytosanitary measures.

6.1 Members shall take into account, inter alia, the level of prevalence of specific pests and disease, the existence of eradication or control programmes.

Annexure A – SPS Agreement

5. Every country has the right to set its own appropriate level of protection.

1. Consultation

The Apple and Pear Industry have consistently requested a process of meaningful consultation. (refer appendice 1)

We believe, that taking into account that we as producers are dependent on our ability to understand, and control pests, and disease to make our living, our ability to contribute to both the technical and scientific aspects of an I.R.A. is essential in ensuring the process is complete.

We accept that having a very public disagreement with Biosecurity when they have completed the document, is not in Australia's interests, and would have preferred to have had meaningful input into the process, to at least minimize this confrontation.

It is clear that Biosecurities interpretation of the word "*consult*" differs from the dictionary definition (*to ask advice – to refer to for information – to have regard for*).

The failure of Biosecurity in publishing a true Scientific Review Paper and Technical Paper has meant that the industry has had to attempt to "second guess" Biosecurity in identifying relevant new scientific information as it has developed.

The failure of Biosecurity to respond to requests for information has also restricted stakeholders from having input prior to the release of the draft I.R.A.

We believe that Biosecurities failure to consult during the preparation of the draft I.R.A. puts Australia in a compromising position. The major changes needed due to Biosecurities lack of technical expertise will almost certainly lead to a W.T.O. challenge by New Zealand. Australia will now have to defend the reasons for changes in a background of having had four years to get it right in the first instance.

2. The Matrix

Biosecurity has changed the profile of the risk matrix since the original draft I.R.A. The original matrix had 2 categories above moderate, and 3 categories below. The new matrix has only one category above moderate, and now has four categories below.

Matrix Comparison	Original Draft	New Draft	Probability
	Extreme		
	High	High	0.85 (or one in 117)
	Moderate	Moderate	0.5 (or one in 200)
	Low	Low	0.175 (or one in 571)
	Very Low	Very Low	0.0255 (or one in 3921
	Negligible	Extremely Low	0.0005005 (or one in 199800
		Negligible	0.0000005 (or one in 200 000 000)

Australia's appropriate level of protection has been determined as very low.

As the matrix has a mathematical probability attributed to each level, any level below moderate will come out with a lower estimation than the mid point, when combined with a higher risk factor.

Even when the risk is the same in each step the combination results in a lower risk. For example if four steps are identified to have a moderate risk (i.e. 50/50) then the matrix used assesses the overall risk as very low. If one of the four steps is assessed as low then the outcome is an extremely low risk.
We know if you have a 50/50 chance when flipping a coin (Biosecurities moderate) that statistically every time you flip the coin it remains a 50/50.

The inclusion of an extra category below Australia's A.L.O.P. allows for a lower risk factor to be determined, and the exclusion of the higher risk prohibits a higher risk probability being determined.

Why Biosecurity have changed the risk matrix to allow for Australians A.L.O.P. to be more easily met does not make any sense.

The matrix consistently underrates the level of risk because it does not take into account relevant processes and production methods. For example in step 1 Biosecurity estimates the risk of Fireblight being present in the source orchards in New Zealand is high, they then go on to estimate in step 2 that the likelihood of picked fruit being infested with Fireblight is very low.

While this may or may not be mathematically correct it does not take into account that the likelihood of Fireblight being present at greater levels in a part of the orchard is considerably higher than the average infestation.

If a pest or disease is present in an orchard it will most likely have a "hotspot". With fireblight this hotspot will be the source of the inoculum for the rest of the orchard. Being

of a higher infestation level the chances of fireblight being on these trees is higher than the average.

Due to the extreme difficulty in identifying small cankers on trees with a full canopy of leaf, these hot spots would most likely be missed in any visual inspection.

When normal horticultural practices are taken into account, we know that because of the close proximity of these infected trees, they will be harvested into the same bulk bins and will be processed through the rest of the packing, coolstorage, shipping and retail chain, together.

This will result in a part of the shipment having a significantly higher risk factor than the balance. Because Biosecurities risk matrix only deals with each step as a whole, it cannot take this into account, and as such is programmed to underrate the risks in this instance.

