

# Australian Bananas

Issue 43, Summer 2014-15

## Water wise

Tips for better irrigation



Page 10  
Freckle levy proposal



Page 23  
Killing the bills



Page 40  
Sign-up for Congress





We are protecting ourselves and the environment...

We are saving time and money...

We are looking after the family's future...

# We are Confidor

Aaron & George Serra  
Banana growers  
Tolga, Qld



www.bayercropscience.com.au

Bayer CropScience Pty Ltd, ABN 87 000 226 022, 391-393 Tooronga Road, Hawthorn East, Victoria 3123. Technical Enquiries 1800 804 479. Confidor® is a Registered Trademark of Bayer.

BCH0319

**editorial & advertising**  
Rhyll Cronin  
07 3278 4786  
rhyll.cronin@abgc.org.au

**art direction & design**  
ToadShow  
2 Eton Street, Toowoong  
07 3335 4000  
www.toadshow.com.au

**publisher**  
Australian Banana  
Growers' Council Inc.  
ABN: 60 381 740 734

**chief executive officer**  
Jim Pekin

**research and  
development manager**  
Jay Anderson

**industry strategy manager**  
Michelle McKinlay

**office manager**  
Alix Perry

**administration assistant**  
Kaylar Packer

**BOARD OF DIRECTORS**

**chairman**  
Doug Phillips

**deputy chairman**  
Adrian Crema

**treasurer**  
Paul Johnston

**directors**  
Tom Day  
Steve Lizzio  
Stephen Lowe  
Peter Molenaar  
Stephen Spear

**all mail to**  
PO Box 309  
BRISBANE MARKET  
QLD 4106

**Australian Bananas**  
is published three times a year by the Australian Banana Growers' Council Inc as part of the Banana Industry Communications Project. This project has been funded by Horticulture Innovation Australia Ltd (HIA) using the banana levy and matched funds from the Australian Government.

**Disclaimer**  
Horticulture Innovation Australia Ltd (HIA Ltd) and ABGC make no representations and expressly disclaim all warranties (to the extent permitted by law) about the accuracy, completeness, or currency of information in this magazine. Users of this material should take independent action to confirm any information in this magazine before relying on it in any way. Reliance on any information provided by HIA Ltd and ABGC is entirely at your own risk. HIA Ltd and ABGC are not responsible for, and will not be liable for, any loss, damage, claim, expense, cost (including legal costs) or other liability arising in any way (including from HIA Ltd's and ABGC's or any other person's negligence or otherwise) from your use or non-use of the magazine, or from reliance on information contained in the magazine or that HIA Ltd and ABGC provide to you by any other means.



contents

# Australian Bananas

Issue 43, Summer 2014-15

## Regulars

- 4 Chairman's comment
- 5 CEO's comment
- 39 Health
- 42 ABGC Membership

## Industry news

- 6 HIA transition
- 8 Review of biosecurity regulations
- 8 Horticulture levy inquiry begins
- 9 Bananas makes import risk analysis submission
- 9 Ginger import review starts

## Biosecurity

- 10 Levy proposed for Freckle eradication
- 12 Magpie geese arrive in Tully

## Farm practices

- 14 National Banana roadshow - growers show the love
- 16 Results from the roadshow soil-health survey
- 19 drumMUSTER for banana growers

## Features

- 20 Irrigation without the irritation - Reef water quality grants
- 22 New round of reef grants to open
- 24 Kill a bill - reducing farm energy costs
- 25 Orchards lay off the juice - results from energy study



Tiger Mereider with a newly-automated irrigation system at his East Palmerston farm

Photographer: Rhyll Cronin



New IDO Matt Weinert Page 30

## Profiles

- 26 Next-gen scientist - science-career hopes for Emily Pattison
- 28 Next-gen grower - fresh-food passion brings home Rob Johnson
- 30 Matt's mission - new industry development officer Matt Weinert
- 42 Sharing the industry passion - new ABGC director Stephen Lowe
- 43 Back on Board - returning ABGC director Tom Day

## Professional development

- 32 Study tour - taking a trip to banana central

## International

- 34 Toxic past challenges French West Indies

## Events

- 36 Murwillumbah Show - younger growers stand out
- 37 Banana Hurl - bananas an energy gift at Macksville
- 38 Banana Race Day - 2000 at Innisfail gallops
- 40 Banana Industry Congress 2015 - registrations open soon

PAGE 26

PAGE 28

PAGE 42

PAGE 43





# Highs and lows of footy and farming



**In a year with the usual highs and lows there remains one event sticking in my mind that I continue to struggle with - I can't believe Queensland lost the Origin series!**

That was, of course, a memorable event from beyond the farm gate. There was also another set of highs and lows for a range of industry events during 2014.

Tropical Cyclone (TC) Ita in April was a low, in every sense of the word, for the Hope Vale Banana Farm and some other banana farms in its path.

Fortunately, the cyclone inflicted far less damage on the wider North Queensland industry than it could have. Another major interruption to supply so soon after TC Yasi and TC Larry would surely have tested the patience of even the most stoic banana consumer, as well as the resilience of many banana farmers.

Much time and effort has also been invested in the Banana Freckle response this year. While the eradication plan that was approved in October has some obvious significant and drastic impacts on growers within the Northern Territory, I have no doubt these steps are necessary to protect the national industry from the impacts of this particular pathogen. It

will also assist the longer-term future of NT banana growing.

We have also seen Horticulture Australia Limited (HAL), the organisation that manages our levy investment, undergo a significant review (see story, Page 7). The review was in response to the ACIL Allen report and the concerns about the undue influence some industry bodies had over the company and the investment process. The result of this review was the creation of a new entity, Horticulture Innovation Australia Limited (HIA), from November 2014. HIA will have the growers as the direct owners, as opposed to the various industry bodies.

We also experienced record production for the 2013/2014 financial year with levy data indicating 28.6 million cartons of bananas were produced and sold. At time of writing, supply for the current financial year, while strong, has not kept pace with the previous year. However, the returns to growers have been firm.

While many factors impact on the wholesale price it has been evident that demand for bananas has been strong and this is in no small part due to the work of the Australian Bananas marketing team. We certainly look forward to continuing success in this area.

As we move toward the end of the year it is also appropriate to look forward to what we can expect next year.

The freckle response will obviously continue to demand our attention as we progress through the eradication plan. We will also work toward the introduction of a positive Emergency Plant Pest (EPP) production-based levy to repay industry's share of the response costs. Information about this process appears on Page 10. More detail will be provided in 2015.

As further details of HIA's operations come to light we will need to work with, and adapt to, the new processes to ensure maximum benefit continues to be achieved through the investment process.

A new three-year marketing strategy will be developed for banana marketing activities. This work recently commenced with a review of the current strategy and activities. The remainder of the strategy's development will occur in the first few months of 2015 and it is intended to kick off in July. This represents an opportunity to continue to build on the fantastic work that has already been achieved.

