

***Templeton Ginger Pty Ltd***

SUBMISSION TO SENATE INQUIRY

INTO THE EFFECT ON AUSTRALIAN GINGER GROWERS OF  
IMPORTING FRESH GINGER FROM FIJI

I thank you for the opportunity to make a submission to the Senate Rural and Regional Affairs and Transport References Committee into the effect on Australian ginger growers of importing fresh ginger from Fiji.

My name is Shane Templeton. I am a 3<sup>rd</sup> generation ginger grower and am on the board of directors of Buderim Ginger Ltd.

My father, sister, wife and I run a ginger business which my grandmother and grandfather started 70 years ago. They were one of the first members of the Buderim Ginger Co-Op and started growing a few square meter block of ginger. Our business has slowly grown to in excess 65Ha of ginger. This is arguably the largest ginger farm in the world.

Our family has seen all the ups and downs of the ginger industry. It has seen the introduction of Bacterial Wilt Biotype IV which almost wiped out the industry in the 1960's. Bacterial Wilt Biotype IV can start in a small corner of a 2Ha field and spread across it in 3-5 days causing 100% loss. The only way to combat this was to quarantine any infected fields and either leave the infected equipment there or steam sterilize it thoroughly so as not to shift any infected soil particles elsewhere.

We have also just seen the fungal disease pythium create havoc in our industry over the last few years. The industry has worked very hard to combat this disease with research and development from its voluntary levy. The industry has had to change some farming practices based on that research and is now starting to get back on its feet.

My sister recently participated in an information seeking trip to Japan and spoke to a Japanese farmer who said "Ginger is a hard crop to grow. It is very susceptible to pest and disease, which is why it is a higher paying crop".

A Provisional Final Import Risk Analysis Report for fresh ginger from Fiji has been completed. How could this affect the Australian ginger industry?

## Our Concerns

- Burrowing Nematode (*Radopholus similis*) has been provisionally accepted as a quarantine pest and will be reviewed after one year (page V PFIRA). Page 56 (PFIRA) also adds the review will be done within 12 months and must support taxonomic retention for the pest risk management to be kept in place.

If Burrowing Nematode (*Radopholus similis*) was to enter Australia it would be as devastating to the ginger industry as Foot & Mouth disease would be to the cattle industry. Burrowing Nematode has been found to be pathogenic on ginger in Fiji, with losses of up to 70% of their crop. It could not only affect our yields but would affect our access to overseas markets like Japan. On the other hand Australia's

Burrowing Nematode is not pathogenic on ginger and there is no loss of crop. Our family business has previously exported to Japan approximately 15 years ago. We were required to test our ginger prior to exporting for burrowing nematode. Any positive test would stop that ginger from being exported to Japan.

The only imported pest and disease worse than Burrowing Nematode would be Bacterial Wilt Biotype 4, which as discussed earlier can wipe out 100% of a ginger crop in 3-5 days. The Field Trip Report did state this needed to be investigated further. I'm not aware of any further testing done in Fiji to alleviate my fear of this coming into Australia.

This import request is to deliver ginger into Australia, anywhere! It is not limited to 1 or 2 places with strict quarantine restrictions. It can be bought by anyone, anywhere for almost any use. Any piece of ginger can be used as planting material intentionally or unintentionally. Ginger has a complex morphology with lots of crevices allowing soil to hide in corners and between rhizomes. A study conducted by DEEDI showed soil less than 1 gram in weight still contained up to 17 nematodes. Free from soil must be just that, FREE FROM SOIL. A few grains of soil is all it would take to introduce Burrowing Nematode. Otherwise other risk mitigation measures are required.

Ginger is grown mainly in the south east corner of Queensland but can be grown in areas from Tropical Australia to the lighter temperate regions. In Japan ginger is grown in areas where it snows in winter. The ginger is grown in the warmer months of the year and then harvested and stored just prior to the winter snow. Our biosecurity should take care to protect not just the present ginger growing areas but also future potential growing areas.

Whilst most of these points are recognized by DAFF Biosecurity, I believe the risk associated with them, have been grossly underestimated.

- The Burrowing Nematode's Pest Risk Management measures are either:-
  - A systems approach such as:
    - Use of clean seed certified nematode free, or seed dipped in hot water at 51 degrees Celsius for 10 minutes and either Crop rotation program using non-host crops and fallow periods or
    - Production in a recognized area of low pest prevalence

**OR**

- Methyl Bromide Fumigation or other suitable treatments, either in Fiji or on arrival into Australia.

These risk mitigation measures raise many questions:-

- **Clean Seed Certified as Nematode free.**

(1) How is this produced e.g. is it in a sterile environment, like a greenhouse?

(2) Who certifies it?

(3) What procedures has it gone through to be certified free from Burrowing Nematodes?

(4) Is it tested after the mother seed phase to check if it's free from Burrowing Nematodes?

**(b) Hot Water Treatment – 51 °C for 10 minutes**

Our family business has performed this for control of root knot Nematodes and found results to be varied. It is very difficult to keep the temperature right when adding ginger planting material which is introduced at a lower temperature than 51 °C. This planting material pulls the water temperature down a number of degrees when introduced and can render the Hot Water Treating process ineffective.

