



Australian Ginger Industry Association
Response to the draft *Review of import conditions for
fresh ginger from Fiji*
July 2015

1. Snapshot

Australian Government statement ¹	Australian Ginger Industry Association response
<p>Yam scale was detected in the four consignments from Fiji to date, prompting a review of phytosanitary measures and the subsequent recommendation of mandatory methyl bromide fumigation.</p> <p>There is insufficient scientific evidence to support the claim that Fiji has a strain of <i>Radopholus similis</i> with significantly different pathogenicity on ginger compared to <i>Radopholus similis</i> already present in Australia.</p>	<p>AGIA supports the introduction of mandatory methyl bromide fumigation treatment for yam scale.</p> <p>We are concerned the phytosanitary requirements for importation, which stipulated no presence of yam scale, were not followed by Fiji or indeed identified prior to export to Australia.</p> <p>AGIA rejects this assertion.</p> <p>It is the scientific opinion of Australia’s leading nematologists that the <i>Radopholus similis</i> found in Fiji is a more virulent strain than the nematode found in Australia. This opinion is supported by several research papers and complemented by relative work undertaken in Fiji. (Key papers are discussed and referenced throughout this submission.)</p> <p>There is increasing evidence that there are different strains of the <i>Radopholus similis</i> nematode and there is ample data to warrant further investigation. At its simplest, in field and in laboratory research has clearly demonstrated the non-pathogenic nature of the Australian strain of <i>Radopholus similis</i> on ginger whereas comparable studies in Fiji have shown highly pathogenic outcomes.</p> <p>Further, the Senate Standing Committee on Rural and Regional Affairs and Transport also questioned the Australian Government’s interpretation of the available scientific data and why the government had not actively sought to obtain more information before granting access to Fijian ginger.²</p>
<p>The only way to scientifically prove such a difference would be to do an experiment comparing Fijian and Australian <i>Radopholus similis</i> isolates side-by-side in an appropriately controlled trial using a methodology agreed by all parties.</p>	<p>AGIA agrees with this statement, as did the IRA’s Technical Expert Panel. We question why the Department of Agriculture has not championed this research or provided any assistance to progress this matter.</p> <p>Indeed, the draft report acknowledges that <i>Radopholus similis</i> continues to exist in Fiji.</p> <p>Why has more work not been done to find the isolate when we know it still exists and we know the regions in Fiji in which the outbreak previously occurred?</p>
<p>The department is prepared to reconsider the quarantine status of <i>Radopholus similis</i> if a significant biological difference can be</p>	<p>Time is needed to progress this research. Article 5.7 of the SPS Agreement states that provisional phytosanitary measures can be in place for a ‘reasonable time’ while additional information is obtained.</p>

Australian Government statement ¹	Australian Ginger Industry Association response
scientifically proven in this way.	The Australian Government’s recommendation to remove the provisional pest status of <i>Radopholus similis</i> after 18 months’ status has not provided reasonable time to obtain this relevant information.
<p>Initial discussions with the Fijian authorities indicate that no <i>Radopholus similis</i> cultures (alive or dead) are being held in Fiji and it may be difficult to source new specimens from the field considering its current reported low prevalence.</p> <p>The ongoing application of phytosanitary measures against <i>Radopholus similis</i> cannot be justified since it does not meet internationally recognised criteria for a quarantine pest. It follows that questions of treatment efficacy in relation to <i>Radopholus similis</i> are also no longer relevant.</p>	<p>AGIA is concerned the Australian Department of Agriculture seems to have accepted this argument on face value with little or no further action or investigation. It appears both the Fijian and Australian Governments have agreed that it will be too hard to find specimens so have decided to rule out the possibility before even trying to find any isolates.</p> <p>More research and more time will provide the evidence to meet these criteria.</p> <p>We do not understand why the Department of Agriculture is not advocating this on behalf of the Australian ginger industry.</p> <p>Given Australia’s ‘conservative approach to the management of biosecurity risks’, we would expect less willingness to ignore the scientific evidence and expert opinion of leading international nematologists and more commitment to protecting our borders.¹¹</p>
The department is prepared to review import conditions if additional relevant information becomes available.	<p>AGIA needs the support from the Australian Government – and in turn the Fijian Government - to resource and progress the side-by-side isolate research.</p> <p>In the meantime, additional research undertaken by QDAF researchers, and scientists worldwide, continues to reinforce the position that the strain of <i>Radopholus similis</i> in Fiji is different from that found in Australia. In 2015 Cobon again found in a second glasshouse experiment that ginger is an extremely poor host of the Australian variant.³</p> <p>During 2014/15 Smith and Cobon undertook an extensive soil survey that was representative of over 90% of the ginger industry. No burrowing nematode (<i>Radopholus similis</i>) was detected in these samples. Again, this indicates the strain of <i>Radopholus similis</i> found in Australia does not find ginger a conducive host.⁴</p>
Some non-quarantine pests were detected with no remedial action required.	All four consignments were found to contain live root-knot nematodes, demonstrating that the mandated methyl bromide treatment was ineffective against internal feeding parasites. If <i>Radopholus similis</i> had been present in the consignments, then it too would most likely have survived the fumigation treatment because <i>Radopholus similis</i> burrow more deeply into ginger