2015 will also be the year of the industry's biennial Congress. For the first time we are taking the event to a capital city - Melbourne. For those of you who have attended a Congress before, you are fully aware of the benefits, both social and professional, of participation. For those yet to attend, I cannot stress enough how important this event is. It is much more than simply listening to the presentations and walking through the exhibition - you will learn things that will benefit you and your business - so I encourage all to attend.

Of course one additional benefit of attending will be the opportunity to see a State Of Origin match played at the MCG on the first night of the Congress, June 17. And, given my struggle with this year's outcome, one of the things I'm looking forward to for 2015 is seeing Queensland regain control of the Origin!

Merry Christmas to all and a happy and safe New Year.

**Doug Phillips**  
ABGC Chairman

**Banana Freckle eradication in the NT will continue in 2015.**

# A look at ABGC's report card



**At the start of 2014, the Australian Banana Growers' Council (ABGC) reconsidered its strategic direction and clarified its roles to:**

- ensure the viability of the Australian banana industry for growers
  - manage and act on industry issues, including policy-related ones
  - communicate information to growers and other stakeholders and
  - ensure effective and efficient outcomes for marketing and R&D initiatives.
- The main ABGC priorities for 2014 were then determined to be:
- Banana Freckle eradication management
  - member communication and engagement
  - HAL review
  - Import Risk Analysis
  - Queensland Biosecurity Regulations
  - Quality Banana Approved Nursery (QBAN) scheme.

The following "report card" is my assessment of our performance.

## Banana Freckle

Senior ABGC staff have dedicated most of our time this year to the various government processes and issues relating to a response plan for freckle. Following these processes, a very large, zone-based eradication program started in October (see story, Page 10). Growers' share of the costs will be \$11 million to \$13 million. The Australian Bureau of Agricultural Resources and Economics and Sciences (ABARES) calculated the cost would have been many times larger than this if freckle were to spread to the main growing regions. We have recently expressed our thanks to the NT Primary Industry Minister and his Department of Primary Industry and Forestry staff for their leadership as the combat state.

## Members

The amount of time on freckle issues has meant fewer farm visits and meetings for me with members than I would have liked. However, ABGC showed its value when it counted. One example is when

Cyclone Ita approached and hit some farms badly on 12 April.

ABGC continues to enjoy the support of most growers and our membership numbers have again increased this year.

Growers are fortunate to receive a range of industry communications. Our Communications Manager, Rhyll Cronin, has delivered improved communications in 2014 through media releases, our website and Banana Grower e-bulletins, as well as through the Australian Banana News and Australian Bananas magazine. In addition she has produced new banana industry videos which will soon be released.

## HAL review

Early in the year there were numerous meetings regarding ACIL Allen's review of Horticulture Australia (HAL). ABGC then made a detailed submission to that review. But the ACIL report, when published in May, did not reflect or mention any of ABGC's points. The implementation of the reforms to HAL is underway, but not without some issues, as noted in my accompanying article (see story, page 7).

## Biosecurity priorities

ABGC Research and Development Manager Dr Jay Anderson had to juggle a variety of tasks during 2014. Her main activity has been technical advice on Banana Freckle. Consequently the revamping of QBAN is not advanced as she would like. However, she worked on the Panama Tropical Race 4 risk management plan and assisted in an ACIAR project on Panama. She also assisted in external reviews of the Bunchy Top project and the Banana Plant Protection Program, and in the development of the black Sigatoka trigger point plan and has provided technical advice on Biosecurity Queensland options regarding banana pest regulations.

As a result of the importance of biosecurity issues, we developed a project proposal, advertised for and employed an additional person, Michelle McKinlay, to develop strategies for biosecurity (and, later on, other priorities). Michelle started in July and has been working on Queensland biosecurity regulation issues and Import Risk Analysis (IRA) matters.

She has written a submission on the IRA process and has provided advice on the implications of ginger imports.

## Industry development

It's also worthwhile mentioning some of the other work conducted by the ABGC. Space does not allow me to list all the 2014 outputs from ABGC staff, so the following is a cross section:

- participated in and provided secretariat for the Banana Industry Advisory Committee (IAC), its scientific and marketing subcommittees
- developed relationships with politicians and senior departmental people. Also hosted two (then) Senators-elect on a NQ banana farm tour, Senators Matt Canavan and Barry O'Sullivan
- developed submissions on agricultural chemical issues and on the Senate inquiry into levies
- developed, with Jenny Margetts, the industry's new Strategic Investment Plan
- led and reported on the banana capacity building project
- assisted in the design of the extension materials for the National Banana Development and Extension Program that resulted in the July and August roadshows
- supported the NSW Banana Industry Development Officer Project. Matt Weinert began in the role in October
- developed a project with the Department of Environment and Heritage to assist best management practice in Queensland
- planning for an exciting Banana Industry Congress in Melbourne next year.

Robert Mayers, who is now one year into the Terrain project, has delivered valuable grants to growers.

Louis Lardi successfully delivered on his yellow Sigatoka project, as well as helped the NT Banana Freckle operations staff with destruction techniques.

Sam Stringer and Barry Sullivan are gradually eradicating Bunchy Top from south east Queensland.

**Jim Pekin**  
ABGC Chief Executive Officer





## HIA happenings

### 2001

Horticulture Australia Ltd (HAL) is established as the Research & Development Corporation (RDC) for horticulture

### July 2013

An independent review of Horticulture Australia Ltd (HAL) announced by the HAL Board. It is HAL's third periodic review since 2001. HAL has 43 owner-members, mainly Peak Industry Bodies (PIBs), and invests about \$100m annually in R&D and marketing

### July

ACIL Allen, one of Australia's largest management consultancies, is commissioned to conduct the review

### October

The first stage of ACIL Allen's three-stage review begins a review of HAL's past performance, the industry model and levy structure

### December

Stakeholder consultation begins, including national briefing sessions. About 50 written submissions are received

### May 2014

ACIL Allen delivers its report making nine recommendations including that HAL be transitioned to a new entity and no longer be owned by grower groups but directly owned by growers. The HAL Board meets with HAL members to discuss the report

### June

A HAL members' extraordinary general meeting (EGM) supports the transition to a grower-owned entity with 95% of members' votes in favour

### October

Federal Agriculture Minister Barnaby Joyce announces the formation of a new horticulture RDC called Horticulture Innovation Australia Ltd (HIA). A nine-member HIA Board is appointed comprising five of HAL's eight directors and four new directors.

### November

HIA replaces HAL. There is a temporary freeze on levy-funded project payments when a Statutory Funding Agreement expires on November 3. A new agreement and HIA's constitution are finalised and announced on November 25.

## Growers asked to sign-on with HIA

Banana growers are among the thousands of farmers being asked to sign-on as direct owners of horticulture's new R&D funding company, Horticulture Innovation Australia Ltd (HIA).