As the level of infested fruit is what a protocol is supposed to lower, it is obvious that if a part of the pathway has an underrated risk, then the protocol will not be effective.

There are other instances, in both the production and processing pathways, that have not taken into account processing and production practices.

It should be noted that the matrix used by Biosecurity is not used by any other country and it has been developed internally, and without any independent expertise.

3. Relevant Processes and Production Methods

Under article 5.2 of the W.T.O, S.P.S Agreement, relevant processes and production methods must be taken into account when undertaking a risk analysis.

It is imperative that what happens in the real world is added to the scientific theory. Biosecurity in its analysis consistently fail to take into account the technical aspects of apple production and processing. This results in a failure to take into account the relevant risk factors, and as such underrates the risk.

Some examples of this are as follows;

- Hot spots of infestation in orchards.
- Presence of non quarantinable insects that may act as vectors for Fireblight and Canker.
- Ability to mask symptoms in orchards.
- Potential for mechanical transfer in orchards.
- Historical incidence of infections in orchards.
- Proximity of non registered orchards with high pest and disease populations.
- Conclusive climatic conditions for pest and disease breeding cycles.
- Operating practices as they relate to trash.
- Cross contamination in packing sheds.
- Cross contamination in coolstorage.
- Tracibility of designated produce.
- Maintenance of product integrity.
- The difficulty in identifying primary inoculum sources (cankers) when trees are in full leaf.

There is considerable scientific information in relation to all of these area's.

For example there are experiments that have concluded that the incidence of Fireblight in apples in close proximity to a heavily infested pear orchard had a 100% infestation (Sholberg 88).

When questioned, Biosecurity says this has no bearing on the risk. Under Biosecurities proposal, as long as a heavily infested tree is not directly in the registered block it does not matter.

4. Protocols

If the protocols are to be effective, it needs to be demonstrated that they lower the risk profile established by Biosecurity, in their unrestricted risk assessment.

This purported lowering of the determined unrestricted risks must be supported by the weight of scientific evidence, and cannot be an unsupported opinion. The apple and pear industry is convinced that the protocols do not lower the risk and that science supports our view. This is based on the following;

The proposed protocol has 3 steps that are supposed to lower the risk to an acceptable level. They are;

- MAFNZ to provide assurance that apples are sourced from areas free of disease symptoms, determined for the example by surveillance.
- Chlorine treatment of fruit.
- Cold storage of fruit for 6 weeks.

There is limited detail of how these protocols will be implemented and as such we have to "second guess" Biosecurity Australia in some of our responses.

Visual Inspections

There is a large body of scientific evidence where Fireblight has been clinically isolated when there were no visible symptoms on the trees. Examples of this are;

McManus and Jones 95
Clark '93 (.5% to 1.3% infestation)
Sholberg '88 (100% infection adjacent to infected pears)
Miller and Schroth '72
Van der Zwet '90
Schroth '74
Thompson '75
Eden Green and Billing '74
Haung and Goodman '75
Thompson '86
Van der Zweth '72
Crepel '96
Van der Zwatt and Buskirk '84
Gevda and Goodman '70

Added to this are Biosecurity Australia's own conclusions;

I..R.A. Page 86
"Fireblight cannot be detected by visual inspections"

I.R.A. Page 96 –
"Bacteria is not visible and will almost certainly survive quality inspections."

- From the industries experience in identifying pests and diseases we know that even the primary source (cankers) will most likely be missed in a visual inspection.

All of this should be viewed in the context of what is known about the Fireblight bacteria. For example;

- "It is a competent epiphyte capable of colonizing and multiplying on the surface of plants." Steiner 2000.
- "Five Fireblight bacteria were sufficient to cause Fireblight symptoms in apple flowers" – Van der Zwet et al 94.
- "A single Fireblight bacterium was sufficient to cause infection when it was placed directly on the hypanthein" – Hildebrand 39
- "One bacteria could produce one million bacteria in ten hours" – Agrios 97

On the basis of all the factors listed, the industry is of the view that the evidence clearly indicates that a visual inspection process will not identify the bacteria that is present, and will not assist in lowering the risk of infected apples being exported.

