AGIA Meeting Dates

**Annual General Meeting**  
29th April 2013 7.00pm

**General Meeting** 29th April 2013 7.45pm

These meetings are fundamental to the conduct of business for YOUR industry association so it is in your best interest to attend and have the opportunity to voice YOUR concerns.

You should have received your notice of meeting for the AGM, but if not please contact Jann on the numbers or email below and she will make sure you receive whatever information your require.

**Biosecurity Field Day**  
29th May 2013 9.30am

The Ginger Industry will be launching its Industry Biosecurity Plan that has been compiled by Plant Health Australia over the past 8 months. As part of the Field Day there will be demonstrations of the practical ways in which you as growers can use the information included in the IBP AND manage your farm safely.

**AGIA Annual Field Day & Annual Levy Payers’ Meeting**  
27th June 2013 8.30am

A day that will cover project updates, new research, a report on the ginger industry marketing program and YOUR opportunity to provide vital input into levy expenditure.

AGIA IRA Update

There has been an interim report released by the Senate Inquiry into the Risk Matrix. DAFF Biosecurity use this to determine the “risk” of pests and diseases that occur in overseas countries who are applying to export their product into Australia.

The Senate Inquiry has postponed its final report on the Ginger, Pineapple and Potato IRAs until June 24th so they can widen their consultation regarding the risk matrix.

In the meantime, DAFF Biosecurity have “ticked” the Final Provisional IRA for Fijian fresh ginger imports, but have said in their notice to AGIA that they will take note of the final report from the Senate Inquiry. Based on this final decision, AGIA will be meeting with DAFF Biosecurity in May to discuss and gain a better understanding of the expectations surrounding the *Radopholus similis* research that needs to be undertaken to ensure the risk mitigation measures that have been put in place, are maintained.

DAFF Biosecurity have to engage in dialogue with the Biosecurity Authority of Fiji to develop a work plan taking into account the measures that are part of the Final IRA. It is believed this will take months to achieve and will require Biosecurity Authority of Fiji to conduct and audit to satisfy the phytosanitary conditions of the IRA.
**PRJ-008343 Controlling Pythium In Ginger: Phase 2**

Phase 2 of our research into controlling Pythium in ginger is nearing completion with the final report due in July 2013. Over the last two years we have confirmed the importance of surface drainage, improved water infiltration rates, and rotation with cereal crops like oats (winter) and sorghum (summer) for disease control. These practices act together to improve the soil’s structure and restore the soil’s biology in a way that suppresses Pythium and prevents severe disease epidemics from occurring.

Research has also shown that metalaxyl and mancozeb, used in combination, can significantly improve Pythium control, particularly when applied when the first signs of Pythium are encountered in the ginger crop. Rhizome has been recovered from these fungicide field trials for residue analysis and obtaining registration for its use is the next step to complete.

Results will be presented at the Field Day and we would also like to complete a Pythium fact sheet in poster form that can be displayed in farm sheds and work rooms.

The project is funded by the ginger industry levy via RIRDC.

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**PRJ-008862 Marketing Project**

**Background:** The threat of imported ginger has considerable ramifications for Australian growers in terms of increased market competition and the potential risk of introduction of plant diseases that could impact domestic production. While 90% of Australian consumers have experienced ginger (tried it/occasionally consume it) we hypothesise that the Australian public is not fully aware of the full range of potential uses for and benefits of ginger (taste and health) and has little awareness of country of origin of the ginger they consume. Demand for ginger, particularly in relation to ginger that is Australian grown has not yet reached its full potential. There is a clear need to develop the domestic market for Australian ginger to address both of these issues.

**Economic benefits:** Increased profitability for Australian growers in terms of greater ability to prioritise investment in areas of greatest potential return. Increased sales volume and value for their product within Australia.

**Social benefits:** Increased understanding of the benefits of Australian ginger for health and wellbeing.

**Environmental benefits:** Decreased risk of disease from imported ginger.

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**PRJ-008338 Extention & Education Officer**

The E&EO has been:
- working in conjunction with Rob Abbas and Anthony Rehbein engaging with prospective Corporate Sponsors which has been received very positively.
- Finalising the information available on the new AGIA web site which will be live by mid April.
- Co-ordinating meetings and contacts of supply chain partners for Brand Story
- Working with PHA, Biosecurity Queensland, Mike Smith and Rob Abbas to co-ordinate the Biosecurity Field Day
- Attended a Roundtable meeting hosted by Andrew Metcalfe, Secretary DAFF discussing the new Biosecurity legislation and issues associated with such
- Working with RIRDC to assist in project reporting and brief outlines.

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**PRJ-008532 Improving Soil Health to Suppress Soilborne Diseases of Ginger**

Previous projects into the control of Pythium Soft Rot has indicated that some of the critical measures to limit losses are through the use of organic amendments & cultural practices that are thought to improve soil health.

This project attempts to build on research bit with an emphasis on understanding how soil health can be improved to lead to more productive and sustainable ginger farming systems.