HIA replaces the former body, Horticulture Australia Ltd (HAL), after a review decided to scrap the industry-owned HAL and replace it with a group directly owned by growers.

Federal Agriculture Minister Barnaby Joyce and HIA Chairman Selwyn Snell both made announcements on November 25, the day a Statutory Funding Agreement was finalised. The agreement will allow the Commonwealth Government to contribute government funds towards levy-funded R&D projects.

Minister Joyce said it was "a new era for horticulture".

"I am confident that this new model – recommended by an independent review by ACIL Allen – will deliver even greater transparency and accountability to levy payer owners and give them a real say in how their levy funds are invested as well as the outcomes they want to achieve for their industries," Minister Joyce said.

Mr Snell said it was an exciting time for growers and that he was looking forward to working with them.

"I am delighted that HIA's Statutory Funding Agreement and Constitution have been finalised and Parliament has made the official declaration of HIA as

# Horticulture Innovation Australia

the industry services body," Mr Snell said. "This declaration represents the first major step forward for the new company.

"HIA will work in partnership with Australia's horticulture industries to invest more than \$100 million in research, development and marketing programs that provide benefit to industry and the wider community."

HIA Chief Executive Officer John Lloyd said a key priority was establishing a grower registry so HIA could communicate directly with its members.

"There are many benefits in becoming a member, including the opportunity for growers to have a say in the leadership and future direction of Australia's new horticulture RDC," he said.

"Members will also be invited to attend information forums, field days and workshops held around the country."

Minister Joyce has also encouraged all levy payers to become members of HIA.



## Hopes for quick resolution in HIA transition

Many growers have asked what is happening at Horticulture Australia Ltd (HAL) with its transition to Horticulture Innovation Australia (HIA).

The situation at time of writing (November 17) is not pretty, but we hope most of the issues will soon be resolved in favour of growers.

On November 4, HIA replaced HAL. HIA is a public company that will be owned by individual grower share holders.

The Government appointed four of its nine directors. The other five are from the HAL Board. HIA does not yet have a constitution, any members, or a statutory funding agreement (SFA) with the Department of Agriculture.

### Funding freeze

HAL's assets were transferred to HIA on November 4 but HIA is currently not allowed to make payments on HAL-contracted milestone invoices or to enter into new contracts. This is because there is an SFA dispute between the Department and the HIA Board over the operation of HIA.

Consequently, there are no decisions being made on the replacement structures for the Industry Advisory Committees (IACs), which until October 31 advised HAL on the R&D and marketing investments.

### Unclear future

There is also no news yet on whether all industry levy funds for R&D will be matched by the Government. And there is no decision on whether, or how much of, the levy funds will go to across-industry and strategic projects.

Banana growers have, in the main, trusted the ABGC to consult, communicate and represent banana growers as a member of HAL and they have trusted the Banana IAC to provide appropriate investment advice on banana R&D and marketing.

Right now it is not clear what role Prescribed Industry Bodes (PIBs) like ABGC will have in the future. It appears the Department does not trust some PIBs and IACs and this lies at the heart of the reasons for the HAL review and the current dispute over the SFA.

### ABGC requests

ABGC has requested the new arrangements include the concept that all R&D levy funds provided by banana growers be matched by the Government and dedicated to banana-related projects. This is what banana levy payers voted for in 2007 when the vast majority supported the national banana levy proposal.

ABGC has also submitted that we should continue to be able to enter into HIA contracts to deliver projects where that is appropriate, for example communication, consultation and industry development projects. ABGC's Board of grower leaders and our staff are well connected to banana grower networks. We have the trust of industry because we are accountable to all growers. We also operate on a not-for-profit basis. Where ABGC is not the only potential service provider for a project, we are comfortable for that project to be put out to competitive tender.

ABGC does not want HIA to be pushed by the Department into being overly bureaucratic with any processes that are inefficient or unnecessary. HIA is not a statutory authority so operational matters should not be dictated by the Department.

### Changes expected

A massive change in structure and operational processes is now expected and this will take time to sort through. It is hoped that banana growers and ABGC are consulted by HIA through this transition.

We trust that common sense prevails in the procurement of service providers for projects and with grower consultation meetings. That is, if HIA plans to have regular direct meetings with growers of all crops in a dozen or so locations around the country, they would need to be planned well for growers to attend and be cost effective.

We are also keen to see the Banana IAC replaced with something similar, that is, a structure where keen and capable banana growers have input into the priorities and projects to be funded by their levies. A decision on this is required soon for both marketing and R&D.

### Banana projects

In regard to marketing, which only growers fund (and at about \$4 million per year), banana industry input is imperative. The next three-year marketing program starts in July 2015, and there are a lot of development work decision points before then.

It is also hoped that the new R&D investment decision process is put in place soon so that new projects can be applied for, assessed and contracted from 1 July 2015. The Bunchy Top project, Dr Jay Anderson's R&D Management project and the yellow Sigatoka project all finish at the end of this financial year. The industry needs all three to continue with some changes, but seamlessly, from July.

ABGC understands it will take about a year to have a HIA share registry up and running. In the meantime, growers need to not only be informed but have the opportunity to provide advice on the use of their levies.

by Jim Pekin  
ABGC Chief Executive Officer





# Call to keep leaf-spot regulation

The Australian banana industry is awaiting the outcome of a Queensland Government review of biosecurity regulations amid concerns changes could diminish future enforcement of yellow Sigatoka outbreaks.

About 30 North Queensland growers attended an Innisfail briefing from Biosecurity Queensland (BQ) on proposed changes to the regulations. About six growers also attended a separate briefing held on the Tablelands, at Mareeba.

The November briefings were part of BQ consultation on a Regulatory Impact Statement (RIS) it released in October as part of changes being made prior to the introduction of the Biosecurity Act 2014. The new Act is to come into force by no later than July 1, 2016.

The Australian Banana Growers' Council (ABGC) and banana grower associations have made submissions on proposed changes.

All banana grower groups are concerned about an option to drop a regulation that states an infestation of yellow Sigatoka (leaf spot) occurs when a banana plant leaf has at least 5 per cent disease coverage.

BQ is considering changing this section of the regulation to a guideline supporting the Government's new General Biosecurity Obligation (GBO) that obliges everyone to take reasonable

steps to prevent or minimise a biosecurity risk.

The ABGC is viewing any removal of the 5 per cent infestation regulation as a fundamental shift in the Government's approach to biosecurity and a major concern for the banana industry.

It is the ABGC's view that such a change could redirect BQ resources away from yellow Sigatoka enforcement because it would not be considered as a "high" biosecurity risk. The banana industry currently funds a yellow Sigatoka liaison officer to inspect farms but it is BQ's role to enforce any breaches. Other options being considered by BQ are:

- changes to existing biosecurity zones
- changing or removing restrictions on the number and variety of backyard banana plants that can be grown outside the main banana growing region
- removing the need for commercial planting permits
- a decrease to the number of BQ fees but increased prices for those that remain.