Chlorine Treatment

There is sufficient scientific evidence to show conclusively that dipping apples in any solution does not disinfect the calyx area of apples due to the formation of air pockets. Biosecurity Australia recognizes that "Bacteria, especially those inside the protected calyx cavity would not be removed in the water dump due to the formation of air pockets in at least some fruit" – I.R.A. Page 92

There is a large body of scientific evidence that clearly accepts that the Fireblight bacteria will most likely have higher concentrations in the calyx due to protection from sunlight and latent infection from the flower remnants.

Very recent research in Australia and France has confirmed that chlorine is not always effective on bacteria. This is due to bacteria's ability to create a biofilm that protects it. We are presently seeking more information and recently published papers in this area.

On the basis of the available science in relation to the inability of sterilizing the calyx through dipping and the variable effectiveness of chlorine as a disinfectant, this protocol will not assist in lowering the risk of infested or infected apples being exported.

Cool Storage for 6 Weeks

There is sufficient evidence to demonstrate that cool storage does not have a significant impact on the survival of Fireblight.

There is one scientific paper that even draws a correlation with pre-bloom freezing as being a vector for Fireblight. – Powell '63.

Obviously Fireblight survives sub-freezing conditions over winter in Europe and the United States.

There are two specific scientific papers that deal with the effects of cool storage on Fireblight. They are;

- Nachtigall et al '85 – Fireblight survived for 34 weeks at 0 degrees C.
- Scholberg et al '88 – Fireblight survived for 6 months at 0 degrees C.

There is also a paper presented at the New Zealand conference that refers to infected bud wood that survived long-term storage – Taylor '01.

New Zealand has presented work with artificially inoculated fruit that showed Fireblight reduced to non-culturable levels in coolstores. Past history in Fireblight research shows that you get very diverse results with inoculated fruit and Fireblight can be notoriously difficult to culture artificially. It is recognized that there is a reasonably high level of probability that the bacteria can be killed in the process, due to shock.

On the basis of the available science into the disinfestations of Fireblight through the usage of cool storage, the proposed protocol will not reduce the risk of fruit carrying Fireblight.

In summary the 3 steps of the protocol are in conflict with the known scientific work on Fireblight, and will not reduce the risks. As such the risk remains the same as that established by Biosecurity Australia on unrestricted exports.

5. Issues Not Taken Into Account

There is a large body of scientific evidence that has concluded there are risk factors that influence the probability of infection, and potential cross infection. Neither the risk assessment or the proposed protocols have taken these into account.

Some of the factors are;

The infection in orchards in previous years has a bearing of the quantum of inoculum in that orchard in the next year. As Fireblight has never been eradicated it is accepted that it is a resilient bacteria. With its identified ability to replicate itself every 20 minutes (1 to 1,000,000 in 7 hours), the level of residual inoculums in an orchard is very relevant to the risk profile.

The proximity of infected hosts combined with the known modes of transmission of Fireblight has a direct bearing on the risks of contamination of trees in close proximity. Scientists are in agreement that the chance of internal infection of fruit is greater when fruit is in close proximity to Fireblight cankers on severely infected trees.

Cross contamination by machinery is accepted by scientists as a means of infecting orchards. With Fireblights known ability to survive in soil, and the acceptance that leaves, twigs, and spurs are high risk vectors of Fireblight, the movement of machinery from a known infected orchard to one not identified as infected, increases the risk in the end point orchard.

The removal of visual symptoms is an accepted practice in lowering the level of inoculums in infected orchards. This practice can result in a very heavily infested orchard appearing to be free of the disease. There is some scientific work that concludes that the removal of visible infection does not significantly lower the level of bacteria. There is universal agreement that it will not remove all of the bacteria.

Migration of identified pests during the packing and coolstorage process has been observed in the past. The protocols have no protection mechanisms in place to minimize this risk. Fruit from registered blocks for Australia can be placed in the same areas with fruit from infected blocks. The potential for cross contamination in the circumstances is almost certain.

Calyx infestation with other insects potentially allows for the ready transfer of Fireblight and European Canker. The Calyx of the apple, due to its protected nature has a higher chance of infestation of the quarantinable diseases. It is the most likely place for insects to hide. Insects have been identified as a high-risk vector for the spread of Fireblight and the common pest, wooley aphids is known to spread canker. The I.R.A. has no provisions to exclude other insects even if they have been identified as potential carriers.