Australian Government statement ¹	Australian Ginger Industry Association response
<p>No soil, plant trash, or growing shoots were found in any of the consignments at inspection.</p> <p>The Australian ginger industry is likely to benefit from a high health seed scheme, which would reduce the likelihood that any ginger rhizomes purchased from markets – whether of domestic or overseas origin – would be planted.</p>	<p>rhizome compared to root-knot nematodes which are closer to the surface and more likely to be treated by surface spray.</p> <p>The live root-knot nematodes found in the consignments were identified as <i>Meloidogyne arenaria</i>. It is not known if the isolate of <i>Meloidogyne arenaria</i> detected in the ginger from Fiji is the same strain as previously recorded in Australia on bananas. Introducing a new strain of a plant pest can be as hazardous as introducing a new species. Furthermore, consignments of fresh ginger rhizomes that harbour live plant pests should not be accepted into Australia due to the risk of introducing new strains of plant-parasitic nematodes.⁵</p> <p>Indeed, given the Fijian ginger industry and its government are confident that <i>Radopholus similis</i> is no longer a threat to their ginger production, and are unable to locate isolates from the pest due to its purported low incidence, we question why the republic has not set a target to obtain area freedom status or even applied to be regarded as an ‘Area of low pest or disease prevalence’. To this end, we believe area freedom from <i>Radopholus similis</i> should be identified as a mandatory requirement for ginger importation into Australia.</p> <p>AGIA rejects this assertion. Inspections of five imported ginger boxes intercepted from Sydney market found soil, weeds, plant debris, in addition to the live root knot nematodes. Scientists from QDAF confirmed this and provided evidence.⁶</p> <p>AGIA supports the introduction of a high health / clean seed scheme for the ginger industry.</p> <p>We note that, in Fiji, the scheme is funded by the government’s Ministry of Agriculture. Given the Australian Government has recommended a clean seed program as a preventative measure for the Australian ginger industry, we would welcome a comparable investment by our government.</p> <p>Indeed, we do not believe the industry should be expected to fund and resource this scheme given its key purpose is protection from exotic pests and diseases, with the most significant risk being the Fijian strain of <i>Radopholus similis</i>.</p> <p>Additionally, given one of the primary methods of the spread of the pest is through the planting of contaminated materials, AGIA believes the use of imported ginger as plant material should be legislated as an offence. We request this in the shadow of the long-term damage the outbreak, and subsequent handling, of the citrus canker disease caused to the citrus industry in the last decade.</p>

2. Australian Ginger Industry Association's platforms

Given the issues summarised above, AGIA has the following nine requirements:

- The Australia Government needs to maintain mandatory methyl bromide fumigation treatment for yam scale.
- The Australian Government needs to acknowledge the substantial evidence that indicates there are differences between the *Radopholus similis* found in Fiji and the *Radopholus similis* found in Australia.
- Further, the Australian Government needs to commit resources and actively work with the Fijian Government to find an appropriate isolate of the nematode within that republic.
- Once an isolate is found, the government needs to support research into determining the differences between the Australian and Fijian *Radopholus similis* strains.
- The provisional pest status for *Radopholus similis* must be retained until this research is finalised.
- The Australian Government should provide funding for specialised training of biosecurity inspection staff in Fiji to minimise the risk of oversight specifically in the area of visual inspection for yam scale and monitoring of the sanitary conditions of consignments.
- The Australian Government should provide funding for a high health / clean seed program given the greatest risk of contamination comes from imported material, namely Fijian *Radopholus similis*.
- The use of imported ginger as plant material should be deemed as an offence under appropriate legislation designed to safeguard our industry from exotic pathogens.
- Area freedom from *Radopholus similis* should be identified as a mandatory requirement for importation into Australia.