The ABGC agrees with biosecurity zone changes, as long as there is a pest

protection area around the main banana growing region.

The ABGC supports the removal of the restrictions on the number and species of backyard banana plants that can be grown outside the main growing regions.

This is because the regulation is very difficult to enforce as the population of south east Queensland grows. In the state's north, untended plants in the Far Northern Biosecurity Zone are unlikely to survive unless cultivated.

Any removal of commercial planting permits is not supported by the ABGC as they are an invaluable tool for industry when trying to trace the source of disease incursions, especially exotic ones. The ABGC would prefer to keep a plant permit system but would like to work with BQ to develop a more simple, grower-friendly system.

The RIS also outlines options for changes to regulations for the mango, sugarcane, cattle and bee industries.

Submissions closed on November 21 and announcements on BQ's decisions on future regulations are expected by early 2015.

For further information: Please contact ABGC Chief Executive Officer Jim Pekin 07 3278 4786.

## Inquiry flags levy-payer update

The first hearings of a Senate Inquiry into agriculture and horticulture levies has flagged there may need to be a review of levy-payer records.

The inquiry is looking into the levy system which uses payments from growers to fund industry projects including research and development as well as marketing.

Industries including sugar, pork and grains appeared at the inquiry's

first day of hearings in Canberra in late November. More hearings have so far been scheduled for Sydney and Melbourne in early February.

At the November hearing, the Federal Department of Agriculture confirmed it did not have a list of all Australian levy payers but that consultation with levy payers was conducted by industry services bodies.

In response, inquiry member, South Australian Liberal Senator Anne Ruston said: "I think one of the early recommendations that is likely to come out of this hearing is that there has to be way more

emphasis on identifying who the levy payers are, because there's a myriad of benefits that come out of that," she said.

"It's not just for the purpose of expending research and development, but from a biosecurity perspective too."

The inquiry is being conducted by the Rural and Regional Affairs and Transport References Committee and is due to report by June 30, 2015.

The inquiry was convened after NSW Liberal Democratic Senator David Leyonhjelm opposed proposed levy increases for the mushroom, mango and onion industries.

# Bananas in import risk submission

Submissions on the import risk analysis (IRA) process are now being considered as part of changes to Australia's Quarantine Act.

The Australian Banana Growers' Council (ABGC) is among horticulture and agriculture groups who have made about 50 submissions as part of industry consultation on the changes.

The import risk process is being reviewed as part of the move to new biosecurity legislation and the Biosecurity Bill 2014 was introduced to Federal Parliament in late November.

The legislation is of major importance to the banana industry because of its interests in biosecurity and the threat of exotic pests being introduced with imported produce.

Federal Agriculture Minister Barnaby Joyce said the legislation, if passed, would provide a national capability to respond



to pest and disease incursions within Australia.

For more information on the Biosecurity Bill 2014 and the supporting legislation, visit [www.agriculture.gov.au/biosecuritylegislation](http://www.agriculture.gov.au/biosecuritylegislation) or subscribe to the Biosecurity Bill 2014 subscription list at <https://agriculture.custhelp.com/>.

The legislation is of major importance because of the threat of exotic pests.

## Ginger import review starts

A review of import conditions for Fijian ginger has been announced following industry biosecurity concerns and a find of live nematodes in some of the first imports to arrive.

The banana industry has been among industries to voice concerns over any biosecurity risk posed by the fresh ginger imports.

Of particular concern to bananas is any risk of Fijian burrowing nematodes (*Radopholus similis*) entering Australia. The nematode appears to be a more aggressive pest than nematodes already found in Australia, based on the damage it causes to Fijian ginger.

Although the live nematodes found in a box of imported Fijian ginger in September were a different type of nematode, root-knot nematodes (*Meloidogyne* spp.), there are concerns about the nematodes surviving quarantine fumigation.

Australian Banana Growers' Council (ABGC) Chairman Doug Phillips wrote to Agriculture Minister Barnaby Joyce in October outlining the industry's

concerns and calling for a suspension of ginger imports until a review of quarantine procedures was conducted.

In response, Minister Joyce said he was not aware of any new evidence to indicate ginger imports presented a risk to Australia's banana industry. Fresh ginger imports have not been suspended.

In November, Minister Joyce announced the review, originally scheduled to take place 12 months after the start of imports but now brought forward.

Submissions are open until December 19 and a draft report is expected to be released by April 2015.

In a statement, Minister Joyce said: "It is important that industry and the community have confidence in the import protocols imposed by the Department of Agriculture to mitigate risk. I am pleased

therefore that the Director of Quarantine has brought forward the review in order to clarify the science around *Radopholus similis*."

The Minister said media reports suggesting a compromise of the biosecurity status of the ginger industry were "misguided".

"While tests performed by the Queensland Department of Agriculture, Fisheries and Forestry on a consignment of imported ginger did find live nematodes—root-knot nematodes—these are already found in Australia and their presence was not a surprise, nor a quarantine concern."

He said independent tests had confirmed the live nematodes were root-knot nematodes.

The import review is looking at existing and new science on the quarantine status of burrowing nematodes and the efficacy of measures to manage identified biosecurity risks.



# Freckle eradication

Banana Freckle is the most serious banana-pest incursion since black Sigatoka hit Tully in 2001. A national committee has approved a \$26 million eradication.

A plan for a production levy of 0.75 cents-a-kilogram is now being discussed with banana growers to fund the industry's share of the Banana Freckle eradication in the Northern Territory.

Under the terms of a joint government and industry agreement, the Emergency Plant Pest Response (EPPR) Deed, the banana industry must contribute to the eradication fund via a compulsory production levy.

Banana growers will contribute between \$11 million and \$13 million towards the eradication's \$26 million budget. The Northern Territory, State and Commonwealth Governments and the nursery industry will contribute the balance.

The Australian Banana Growers' Council (ABGC) has been representing the banana industry in national

## 0.75 cents-a-kg levy proposed to fund freckle fight

consultative committee discussions on the eradication. The Commonwealth Government will pay the banana industry's share of the response costs and the ABGC is now proposing a 0.75 cents-a-kilogram Emergency Plant Pest (EPP) Levy to repay the funds.

ABGC Chairman Doug Phillips said the levy proposal had been discussed at the ABGC's Board meeting held on November 27 and 28. ABGC directors spoke about the potential amount per-kilogram and likely timeframe for repayment.

The levy will be paid in addition to the existing 1.7 cents-per-kilogram levy which funds industry research and development and banana marketing.

"We will be continuing to consult with banana growers about the proposal for repaying the EPP loan," Mr Phillips said.

"The ABGC Board's proposal is for the EPP levy to be struck at 0.75 cents-per-kilogram of bananas produced. On a carton basis, that equates to 9.75 cents for each 13-kilogram banana carton.