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**AOTGRI-143 Improving Soil Fertiliser Irrigation Management for SEQ Ginger Production**

Improving soil management by adopting better soil practices (eg minimum tillage, legumes in conjunction with cover cropping) will assist the soils ability to store carbon and improve productivity. Outcomes will include: improved fertiliser efficiency; improved fallow management; improved irrigation management; increased water infiltration rates; improved soil condition; improved capacity to store carbon in the soil; reduction in nitrous oxide emissions; capacity of four soil types to sequester and store carbon will be estimated using current soils carbon models; and predicting soil carbon trends across the region.
“Half way through January and still no sign of rain.”

This was the first line that I wrote in our last newsletter. Well who would have thought that since the Australia day weekend the rain has not really stopped, not to mention the total of over a metre for February.

Of course this has had a huge impact on our ginger crop for 2012/13. Firstly from slow early development, due to heat damage and high evaporation and then followed by Pythium and flood damage due to excessive rainfall and removal of oxygen from soils.

As we speak the early harvest intake did not top 900 tonnes, which is the lowest I can remember. This provides a good gauge for the state of our industry.

So what has been done and in what direction do we go to maintain the viability of our unique industry that is Australian Ginger.

The industry has now conducted 4 seasons of research reviewing all aspects of Pythium control. It has researched all available overseas data, including visits to Fiji and Japan and has enlisted the expertise of experts including plant pathologists, nematologists, soil biologists, soil health consultants, private and agricultural chemical company researchers and not forgetting fumigation, composting and soil health experts.

In short *Pythium myriotylum* is considered an endemic pathogen in Australia. It is widespread and has a wide host range, especially with several important vegetable crops including Tomato, Capsicum, Cucurbits and Carrots. So why are other crops achieving levels of control and we are not?

Simply because these crops have one susceptible growth stage during early development and they are not grown during the hot wet season. Ginger is unique in the fact that it is a sterile rhizome crop that continually has soft vegetative underground susceptible growth material and is grown during the hot and wet season.

Keep in mind the progress that we have made into controlling the disease since it first appeared.

1. Transfer of the disease through planting material and contamination from seed dips suggesting the recommendations for the use of clean seed and no seed dips.
2. A diagnostic tool that provides proof of *Pythium myriotylum*.
3. Confirmation of the high levels of oospores in infected soil material necessitating the need for quarantine measures and use of clean soils until controls in infected soils are found.
4. Confirmation through M38 mapping that high eC soils are more susceptible to *Pythium* due to generally lower organic carbon levels and poor internal drainage.
5. That improved drainage and the use of cross drains significantly reduce infection levels and act as quarantine barriers inside blocks.
6. That improvements in soil health by fallow cropping and improvements in organic carbon levels have greatly improved soil biology and the soil’s suppression of *Pythium*. The reduction in heavy tillage operations also improved the soils drainage characteristics.
7. That surface water movement is responsible for transfer of motile zoospores that were mapped at 5m per day in some studies. Contamination of clean blocks can occur due to this transfer.
8. Water studies found that where foot valves were placed at depth and away from edges of dams no trapping trials tested positive.
9. That any crop damage including Nematodes, Symphyllids, spray damage and wind rub will provide entry point for the disease.
The use of fumigation increased infection levels of soil borne diseases where fumigation was conducted within 3 months of planting and when no further mitigation measures were used.

That the practice of rouging infected plants and spot spraying using Mancozeb/Metaxyl mixes greatly reduced disease spread. Current results also provided statistical levels of control using this chemical combination through high volume under canopy application.

Where do we go next

Keep in mind that to date we have not found a silver bullet control of both Pythium and Fusarium in ginger.

We do know however that the control of these diseases in ginger culture will involve the use of the findings already gained as the basis for an integrated disease approach.

For my mind this seasons work on the industry soil health project will continue to steer us in the direction of finding the key soil indicators that drive these diseases.

The start of work utilizing soil fumigation to reduce infected soil disease levels followed by soil mitigation measures that increase beneficial microorganisms should also get us started on the road to re-planting some valuable lost soils.

The achievement of a permit to use under-canopy high volume Mancozeb/Metaxyl mixes will also aid when weather conditions greatly increase disease pressure.

Improvements in surface drainage, reduction in ponding and maintenance of soil oxygen levels will continue to bind the cornerstone of controls.

Ginger Block Perimeter Controls

I believe nearly all growers know the importance of maintaining ginger block perimeters. How many actually focus strongly on it and how many actually are aware of the loss of production in true dollars would be far less. This season following huge amounts of rain I have seen heaps of blocks that have lost considerable dollars in production.

Let's do some conservative sums taking a 1 Ha block. 1Ha equals 10000m2 or 100m long by 100m wide. That equals 400m of exterior length of perimeter. Let's take a conservative loss of 1 meter around the block and a 20% yield decline.

That's 400m2 at ave 50tonne Ha at 20% yield loss = 400kg @ $4kg = $1600.00

Now keep in mind this is a very conservative figure and this year alone the losses experienced due to

1. Wet ends and Erwinia.
2. Tree rot losses during our dry spring.
3. Weeds and grasses getting out of hand following rain.
4. Restriction of free drainage from blocks inducing pythium.

Would far outweigh the loss of 20% over 1 metre around block.

The sugar industry has done much research into loss of production from poor weed control around perimeters and suggest similar losses.

So as we prepare for block selection and preparation for the 2013 planting season a bit of extra effort to maintain perimeters at very low input costs utilizing a scraper blade, slasher and a bit of roundup I would bet will pay off 10 fold.