3. What we know

- The strain of *Radopholus similis* in Fiji is highly pathogenic on ginger.^{7 8}
- *Radopholus similis* in Australia is not pathogenic on ginger but has proven highly pathogenic on bananas. Indeed, problems with *Radopholus similis* have never been observed on ginger in Queensland, despite the fact that that it has been grown for more than 70 years in areas where banana is infested with the nematode.⁹
- Further, an experiment to establish the pathogenicity of an Australian isolate of *Radopholus similis* to ginger in 2012 showed the nematode was not an aggressive pathogen of ginger.

In this study, the authors stated that their results “add to a large body of evidence which shows that *Radopholus similis* is a genetically diverse species, with isolates from various countries having different host preferences and rates of reproduction ... and underscore the need to ensure that the limited diversity of *Radopholus similis* within Australia is not enhanced by introductions of the nematode from elsewhere.”¹⁰

- A comparable study in 2009 using an isolate of *Radopholus similis* from Fiji showed this strain was a more aggressive pathogen, killing most of the ginger plant.⁷
- In a 2015 Ginger Field Day paper called *Safeguarding the Australian Ginger Industry from Exotic Plant-Parasitic Nematodes*, researchers Mike Smith, Jenny Cobon, Pauline Wyatt and Rob Abbas

clearly demonstrated the different reproduction responses between Fijian and Australia variants of the nematode (shown below in Table 1).³

Table 1: Reproduction of Fijian and Australian variants of *Radopholus similis*

Experiment	Multiplication rate @ 15-16 wks	Reference
Fijian variant	X 4.5 on ginger	Turaganivalu <i>et al.</i> , 2013
Australian variant expt. #1	X 0.95 on ginger	Cobon <i>et al.</i> , 2012
Australian variant expt. #2	X 0.21 on ginger	
Australian variant expt. #2	X 5.7 on banana	

This paper was the first step in conducting additional pathogenicity tests (following a funding commitment from the Rural Industries Research and Development Corporation) which will include a parallel analysis with the South Australian Research and Development Institute on a pathogenicity test with *Meloidogyne arenaria*.

As part of this new project:

- the pathogenicity of the Fijian strain of *Meloidogyne arenaria* compared to the Australian strain on ginger will be evaluated in side-by-side experiments
 - an effective methyl bromide fumigation treatment that will safeguard the Australian ginger industry from the unwanted introduction of live plant-parasitic nematodes, such as *Radopholus similis* and *Meloidogyne* spp., on fresh ginger imports will be sought to be identified.
- As part of this paper, a second experiment with the Australian variant of *Radopholus similis* was conducted in 2015 using Williams banana as a susceptible control to prove the virulence of the Australian strain of *Radopholus similis*. The numbers of nematodes recovered from ginger in this experiment again suggested that ginger is an extremely poor host of the Australian variant, while banana is an excellent host. It also demonstrated the experimental conditions in the glasshouse were conducive to burrowing nematode survival and multiplication, providing a susceptible host was present.³
 - In an extensive survey of ginger production areas in Queensland conducted in 2014-2015 by specialist nematologists, no *Radopholus similis* was found in any soil samples collected from ginger farms representing 90% of the industry.⁴
 - An independent assessment of current literature by CSIRO nematologist Dr Mike Hodda, CSIRO has indicated that it is highly likely that Australian and Fijian populations of *Radopholus similis* are different biological entities with differing pathogenicity and perhaps host relationships.¹¹
 - In 2014, the European Food Safety Authority (EFSA), at the behest of the European Commission, published a Scientific Opinion on the pest categorisation of *Radopholus similis*, primarily comprising a literature review. This paper identified intraspecific diversity, clearly stating there are different strains with different pathogenicity profiles.¹²
 - Despite assertions that the prevalence of *Radopholus similis* is low – and potentially undetectable according to the Fijian and Australian Governments – research in Fiji by Turaganivalu et al published in 2013 states: “ ... the reason the [*Radopholus similis*] nematode continues to cause problems is that many growers fail to ensure that the recommended hot water treatment is applied correctly.”⁸

- There is no suggestion that *Radopholus similis* has been eradicated, and it is likely that *Radopholus similis* is still present in some areas in low numbers, or surviving on other host plants.” Australian Government *Department of Agriculture*.¹

4. Discussion

4.1. The Australian Government’s position

Australia’s Federal Department of Agriculture announced its final import risk assessment (IRA) for the importation of fresh ginger from Fiji in January 2013.