"The levy will be paid by all commercial banana growers in Australia and collected by the Commonwealth Government's Levies Revenue Service, in the same way as the existing R&D and marketing levy.

"We are proposing that the levy should start on July 1, 2015 and we would expect it to be in place for about five to six years. The exact time will depend on banana production figures, the final cost of the freckle eradication and the EPP loan's interest rate, which will be set to match the inflation rate.

"The proposed levy is based on expectations of national banana annual production averaging 25 million cartons, or 325,000 tonnes. This is below the record annual production for the last financial year of 28.6 million cartons."

Mr Phillips said banana growers had been kept informed about the freckle

incursion since it was first detected in July 2013.

Information has also been provided about the need for an EPP levy. This included a letter sent by the ABGC to all growers on October 10 this year when the final eradication response was announced.

The eradication was approved after a national consultative committee found it was technically feasible to eradicate the disease. A national management group of government and industry groups then decided to proceed.

In making their decision, the groups considered an analysis from Commonwealth Government economists from ABARES who conducted a benefit cost analysis. This found the cost of the eradication to banana growers would be many times lower than the cost if the disease spread to major growing regions. "We wrote to banana growers on October 10 and have now written again to provide an update on the levy proposal," Mr Phillips said. "We will also be contacting banana grower associations and will discuss the issue at the associations' upcoming meetings."

The EPP levy structure was put in place in 2013 with the levy set at zero until needed to fund a pest response.

The freckle eradication will be the first use of the levy by the banana industry and one of the first times the new EPP levy system has been used in Australian horticulture. It is a compulsory levy, unlike the voluntary levy used to fund the successful eradication of black Sigatoka from north Queensland when the disease was found there in 2001.

Mr Phillips said any levy payers with comments or concerns about the levy should discuss them at the upcoming banana grower association meetings or raise them by 1 February with ABGC CEO Jim Pekin by emailing jim.pekin@abgc.org.au

Left: Eradication work in the NT.



## Red-hot effort in six zones

More than 45,000 residential properties are in the NT's six freckle-hit "red zones" where surveillance and banana plant destruction has begun.

The summer wet season is a key danger period for the spread of freckle, a fungal spore which can move from plant-to-plant in water splashes – such as those caused by rain.

Visits to properties which are harder to access during the wet are among the priorities for field officers who are working to have all banana plants within the red zones destroyed by next April.

It is expected that about one-quarter of the properties have banana plants and these will be destroyed by field officers or by residents using guidelines provided as part of the eradication.

Regulations for the destruction and treatment of banana plants have been endorsed by the NT Government.



Field officers have been appointed and Australian Banana Growers' Council (ABGC) Yellow Sigatoka Liaison officer Louis Lardi has visited the NT to assist in training the field officers in plant destruction and stem injection.

The effort is being led by National Banana Freckle Eradication Program State Coordinator Kevin Cooper. Mr Cooper, formerly of the NSW Department of Primary Industries, is a veteran of emergency work including floods, fires and exotic disease outbreaks with his efforts recognised in the 2013 Australia Day honours list.

He has worked on emergencies and disasters including Newcastle Disease at Mangrove Mountain in 1999, the horse flu epidemic in 2007, and marine and plant pest incursions in 2010. He was deployed to assist with Foot and Mouth Disease (FMD) operations in the UK in 2001.

The program has launched an extensive communications program including a Banana Freckle Hotline, detailed red-zone maps and information materials for the public and media and roadside signs identifying red zones.

More information is available at [www.dpif.nt.gov.au/bananafreckle](http://www.dpif.nt.gov.au/bananafreckle)

Above: Field officers travel throughout the red zones to destroy banana plants.

Left: Banana plants are cut down and stem injected.

## Freckle facts

- new three-year plan to eradicate Banana Freckle (*Phyllosticta cavendishi*) from Australia by mid 2017 with work started in October 2014
- total cost of eradication, including work already conducted, estimated at about \$26 million and jointly funded by banana growers, the nursery industry and Commonwealth, State and Territory governments
- commercial banana growers' contribution expected to be about half, in the range of \$11 million to \$13 million, with a 0.75 cents-per-kg levy proposed
- all banana plants to be removed from six "red" zones – the Greater Darwin area; Rum Jungle and Batchelor, south of Darwin; Dundee Beach, south west of Darwin; Naiyu/Daly River, south west of Darwin; Milikapiti on Melville Island; and the Ramingining Aboriginal community in west Arnhem Land
- a four-phase approach of removing banana plants; a banana plant-free period including a full wet season; controlled reintroduction and monitoring of banana plants and assessment of freedom from the pest
- movement controls for banana plants and fruit
- Owner Reimbursement Costs (ORCs) for affected commercial banana growers and production nurseries.





## Concerns over plant damage as magpie geese arrive

**Magpie geese have been damaging crops in the Northern Territory and are now finding their way to Queensland. Gavin MacKay and Richard Piper provide this report on damage to banana plants in the Tully Valley and Murray Upper.**

**Magpie geese have been found feeding on young banana plants in the Tully Valley and Murray Upper in what is believed to be the first instances of the birds damaging bananas.**

The geese were first seen late in 2013 in a Tully Valley plantation and on closer examination were found to have damaged a plant crop.

In this instance, scrap bananas and bunch stalks had been deposited into a fallow block. It appears the magpie geese fed on the decaying scraps and then

moved across to the adjacent block to feed on growing banana plants.

They stripped back the outer leaf bases on the main pseudostem and shredded the suckers. The geese had apparently also fed on the lower leaves of the plants resulting in a wave pattern on the leaf blade of some affected leaves.

There appear to be no previous published reports of damage to bananas by magpie geese.

Another grower in the Murray Upper area had damage to young plants in a

newly planted. The damage was so severe the block needed to be replanted.

It is possible behavioral change could see more damage to banana crops by magpie geese occurring in the future. This is the same phenomenon that has occurred with sacred ibis and seagulls becoming urbanised and frequenting rubbish dumps and suburban parks where they feed on food scraps.

Magpie geese have been reported to cause problems to rice, watermelon, rambutan and mango growers in the Northern Territory. There are reported to be two to three million of the geese in the Territory and there is now debate over how to minimise crop damage.

Because magpie geese occur in flocks and are large birds, the potential for damage, should they start to damage banana crops, could be high if they were to start favouring this crop.

It may be prudent to spread banana waste so that it dries out or rots more rapidly than to deposit it as a heap where it can provide a food source for magpie geese.

Another potential concern is the possibility that the birds could carry banana pathogens, such as Panama disease, in any soil on their feet.

**Magpie geese in a paddock on Mullins Road, Tully**



## NT birds are back for a gander at Queensland

**Magpie Geese are reported to be moving out of the Top End, now being found in increasing numbers as far away as south east Queensland.**

**Media reports in recent months have said the geese, a native bird, have been sighted as far afield as Gympie, north of Brisbane.**

In the Northern Territory, there are reported to be two to three million of the birds and the crop damage they cause has increased in recent years.