Pre harvest climatic conditions have a bearing on activity levels of Fireblight. It has been clearly identified that certain weather conditions are conclusive to the increase in populations, and the spread of Fireblight. It is quite conceivable that a block showing no symptoms of Fireblight at harvest could show severe symptoms a week after harvest. In this instance the trees would have a higher than normal level of inoculums at harvest due to favorable pre harvest weather conditions occurring.

6. Trash

Trash is universally recognized as a high-risk vector for Fireblight. The protocols propose that an inspection of 600 pieces of fruit will be sufficient to confirm that a consignment is free of trash.

The level of leaves and spurs in any given quantity of fruit will depend on the level of experience of pickers. It is conceivable that with an inexperienced picker over 20% of fruit may have leaves and spurs attached.

In this instance even the best systems in a packing shed are under high pressure. Equally the level of trash in the packing shed surrounds increase and the possibility of machinery contamination, and the risks of leaves and twigs falling into cartons, and trays, increases dramatically.

It is accepted that both the fruit and the carton are potential carriers of trash. If 600 pieces of fruit are considered adequate to ensure pests are excluded from fruit, then consistency demands 600 cartons should be inspected to ensure trash is excluded from cartons.

The industry believes that the statistical assumptions that 600 pieces of fruit is a sufficient sample to ensure exclusion does not have a supportable basis when variables are taken into account. A typical consignment for inspection could contain in excess of 500 000 apples.

It is also of considerable concern that Biosecurity at a consultation meeting, on the 7th of April 2004, stated that they did not consider trash to be a high risk vector. This is a significant change in their previous position and is contrary to all the scientific evidence.

7. Insects as Vectors

The risks increase dramatically if you have a disease and a means of transmitting it in the same consignment.

There are numerous species of insects that have been identified as potential carriers of Fireblight. Several insects have been identified as carriers of Canker.

The protocols proposed by Biosecurity are only aimed at excluding 6 insects. In attachment 3 of the draft I.R.A. Biosecurity have identified 331 insects with varying degrees of potential to be in the pathways. The ability of these insects to act as carriers of either Fireblight or Canker is unknown.

International practice in similar situations is to fumigate all of the fruit. It appears to us that Biosecurity has a pre occupation with achieving a least trade restrictive outcome at the expense of increased risks.

8. Lack of Detail

Stakeholders are required to comment on the draft I.R.A. using scientific argument as the basis of their response. As the proposed protocols are based on the premise that they will lower the risks to an acceptable level, they would be expected to form a key component of any response.

The protocols in the I.R.A. have no details and as such restrict stakeholders ability to respond in an informed manner.

An example of information needed are as follows;

Visual Inspections

- How many inspections will be undertaken?
- At what time of the season will inspection be undertaken?
- What form will it take? Will it be an orchard walk, will it be undertaken with some form of matrix, will it vary depending on the size of the block?
- If it is observed that recent pruning to remove visible infection has taken place, will orchard remain in program?
- What action will be taken if there is a doubt if a symptom is Fireblight?
- Will inspection procedure vary depending on susceptibility of variety?
- Will inspection procedures change if a registered block is in close proximity to outbreak?
- Will there be more than one inspection if hail occurred prior to harvest?

The dipping, coolstorage and end point inspections have a similar number of questions that need to be answered before stakeholders can respond in a complete manner.

It appears to us that the lack of detail intimates an opportunity between New Zealand and Biosecurity to negotiate on the rigors that will be applied in implementing the protocols.

9. International Equivalence

Australia has historically had a reputation of applying strict quarantine conditions. With most major pests and disease being absent in Australia this has proved to be a justifiable practice.

Biosecurity appears to be focused on how to arrive at the least trade restrictive outcome, rather than the outcome that has the least amount of risk to Australia, and its producers.

From the apple and pear industries experience other countries put their National interest in front of making it easy for other countries wishing to export to them.

Some examples of standards applied by other countries are;

- Orchard inspections by importing countries quarantine inspectors, at exporting countries cost.
- End point inspections by importing countries inspectors, at exporting countries cost.
- Total segregation of produce to be exported.
- Exclusion of pest migration with carton openings covered with gauze.
- Fumigation to eradicate insects.
- Buffer zones around registered blocks.
- Up to 3% of produce visually inspected (could be 30,000 pieces of fruit).
- Sequential numbering of cartons.
- Insect proof loading areas.
- Exclusion zones around declared pest and disease outbreaks. (up to 35 kilometers).
- Extensive temperature data logging of coolstores and containers.
- Pre export chemical residual testing.