Following evidence from stakeholders, including world scientific experts and Queensland Department of Agriculture and Fisheries senior researchers, the burrowing nematode *Radopholus similis* was identified as a provisional pest in the IRA and, accordingly, specific phytosanitary requirements were established, with a commitment by the Australian Government to revisit and review the arrangement in 12 months time.

In June 2015, the Australian Government released its draft *Review of Import Conditions for fresh ginger from Fiji* which, in short, recommends:

- the introduction of methyl bromide treatment for yam scale (*Aspidiella hartii*)
- the removal of the provisional pest status for *Radopholus similis* and all phytosanitary controls for mitigating the risks associated with the importation of this pest.

The decision to remove all phytosanitary controls for *Radopholus similis* is based on the position that there is not enough evidence to prove significantly different pathogenicity between the *Radopholus similis* nematodes found in Fiji and in Australia. Further, the Federal Department of Agriculture (FDA) states that there is currently no evidence that *Radopholus similis* is causing damage to ginger crops in Fiji and that detection levels are currently nonexistent.

The FDA states that the only way to scientifically prove a difference between the two nematodes, and therefore ban imports (or at least enforce long-term phytosanitary protocols) is to conduct a side-by-side experiment in an appropriately controlled trial using a mutually agreed methodology. The Technical Expert Panel for the Import Risk Assessment agreed.

However, the Fijian Government has indicated that there are no available *Radopholus similis* cultures and it may be difficult to source new specimens from the field.

The Australian Government has accepted this assertion and appears to have chosen to not pursue the matter further but instead weaken its publicised benchmark of biosecurity protection and remove all provisional phytosanitary requirements. This means that there will be no mitigation measures to stop the potential introduction of the Fijian *Radopholus similis* nematode.

The Australia Government has not explained why it has taken no action to champion a search for an isolate from Fiji. The only statement made to date is in the draft *Review of import conditions for fresh ginger from Fiji* report which states “Initial discussions with the Fijian authorities indicate that no *Radopholus similis* cultures (alive or dead) are being held in Fiji. It may be difficult to source new specimens from the field considering its current reported low prevalence.” The terms *initial*, *indicate* and *may* suggest the government has not invested any resources in furthering this essential investigation.¹

Further, the FDA does not appear to be concerned that:

- All of the four consignments sent from Fiji to date were found to contain live root-knot nematodes, demonstrating that the mandated treatment of methyl bromide was ineffective against internal

feeding parasites. If *Radopholus similis* had been present in the consignments, then it too would most likely have survived the fumigation treatment⁵ (particularly as it typically burrows deeper). Despite this, there has been no discussion of revising the fumigation treatment process or requesting area freedom status from Fiji.

- The live root-knot nematodes found in the consignments were identified by QDAF staff as *Meloidogyne arenaria*, a species that has never been recorded on ginger in Australia, although it has been recorded on banana in this country. Introducing a new strain of a plant pest can be as hazardous as introducing a new species.⁵
- Yam scale was detected on the four consignments of imported ginger during the first season of trade, despite the import protocols requiring for the ginger to be free of this pest. The FDA's response was to introduce methyl bromide fumigation.
- Inspections of five imported ginger boxes intercepted from Sydney market found soil, weeds, plant debris, in addition to the live root knot nematodes.⁶ Indeed, the FDA appears to have overlooked this in its review stating that 'No soil, plant trash, or growing shoots was found in any of the consignments at inspection'.

4.2. The Australia Ginger Industry Association's position

AGIA recognises that the Australian Government's importation decisions must be made within the requirements of the World Trade Organisation and the multitude of trade, biosecurity and phytosanitary bodies and instruments that form the regulatory framework around international trade.

We also note that the Australian Government's position on managing pests and diseases is summarised in the Final IRA as:

"Successive Australian Governments have maintained a conservative, but not a zero risk, approach to the management of biosecurity risks. This approach is expressed in terms of Australia's ALOP, which reflects community expectations through government policy and is currently described as providing a high level of protection aimed at reducing risk to a very low level, but not to zero."¹¹

This is in conflict with the recommendations for importation of Fijian ginger.