Territory wildlife expert Keith Saalfeld, from the NT's Department of Land Resource Management, says magpie geese were once common in most parts of Australia but moved north when their southern habitats were lost to development or agriculture.

He told ABC National Rural News the birds now appear to be moving back south and are becoming an increasing problem for farmers outside of the Territory.

In the Territory, the geese have traditionally eaten bulbs out of the ground but the expansion of horticulture there has given them a variety of crops to choose from. This season, mango farmers have reported crop losses with some hosting thousands of the geese on their farms during harvest.

The geese have also been reported to damage irrigation by pecking at and piercing the lines.

In the Territory, farmers who can show they have exhausted all other avenues for controlling the geese, such as use of netting and scaring devices, can apply for a category of shooting licence known as a Pest Mitigation Permit. However, the NT Government is investigating strategies other than shooting to deter the birds.

There is also a four-month waterfowl hunting season, beginning in September, when the birds can be shot for food, with bag limits applying. There has been debate about whether hunting worsens the problem by scaring geese away from swamplands and into farmland.



**Above left: Pair of magpie geese resting in a tree in the Tully Valley. Top right: A sucker bent over and shredded by the geese. Above: leaf bases on the pseudostem have been pulled down and stripped. Left: Wave-like pattern showing where geese have fed on the lower edge of this banana leaf.**

## TISSUE CULTURE BANANAS

Clonal  
Solutions  
Australia  
Pty Ltd

- Laboratory & Nursery, QBAN #175 & #176
- EcoHort & NIASA Accredited \*
- Email: [bananas@clonal-solutions.com.au](mailto:bananas@clonal-solutions.com.au)
- Kennedy Highway, Walkamin, North Queensland



EcoHort  
Certified

\* Accredited to Australian Nursery Industry Best Practice Standards



[www.clonal-solutions.com.au](http://www.clonal-solutions.com.au)

ph: (07) 4093 3826



# Growers show the love for 'speed-dating' scientists

It's been called banana science's version of "speed dating" and it's a concept that banana growers seem to have fallen in love with.

The National Banana Roadshow was an industry first – a road trip taking some of Australia's top banana scientists and industry experts on a six-stop, three-state tour to visit banana growers on their home patch.



Discussing the presentations at the Tully roadshow, are growers Stephen Lowe (left) and Jenny Wells



Tully grower Aiden MacKay (centre) discusses industry issues with ABGC CEO Jim Pekin and Lakeland grower Paul Inderbitzin (backs to camera) and Tully grower Keith Rixon.



Banana growers at the roadshow held for Tablelands growers at Walkamin in north Queensland.

Presenters with years of research and technical experience were given only a strictly-policed, ten-minute timeslot to tell banana growers and industry partners the key points about their projects.

The days had three major themes – farm production and best environmental practice; farm business and marketing and supply chain management.

Topics included soil health and Panama Disease, disease-resistant and new banana varieties, leaf disease, best management practices, plant nutrients and sediment, chemical registrations, banana marketing and supply chain, carton design, benchmarking farming profitability and international production insights.

The snappy 10-minute presentation format allowed up to 15 presentations at each session as well as group discussions, questions and feedback from attendees. While some of the presentations were made at each roadshow stop there were also some especially tailored for specific regional issues. Video presentations were also included and showed footage of carton design, tissue culture science and international growing practices.

The roadshow was part of the levy-funded National Banana Development and Extension Program led by banana scientist Naomi King.

Naomi said the roadshows had been a valuable way to find out how science could help growers and the industry achieve their production goals.

The ten-minute presentation format had been a hit with growers.

"We told them it was banana science's version of speed dating – a chance for scientists to talk about the most interesting aspects of their work. The growers loved the idea and the scientists have also been very pleased with the response.

"The event not only gave banana scientists the chance to tell growers about their work, just as importantly, it gave growers the chance to talk directly with scientists about how they can use that

research and what other research they would find useful.

"We now have some great information on the issues that are of most interest to growers, both nationally and on a regional basis."

Attendees from across Australia, at sessions in north Queensland, northern and mid-north coast New South Wales and Carnarvon in Western Australia, all provided enthusiastic feedback on the roadshow.

They rated the roadshows using electronic polling keypads and the results have been impressive.

The event achieved a major upgrade in knowledge about the research projects that are a key to improving banana farming practices.

At the start of the roadshows, 84 per cent of participants had rated their knowledge of research projects at the lower end of a five-point scale – in the range of one to three. Only 16 per cent rated themselves in the top two levels. By the end of the event, that result had flipped with 71 per cent of participants rating their knowledge about the projects in the top two levels, an increase of 55 percentage points.

Other impressive results were that 90 per cent of participants said they either would change or were thinking of changing a farming practice based on the information they heard about on the day.

The roadshows seem assured of strong continuing interest from growers with 98 per cent saying they'd attend another event.

The roadshows are now planned to be held every second year with the next ones to be held in 2016. This slots them into the years between the Banana Industry's major event, the biennial Banana Industry Congress.

Ms King said the two events would work well together to provide information to growers in a variety of formats.

## Handover

Banana Roadshow leader Naomi King will be handing over the role to another researcher following her move to a new industry position in 2015.



National Banana Development and Extension Program leader Naomi King at the Tully roadshow with, from left, Aiden MacKay, Paul Inderbitzin, Caleb Matthews, Keith Rixon, Stephen Lowe and Paul Johnston.



Roadshow co-ordinators, Queensland Department of Agriculture, Fisheries and Forestry horticulturists Stewart Lindsay and program leader Naomi King at the final roadshow at Walkamin.

## What the growers said

As reported in the last edition of *Australian Bananas*, growers who attended the first roadshows at Murwillumbah in northern NSW and Coffs Harbour on the mid-north coast, were enthusiastic about the event.

Comments from the north Queensland roadshows were equally appreciative:

**Stephen Lowe:** "The ten-minute format is a winner, the presenters have to put all the main points in to that timeframe and you can't fall asleep in ten minutes! It's great to have the researchers presenting directly to us."

**Craig Buchanan:** "It was just a good day all round. There was a little bit of everything, I like all the soil health stuff."

**Adrian Crema:** "There was a great variety of information. I really enjoyed Paul Inderbitzin's video presentation on his Nuffield Scholarship studies. He hit every nail on the head. It's all about bunch care, and I loved the comment 'the shed's not a hospital'."

## Roadshow snapshot

- More than 150 attendees
- Banana grower and industry partners participated
- Achieved a major upgrade in knowledge about research projects
- 90% of participants to consider or make changes to farming practices based on roadshow information
- 98% would attend a future roadshow and 62% said they would also recommend the roadshow to others
- 94% of participants rated the day 7 or higher, out of 10



## Soils ain't soils, national grower survey finds

Improving soil health on Australia's banana farms will require a range of actions to suit individual regions, according to an analysis of grower surveys conducted at the national banana roadshow.