The ACAIR project also stated in Fiji Hot Water Treatment was done incorrectly and at temperatures that were insufficient to kill Burrowing Nematodes.

Questions for this section are:

(1) Who does the Hot Water Treating?

(2) Who checks that it is done properly?

(3) Is the ginger checked after treatment to see if it is free from Burrowing Nematodes?

**c) Crop Rotation**

Our family business practices this system with pasture grasses like Rhodes Grass and Green Panic which are highly resistant to Root Knot Nematodes. We have found with fields of high populations of Root Knot

Nematodes they are still very much present after a number of years not producing ginger.

The ACIAR project states in Fiji, Burrowing Nematode populations are being maintained during crop rotations on volunteer ginger and common weeds like crows foot.

Why have the results of this study been ignored, or why are we satisfied with using Risk Mitigation Measures that are being used in Fiji ineffectively?

(d) **Production in an Area of Low Pest Prevalence**

The ACIAR report says Burrowing Nematode can multiply to relatively high levels in a few months. This means an area of low pest prevalence can be an area of high pest prevalence in a few months. This is far too loose and should be a total area freedom. Other questions are:

- (1) How is this area determined?
- (2) Who determines this area?
- (3) What level of soil testing is required to have **area freedom**?
- (4) Who polices whether this ginger produced in **area freedom** is the ginger placed in the boxes to be sent to Australia?

All the above risk mitigation measures are in my opinion not quarantine measures they are farm management tools to lower the incidence of pest and disease. The ACIAR project states clearly when Burrowing Nematode infested seed is planted, *Radopholus similis* can multiply to relatively high levels within a few months. Likewise if Burrowing Nematode-free seed is planted in infested soils that seed is readily susceptible to infection. Hence all you need is some Burrowing Nematodes left in this system somewhere and you will have a **major** problem.

(e) **Or Methyl Bromide**

This word "OR" means it is not compulsory. If the above systems approach is used, which I believe will be useless, Methyl Bromide is still not required to be used.

What rate, time and temperature will be used to kill Burrowing Nematodes? “Burrowing” as it suggests goes into the ginger. We have found no suggested rates, time or temperature on ginger to be effective. Shouldn’t tests be done by someone independent to determine this?

I am also led to believe, but haven’t confirmed, processed ginger imported from Fiji is all fumigated. If this is correct, why is it processed ginger must be fumigated and fresh ginger isn’t?

3. Yam Scale has been determined as a quarantine pest. Yam Scale Pest Risk Management measures are Phytosanitary inspection by BAF.

Yam Scale could affect Australian grower’s yields and leave pieces unmarketable if introduced into Australia. It should also be noted that Yam Scale has many other host crops. Yam Scale can be so small it is not necessarily detectable to the human eye.

- How can physical inspection be an adequate risk measure?
- Page 55 of the Provisional Final IRA also notes fumigation for Burrowing Nematode (ginger variant) will also be effective for Yam Scale. This is correct if it was compulsory, but it is not so how can this statement are made?

- 4 My other concern about this IRA is the lack of science and data to give a good solid Risk Assessment to stop pest and disease entering the country.

One of the Biosecurity Queensland officer’s views on the Draft IRA added to my early concerns and sticks very firmly in my mind, “It is hard to comment on the science, when there is very little science to comment on”.

The Field Trip Report which as stated in the Draft IRA, provided the information that formed the basis for estimating unrestricted risk in the Import Risk Analysis (page 15), was only 3-4 pages long (without tables and pictures). If this forms the basis of a risk assessment, how can 3 to 4 pages of information be adequate to give proper Risk Assessment?

- 5 I also question the process of the IRA.

How DAFF Biosecurity can place new risk mitigation measures in the Provisional Final IRA for control of Burrowing Nematode and no-one has the opportunity to comment on the science of these risk mitigation measures? To me this seems unjust and shows this process needs change.

6. DAFF Biosecurity 's comments that Burrowing Nematode will be reviewed in one year from the implementation of policy and if the review doesn't support the taxonomic retention of the Burrowing Nematode (ginger variant) the measures will be reconsidered.

These taxonomic tests will take 3 years at a cost of around \$500,000. How can anyone do a 3 year test in 1 year? How can a small industry like the ginger industry afford a \$500'000 test? Once again this seems unjust.

7. Australia's largest competitive advantage of being an island nation, being clean, green and very pest free is under threat. We will never be the cheapest producer so if we lose one of our only other competitive advantages, I have grave concerns for the Australian Ginger Industry as well as other Australian agricultural industries.
8. The report of Dr Mike Smith and Dr Jenny Cobon et al demonstrated the difference in the Burrowing Nematodes pathogen between Australia and Fiji. Shouldn't this be a warning that this attitude of "no evidence means there is no risk" is a biosecurity time bomb and is a much larger issue than DAFF Biosecurity are taking for granted?

My 100 employees, other growers and other members of the public ask me what is going to happen to the Australian ginger industry? My answer is the ginger industry is at high risk of having new very serious pests and diseases in Australia with this present form of the PFIRA. The ginger industry is not just a way to make a living for me, it is my passion and heritage. I ask that my questions be raised and seek adequate answers.

Once again I thank the Senate for this opportunity.