In particular, we are concerned that the government has taken a position of inaction in regards to *Radopholus similis* and interpreted guidelines in a manner which leads to a resolution of the issue for the government but creates an array of potential problems for the ginger industry (and also potentially for the banana, citrus, pineapple, potato and ornamental flowers sectors because *Radopholus similis* can also infest these crops) and exposes us to a risk that will have long-term, irreparable damage.

Specifically, there is growing evidence, and recurrent expert opinion, that there are different 'strains' of *Radopholus similis* throughout the world, including between the nematodes found in Fiji and Australia. There is certainly enough data to warrant further investigation before exposing the Australian ginger industry to unnecessary risk. This includes published papers and analysis by the world's leading nematologists including Turaganivalu in Fiji and Stirling, Cobon and Smith in Australia, referenced throughout this paper and in previous submissions by AGIA, QDAF and other concerned organisations.

Along with Australia's leading experts in this field, the FDA agrees that a side-by-side study of the *Radopholus similis* isolates from Fiji and Australia is the only way to scientifically prove a difference between the two. However, Fiji's advice that it cannot find any samples of *Radopholus similis* in the entire country has seen the Australia Government accept this unequivocally and, in response, recommend the removal of all phytosanitary requirements associated with the nematode.

AGIA believes this is a passive mindset and sets a dangerous precedent - if foot and mouth disease was present in another country but then could not be located (and the region had not been granted area freedom or proved eradication), would it be deemed acceptable to allow meat to be imported into Australia from these other countries?

Instead of using the extensive evidence we have to champion the discovery of more information to lead to a clear conclusion, it appears the Australian Government is choosing to ignore the growing body of science to date and not actively support the discovery of additional knowledge.

This evidence includes cornerstone research findings such as:

- *Pathogenicity of Radopholus similis on ginger in Fiji*, by Turaganivalu, Stirling, Reddy and Smith in 2009⁷
- *Burrowing nematode (Radopholus similis): a severe pathogen of ginger in Fiji*, by Turaganivalu, Stirling and Smith in 2013⁸
- *An experiment to examine the pathogenicity of an Australian isolate of Radopholus similis on ginger* by Cobon, Smith and Stirling in 2012¹⁰

as well as more recent studies by Cobon and Smith, as outlined previously in this submission.^{3 4}

We understand that the Australian Government cannot be seen to be protectionist but we assume other nations would expect our government to protect its industries when there is clear evidence of high risk.

Our concerns are amplified by what appears to be a substantial lower level of pest management standards and phytosanitary practices in Fiji, demonstrated by:

- Fijian officials not keeping any isolates of a pest (the *Radopholus similis* nematode) despite it causing major destruction to the Fijian ginger industry
- advice that it would be too hard to find any isolates on farms, even though it caused extensive damage during the past several years and has not been eradicated, which the FDA states in their review
- consignments to date carrying yam scale, against the Australian importation requirements, despite this being a pest AGIA was advised could, and would, be visually identified with the correct training and expertise
- the presence of unacceptable levels of soil, weeds and plant debris in five imported ginger boxes intercepted from Sydney market.

Add to this the recommendation by the FDA to remove all biosecurity practices for minimising the spread of *Radopholus similis* to Australia – including crop rotation, hot water treatment and clean seed use (the last two of which were highlighted as key factors in spreading the nematode by Turaganivalu et al in 2013 because Fijian growers were not following prescribed practices⁸) – and it should become evident why Australian ginger growers are alarmed.

Surely, these practices should be mandatory when exporting to Australia if indeed our approach to managing biosecurity risks is conservative rather than reckless?

4.3. Four actions needed

Accordingly, we request the Australian Government to take four simple steps:

- Acknowledge the expert scientific opinion of leading researchers and appreciate there is substantial evidence – both in field and in laboratory – to suggest *beyond reasonable doubt* that there are

differences between the *Radopholus similis* found in Fiji and the *Radopholus similis* found in Australia.