The surveys spanned both subtropical and tropical banana-growing regions and have provided valuable information on what growers from different regions need to improve soil quality.

Queensland Department of Agriculture, Fisheries and Forestry (DAFF) scientist Dr Tony Pattison conducted the surveys during soil-health presentations given at each of the six roadshow stops.

The presentations included topics previously rated by some growers as important. Some new topics relating to agro-ecosystem management were also added for growers to consider. These included ideas such as intercropping Nitrogen-fixing trees among bananas.

Growers were surveyed using individual electronic key pads that recorded their votes on how important the soil-health practices would be on their farms.

"The answers growers gave us were really informative and showed some strong regional differences in what's required for improving soil health," Dr Pattison said.

"This is the first time we've been able to assess the views of growers from across Australia on a series of soil-health topics. The information will be very useful in helping banana scientists to focus on the issues of importance to growers and the solutions that will work best on their farms.

"There are big differences among the regions including issues such as rainfall and use of irrigation, whether farms are on flat or sloping land, and the size of farms.

"Something that's right for the wet tropics won't necessarily work in Carnarvon or New South Wales."

Dr Pattison said previous interviews with growers at various field days and

field visits had suggested the following were among the top soil-health priorities:

- plant-parasitic nematodes (all regions)
- nutrient and soil organic matter management (all regions)
- management of Panama disease and erosion control (NSW)
- salinity, sodicity and water quality (WA).

The roadshow survey took that information one step further by looking at some of ways to manage those issues and ideas for using agro-ecology methods on banana farms. These included:

- groundcover management
- fertiliser and water management
- cropping design
- organic amendments and
- computer based, farm management decision-aids.

The accompanying story is Dr Pattison's analysis summarising growers' responses.

**Below: Growers in north Queensland were most interested in GPS-guided tractors, such as this one, being used to plant bananas. The yellow GPS sensor can be seen on the tractor cab.**



## A 'yes' to new systems but 'no' to trees

by Tony Pattison

The national survey of growers at the banana roadshows has found substantial differences in requirements for improving and managing soil health.

While all growers expressed interest in redesigning their production systems to improve soil health, there was a range of views on the best way to achieve the results.

In the surveys, growers were asked to respond to 11 questions (Table 1), giving a rating on a five-point scale, one being of no importance through to five being very important.

Percentages were calculated for banana growers' responses to each question. Then, to gain a better idea of the importance of each potential soil health practice, a weighting was given so that the percentage of growers that believed a

practice was more important obtained a greater result (Figure 1).

To summarise the results, the responses were compared between tropical and subtropical banana production. Three roadshow workshops were held in each production zone.

### System redesign

Banana growers in tropical and subtropical banana growing regions were interested in soil health and were willing to redesign their production systems if it improved soil health and reduced inputs (Figure 2 Q1).

The workshop where participants expressed the greatest interest in soil health and willingness to change was in Innisfail.

The use of tree legumes, agroforestry and agro-ecological practices to improve soil health and reduce foliar diseases were unpopular in both the tropics and subtropics (Figure 2, Q5). It was thought that this was because it added additional complexity to crop management, was unproven and had been associated with lower productivity in some cases.

### Biggest difference

The practice with the greatest difference between subtropical and tropical production regions was GPS-and-controlled-traffic systems (Figure 2, Q10). This was primarily due to subtropical banana production being on sloping ground and smaller farms, making this type of technology inappropriate for many subtropical farms where use of machinery was limited.

Conversely, in the tropics where there is greater mechanisation of banana production and traffic within banana paddocks, there was interest in developing and implementing this type of technology.

### Soil moisture

The management option with the greatest weighting in the tropics was question 7, with regards to use of soil-moisture-monitoring equipment in banana plantations, which growers saw as important and which could be implemented, particularly on the Atherton Tablelands.

Continued next page >

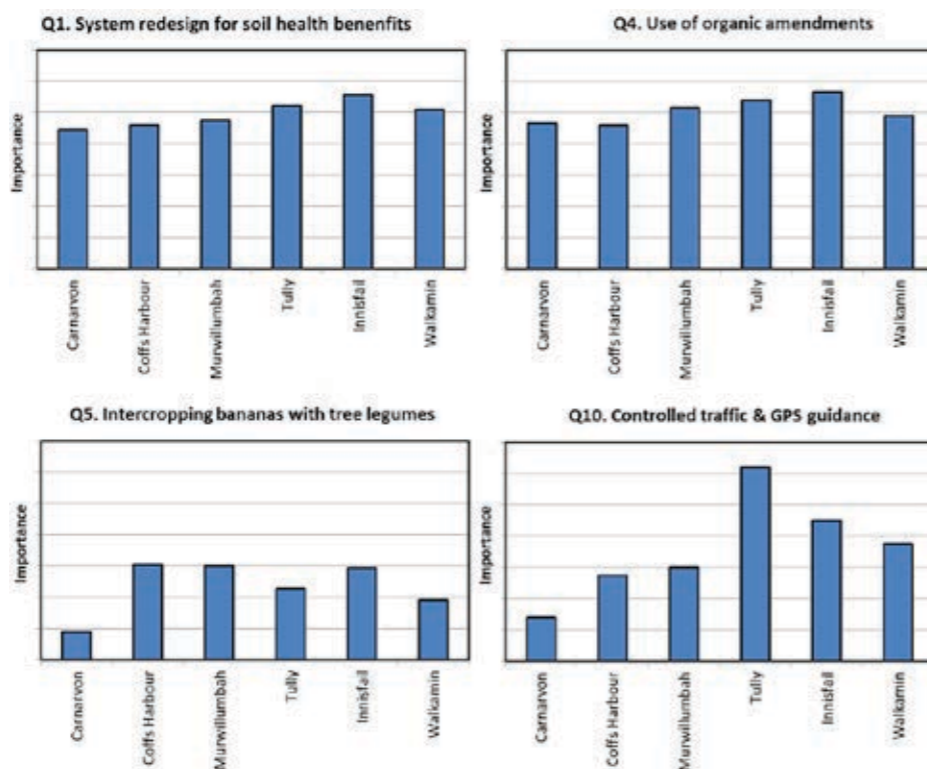




Table 1: Questions asked to road-show participants about soil health management options.

- Q1 Would you be willing to redesign your banana production system if it improved soil health and reduced inputs?
- Q2 Would you be willing to try or do you currently use interplant ground covers?
- Q3 Would you be willing to try or do you currently use predatory mites with groundcovers?
- Q4 Would you be willing to try or do you currently use organic amendments?
- Q5 Would you be willing to try or do you currently use intercropping with N fixing trees?
- Q6 Would you be willing to try or do you currently use controlled release fertilisers?
- Q7 Would you be willing to try or do you currently use soil moisture monitoring and irrigation scheduling?
- Q8 Would you be willing to try or do you currently use fallow crops and rotations?
- Q9 Would you be willing to try or do you currently use minimum tillage or permanent beds?
- Q10 Would you be willing to try or do you currently use controlled traffic GPS systems?
- Q11 Would you be willing to try or do you currently use computer based decision aids or precision agriculture?