Many of these conditions are for "soft" pests or diseases. In the case of very serious diseases, like Fireblight and Canker, total prohibition is maintained by most countries.

As it is our investments and families futures at risk, we do not believe it is unreasonable to expect the most stringent conditions allowable.

It is of concern to our industry that Biosecurity boasts it has the most "transparent" system of assessment in the world. We believe that Biosecurity does not have a charter to make Australia the easiest country in the world to export to.

10. Environmental Impact

Potential impact on Australia's environment from the identified pest and diseases is of major importance in any risk assessment.

The insects identified, have by any international standard, very soft protocols, ie. self control by New Zealand growers, and end point inspections of 600 pieces of fruit.

Other countries have found that their conditions are insufficient and have imposed much stricter conditions, (e.g. USA requires fumigation). Part of the reason for this is that some of the insects are so small (Midge is 1.2mm), and it is easy to miss them as they reside in the calyx.

It is not known what effect the leaf rollers, midge and thrips would have on Australian Native Species and it is reasonable to expect this impact to be determined prior to recommending the level of protection needed.

Biosecurity have every right under the S.P.S. agreements to apply more trade restrictive conditions if our environment is at risk.

The potential impact of control measures on our environment are also relevant when considering risk measures. Australia's apple and pear growers, have by world standards, a very good record of minimal use of chemicals, and as such Australian biodiversity benefits from this. The introduction of any of these identified pests would lead to an increase in chemical usage.

Fireblights main control practise is the application of antibiotics.

The effects of the use of antibiotics in food production is well documented and is a risk that we believe the Australian public were viewed as unacceptable.

11. Quantitative vs. Qualitative

Opinion versus fact is a very important part of the overall rigor of an I.R.A. There are many instances in the I.R.A. where the weight of scientific evidence is insufficient to reach a clear conclusion.

This is usually because there has been insufficient scientific experiments undertaken, or there has been different results from the same experiments undertaken by different scientists.

Some examples of this in relation to Fireblight are;

- Can the trade in apples result in the spread of Fireblight?
- What is the degree of infection or infestation of the Fireblight bacteria on mature apples?
- The level of risk is associated with the mechanical transfer of fireblight.
- The level of risk is associated with the insects within consignment acting as carriers.
- The ability of Fireblight to survive in or on discarded fruit.
- The ability of Fireblight to colonise non host species in variable colonies.
- What is the increased level of risk incurred by infestations in close proximity to registered blocks?
- What number of the bacteria is sufficient to cause infection?

As stakeholders we believe that if there is conflicting or insufficient scientific information in relation to any area, then any opinion should be made on the conservative side. This has not been the case in this I.R.A.

Biosecurity conclusions are based on the premise that while the bacteria will most likely be present, it wont be of sufficient levels to cause an infection.

With the clear scientific knowledge that this bacteria can replicate itself from one to 1,000,000 in seven hours if conditions are suitable and Australia having ideal conditions and plentiful hosts, we are sure that if this was a human disease there would be a public outcry at what is being proposed should be viewed as an acceptable level of risk.

12. State Quarantine

At present there are interstate quarantine regulations in relation to apples. For example Western Australia has a prohibition on apples due to apple scab and codling moth, Tasmania has stringent disinfestations criteria for other pests.

Under Biosecurities recommendations, New Zealand growers will be able to ship fruit into Western Australia, when Australian growers from every other state will be prohibited.

One of the W.T.O's benchmarks is what a country does internally. The rational is that if you impose rules on yourself, it is not unreasonable to impose the same rules on imports.

Biosecurity has now set a new precedent by having a lower set of standards for an importing country than applies to its own members.

The actions taken by states when the suspected outbreaks of Fireblight were reported in Melbourne and Adelaide are also relevant, as they are an example of what Australia views as appropriate conditions that apply to its own industry. A precise of the conditions imposed were;

- Removal of all infected trees
- Removal of all potential hosts within 500 meters
- Total quarantine in a 5 kilometer radius
- Embargo on interstate trade
- Total inspection over 2 seasons of all orchards in Victoria and South Australia to ensure there was no symptoms of fireblight.