- Commit resources and actively assist the Fijian Government to find an appropriate isolate of the nematode within that country. The statement on page 3 of the draft *Review of Import Conditions for fresh ginger from Fiji* that initial discussions with the Fijian authorities indicate that no *Radopholus similis* cultures (alive or dead) are being held in Fiji and that it may be difficult to source new specimens from the field considering its current reported low prevalence, does not give AGIA confidence that our government has actively pursued this matter. This is essential as the government has to date dismissed all other evidence of differentiation and stated that this isolate is needed to clearly prove the variations between the nematodes in Australia and Fiji, and the subsequent importation risks.
- Once an isolate is found, support research into determining the differences between the Australian and Fijian *Radopholus similis*.
- Retain the provisional pest status for *Radopholus similis* until this research is finalised. AGIA estimates this may take up to five years given the seasonality of ginger in addition to the time required to gain the nematode isolate, undertake the study, undergo peer review and publish the results. If this is the extent of evidence the Australian Government needs to classify *Radopholus similis* as a quarantine pest, we argue that the time it takes to achieve this should be deemed as 'reasonable'.

5. The interpretation of science

5.1. Science should not be ignored

One of the challenges horticulture producers historically face when managing the pest and disease risks of importation of produce is the ease with which our very real concerns can be readily dismissed as an attempt to simply protect our patch; to stop all and any imports as competition.

Yet as successful business people, we are the first to recognise we have no commercial standing to stop imports. Further, even if intra-border monopolisation was our goal, we are well aware it is a short-sighted and futile one within the context of the World Trade Organisation. We simply wish to protect the integrity of our product.

This is why AGIA is greatly concerned and confused about the Australian Government's decision to overlook several core facts, and scientific evidence, in recommending the removal of key quarantine measures related to Fijian ginger and, specifically the risk of the highly virulent *Radopholus similis* nematode in that republic.

There is sizeable evidence, and scientific support, that the strain of *Radopholus similis* in Fiji is much more aggressive than its counterpart in Australia and, should this strain enter our shores, is likely to cause high levels of damage.

Our industry has been advised during the import risk assessment process that we need to provide more scientific proof – to unequivocally prove differentiation in *Radopholus similis* strains – to champion more rigorous phytosanitary protocols or to stop importation altogether.

The only way of achieving this is to conduct side-by-side analysis of the *Radopholus similis* found in Fiji and the *Radopholus similis* found in Australia.

The Fijian Government has advised it has no isolates to allow this to occur and finding 'fresh' samples in the field would be difficult given its reported low prevalence. This is despite the fact the pest has not been eradicated and the locations of prior outbreaks have been identified and recorded.⁸

There appears to have been little effort on behalf of both governments to further this discussion and, specifically, the Australian Government appears to have undertaken little if none additional investigation into this matter.

This is extremely disappointing for the Australian ginger industry as there is enough scientific evidence to warrant further research – and general consensus among all parties about what that research should comprise – and yet there appears to be little appetite from our government representatives to explore further. Rather, the recommendation is to ignore the science to date and open our gates.

5.2. Further science must be done, give us time

“The ongoing application of phytosanitary measures against Radopholus similis cannot be justified since it does not meet internationally recognised criteria for a quarantine pest. It follows that questions of treatment efficacy in relation to Radopholus similis are also no longer relevant.

The department is prepared to review import conditions if additional relevant information becomes available.” Federal Department of Agriculture, *Draft Review of import conditions for fresh ginger from Fiji*, p. 3.¹

AGIA recognises that certain international criteria must be met for *Radopholus similis* to be identified as a quarantine pest. We also highlight that new research has been undertaken since the release of the IRA which further demonstrates the benign nature of *Radopholus similis* in relation to ginger crops in Australia. We understand QDAF is providing this research as part of its submission, and we have referenced it throughout this paper.

We accept – and have previously agreed with the Australian Government – that to scientifically prove variations between the nematodes, molecular testing and comparison of the Australian and Fijian isolates of *Radopholus similis* in side-by-side pathogenicity experiments is required.

Currently, the extensive – and growing – body of international research, in field, in laboratory and in literature reviews, strongly demonstrates that there are different strains of *Radopholus similis* and that the Fijian strain of *Radopholus similis* is more virulent than Australia's. To this end, our expectation is clear, reasonable and commonsense – we want time for that research to be undertaken.

There are currently three barriers to this:

- advice by the Fijian government that there are no isolates of the nematode available
- the Australian Government's willingness to accept this and reluctance to champion further investigation
- the Australian Government's definition of reasonable time.