Considering that there are no areas in New Zealand that are free of Fireblight, it is clear that Biosecurity wants to impose a far less protective arrangement than what was imposed on Australia growers with the outbreaks in Melbourne and Adelaide..

In relation to other pests, there are clear differences in how Australia is treated by importing countries. For example New Zealand requires a 35 kilometer exclusion area for fruit fly outbreaks. Midge and leafrollers are insects that have the potential to have an equal economic impact as an outbreak of fruit fly would have in New Zealand. Fireblight and European Canker would be much more devastating. Despite this Biosecurity proposes that there be no exclusion zone even if there is a severe outbreak within three meters of a registered block.

13. W.T.O.

There is no doubt that Biosecurity have a high level of concern in relation to a W.T.O. challenge by New Zealand. From our observation this is a common occurrence in all I.R.A.'s undertaken by Biosecurity.

It is relevant that Biosecurity personnel are not trade experts, and do not have legal training. Our contention is that an I.R.A. should be undertaken with W.T.O. policy issues left to trade and legal experts.

There is a very real danger that protecting Australia from any potential W.T.O. challenge will result in taking the "easy or safe options" when faced with issues that are reliant on opinions to resolve.

The recent W.T.O. case between Japan and the USA highlights the ability of respective parties to come to different conclusions. Biosecurity Australia believes that it sets a precedent while the industry, with advice from suitably qualified experts, sees it as having set no precedent with the present I.R.A.

Close scrutiny of the 200 page ruling clearly shows that the Americans won on a technical/ legal point. The W.T.O. ruling was based on the following;

- The science used by Japan to support their position was done on immature fruit (van de Zwett 1990), and as such did not demonstrate that Fireblight could be on mature apples. As the USA was proposing to export only mature apples, and Japan had not based their science on this, then the protocols were not supported by science.

- The W.T.O. Panel concluded that the Japanese process for undertaking the I.R.A. was not detailed enough.

From our perspective it would have been interesting to view the panels reaction if the submissions to the previous draft I.R.A. on New Zealand Apples had been tabled. Both New Zealand and the US stated in their submissions that while the Fireblight bacteria would be on mature apples the incidence would be low (5% to .03%).

14. LACK OF FAIRNESS IN APPEAL PROCESS

Biosecurity and AFFA (by way of Biosecurity being a division of AFFA) have a significant investment, by way of creditability and time, in this IRA.

Any significant changes from their present recommendations would result in the obvious observation that "They have got it wrong again", and their creditability would suffer.

The impact of this on the creditability of participating individuals, and the organisation in general, would be viewed as disastrous.

It is reasonable to assume that the overwhelming majority of stakeholder submissions, in response to the draft I.R.A, will put a contrary case to that of Biosecurity. The only avenue to pursue if Biosecuirty disagrees with stakeholder submissions is an appeal panel.

It is our belief that the Import Risk Analysis Appeal Panel does not have the independence that would be required within any legal process. In any legal process the members of the IRA appeal Panel would be excluded, due to their lack of independence from AFFA and Biosecurity.

The grounds of appeal also deny stakeholders due process, as they are too narrow and cannot disagree with Biosecurites conclusions.

The only two areas that the Panel can consider are;

1. Was there a significant deviation from the process set out in the I.R.A. handbook?

2. Was there a significant body of scientific information relevant to the outcome of the IRA that was not considered?

It is of note that the panel is specifically excluded from judging or considering the scientific merit of the I.R.A. The fact that the panel only has 45 days from the close of appeals to report its findings, does not reflect the complexity of considering such an important issue. If the process was a genuine appeal process, as a normal democratic process would require, the 45 days allowed is farcical.

As stakeholders we believe the appeal process has to be independent, and have the ability to take into account the scientific merit of the I.R.A. The appointment of an independent panel consisting of eminent people with the appropriate expertise, and fair terms of reference, is the least that we believe would be acceptable in a democracy.

We are sure that if the panel was made up of industry stakeholders, or their associates, you would be facing a similar request for independence from AFFA and Biosecurity.