“Article 5.7 of the SPS Agreement states:

In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of the available pertinent information, including that from the relevant international organizations, as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

As the department's decision resulted in additional phytosanitary measures that have an impact on trade, Australia is obliged under the SPS Agreement to justify its decision and present credible scientific evidence to substantiate its position." Federal Department of Agriculture, *Draft Review of import conditions for fresh ginger from Fiji*, p. 15¹.

Given there appears to be no prescriptive definition of a 'reasonable period of time' within the SPS Agreement, we assume that the intent is that the gathering of additional information while a provisional measure is in place will take no longer than is reasonably required. The absence of a stipulated time period further supports this assumption.

Accordingly, AGIA questions why the Australian Government seems eager to remove the provisional measures if there is still outstanding information to be gathered? This is information that could save the Australian ginger industry – and others – from major long-term damage.

We are not alone in this position. The Senate Standing Committee on Rural and Regional Affairs and Transport in late 2014 questioned how the available scientific data had been interpreted and why the Australian Government had not actively sought to obtain more information before granting access to Fijian ginger in the place. The committee commented that some of risk assessments appeared to defy logic and did not appear to be scientifically robust.²

This supports AGIA's perspective that there appears to be a schism in the decision-making logic by the Australian Government on this matter. On one hand, the government disputes and, in some cases, seems to ignore the growing evidence and informed opinions of leading researchers that variations of the *Radopholus similis* nematode exist. On the other, the government has accepted at face value Fiji's position that it will be highly problematic to provide an isolate of the pest that damaged up to 50 percent of some ginger crops and is yet to be eradicated from the region.

With respect, we believe that if the Federal Government showed the same level of goodwill and confidence towards the international scientific community and the Australian ginger industry as it has the Fijian Government and the ginger farmers it represents, we would not be having to make another argument for what we believe is a reasonable, defensible international trade practice.

To reiterate, AGIA requests that the provisional phytosanitary measures currently in place be retained until both Fijian and Australian isolates of *Radopholus similis* can be found and studied side-by-side.

5.3. Additional issues and concerns

- **Yam scale** - AGIA supports the Australian Government's recommendation for mandatory methyl bromide treatment for yam scale. We reiterate our concern that the initial prerequisite for yam scale to not be present on Fijian imports was not met, suggesting deficient inspection procedures within Fiji.
- **Site surveys in Fiji** - currently, the surveying of ginger production areas in Fiji has only occurred once since mid 2014, with some additional surveying of volunteers earlier this year. This surveying needs to be conducted on an annual basis jointly with Australia.
- **High health seed scheme** - AGIA supports the introduction of a high health seed scheme for the ginger industry, as recommended by the Australian Government. However, we do not feel the industry should be expected to fully fund and resource this scheme given its key purpose is protection from exotic pests and diseases, specifically *Radopholus similis* from Fiji.
- **Planting imported material an offence** - given one of the primary methods of spread of the pest is through the planting of contaminated materials, our position is the use of imported ginger as plant material should be made an offence under appropriate legislation.

6. About the Australian Ginger Industry Association

The Australian Ginger Industry Association represents the country's commercial ginger growers, most of whom are based in south east Queensland.

The Australian ginger industry currently produces about 8000 tonnes of ginger each year with 60% sent to fresh markets across Australia and 40% used in the process industry.

The ginger growers and processors are important employers in regional centres, creating more than 1000 jobs, comprising about 760 full-time jobs and 385 casual jobs during peak harvesting periods.

The net value of ginger farmed in Australia is estimated at \$32 million.

The estimated value of industries in Australia that rely on ginger for processing into brewed drinks, confectionery and therapeutic goods is \$100 million.

Unlike other industries with a diversity of locations, the Australian ginger industry is concentrated primarily in the south east corner of Queensland. This means the introduction of virulent pests and diseases can be particularly devastating as there are little to no geographic barriers in place.

References

¹ *Review of import conditions for fresh ginger from Fiji Draft Report*, Australian Government Department of Agriculture, 2015

² *Effect on Australian ginger growers of importing fresh ginger from Fiji Final report*, Rural and Regional Affairs and Transport References Committee, 2014

³ *Reproduction of the burrowing nematode, Radopholus similis Experiment 2*, Cobon J, 2015

⁴ *Results from a survey for plant parasitic nematodes in the Australian ginger industry during 2014-2015*, Smith M and Cobon J, 2015

⁵ *Safeguarding the Australian Ginger Industry from Exotic Plant-Parasitic Nematodes*, Smith M, Cobon J, Wyatt P and Abbas R, 2015

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