Figure 2: Contrasting banana growers' responses in banana growing areas to importance of four questions dealing with soil health.



... continued from previous page

However, the Carnarvon region also saw the use of irrigation technology as very important to their production systems. In the tropics, question 8 on fallow management and rotation crops was seen as important, particularly on the wet tropical coast (Innisfail and Tully) where fallow crops are used to manage plant-parasitic nematodes.

**Subtopics**

In the subtopics, the practice which created the greatest interest was the use of soil organic amendments, which could promote soil health. This was particularly the case in Carnarvon and Murwillumbah areas, with less interest in the Coffs Harbour area (Figure 2, Q4).

**Regional solutions**

The results from the soil-health survey highlighted that practices which address soil-health constraints such as low organic matter levels, soil-borne diseases, nutrients, water, erosion, sodicity and salinity are not prescriptive, with no technique that would address the needs of all banana growers.

As there are unique problems faced by banana growers in each region, there are different methods of addressing the

issues; some are more suited to specific banana production regions than others. Furthermore, the interests of banana growers in managing soil-related issues were quite different in each region. Therefore, different agro-ecological management practices are required to be tested in the different banana production regions to improve soil health.

In the tropics, there was a greater scope for inclusion of high technology and mechanised solutions, due to the scale and mechanisation of the production system.

In the subtropics, the use of amendments in semi-permanent banana plantations on sloping land generated the most interest. However, in the Carnarvon banana-production region any practice that increased water use was dismissed, due to the scarcity of water.

Therefore, just as there are unique banana production environments there are also unique banana production systems required for the different banana production regions to improve soil health.

For more information contact the author by emailing [Tony.Pattison@daff.qld.gov.au](mailto:Tony.Pattison@daff.qld.gov.au)

# Beat the drum for cleaner farms

Empty agvet chemical containers can be a health hazard to both users and the environment, but a common dilemma is safely disposing of them.

The Australian Banana Growers' Council (ABGC) is encouraging banana growers to take advantage of the *drumMUSTER* program to recycle their drums. With summer and the cyclone season here, now is the perfect time to act.

An industry stewardship program set up in 1999, *drumMUSTER* is a fantastic disposal outlet for users across the nation. Once collected, the containers are shredded and transformed into practical items such as plastic cable covers, wheelie bins, road signs and bollards.

Banana-growing regions across the country have numerous collection sites available to them and Colin Hoey, *drumMUSTER* Regional Consultant, is available to assist chemical users with any enquiries they may have about the program.

Whether you have one drum or 100 drums, take them to a collection site and join the growing band of farmers who are being proactive with farm waste recycling. A receipt is issued on delivery and is suitable as proof in all Best Management Practices (BMP) programs.

"It's good practice to dispose of drums on a regular basis, and I recommend visiting a collection site at least once a year," said Mr Hoey.

Stoters Hill Transfer Station, operated by Cassowary Coast Regional Council, is one of a number of ongoing collection sites available to banana growers in far north Queensland. The site has collected 51,577 containers since it opened in June 2011. In northern NSW, Coffs Harbour Waste Management Facility has collected 19,686 containers from growers since 2008.

ABGC Chairman Doug Phillips believes *drumMUSTER* provides growers with a quick, easy, environmentally friendly way to dispose of used chemical containers.

The Stotters Hill collection site is one of the sites in banana growing regions where empty containers can be taken for recycling.

"The banana industry, like other horticulture and agriculture industries, has been working hard to further improve farm practices," said Mr Phillips.

"Banana growers helped develop our own Best Management Practices guidelines so we could make sure we set high standards for everything we do on-farm, including the disposal of used chemical containers. Our BMP guidelines advise triple rinsing the insides of used containers and disposing of them using *drumMUSTER*," he said.

Mr Hoey encourages growers to also let their neighbours know about the program as everyone should be involved.

"*drumMUSTER* is heading towards recycling 25 million drums and banana growers are urged to participate in reaching the milestone."

*drumMUSTER* and another program, ChemClear, are ideally set up to meet chemical user requirements for quality assurance (QA) programs. ChemClear is a jointly funded program which safely

disposes of unwanted and out-of-date farm chemicals.

But *drumMUSTER* and ChemClear are more than just a tick in the box for QA. They represent a firm commitment from local businesses to doing the right thing for the safety and reputation of their customers, their community and their staff.

*drumMUSTER* National Program Manager Allan McGann said chemical users should take advantage of both programs to satisfy their QA auditors.

"Using programs like *drumMUSTER* and ChemClear not only shows you're meeting the requirements of QA programs, but you're also preventing waste from ending up in the wrong place," he said.

Mr Phillips said, "When banana growers use *drumMUSTER* they can be sure they're following best practice for disposing of used chemical containers."

For further information on the *drumMUSTER* or ChemClear programs, call (02) 6230 4799 or log on to [www.drummuster.com.au](http://www.drummuster.com.au) or [www.chemclear.com.au](http://www.chemclear.com.au).





# Irrigation without the irritation

Taking heed of a few simple tips could be all you need to get more out of irrigation and fertigation systems. Irrigation specialist Pat Daley toured north Queensland banana farms as part of the Reef Water Quality Program to provide some advice. Pat spoke with ABGC Communications Manager Rhyll Cronin.



Innisfail grower Rob Zahra (left) with ABGC Reef Rescue Officer Robert Mayers (centre) and irrigation expert Pat Daley during an on-farm assessment of irrigation systems.

**Narrow suction pipes, fittings in the wrong places and a lack of air valves – in a week of visits to north Queensland banana farms these were just a few of the problems found by irrigation expert Pat Daley.**

They're simple things but the impacts are significant for the effectiveness, maintenance and running costs of the systems.

Pat, a 37-year veteran of troubleshooting such issues admits he can talk all day about the topic.

"It's not always about reducing the amount of water you use - it's about getting the timing right and getting more out of that water," Pat says.

"By scheduling right you will get more out of the crop and if you get your crop and nutrient efficiency right it will also reduce the cost of the power."

As part of the Reef Water Quality Program, which is helping growers to install infrastructure including irrigation and fertigation systems, Pat and ABGC Reef Rescue Officer Robert Mayers visited eight banana farms that have recently installed a range of new equipment. Pat then spoke at a half-day workshop open to all banana growers to help them get the best out of their irrigation and fertigation systems.

The Reef Water Quality Program is funded by the Commonwealth Government as part of initiatives to improve water quality in the Great Barrier Reef lagoon.

More than 40 projects were approved this year (see story, Pate 23) with many being for irrigation and fertigation systems that make the best use of water and nutrients and minimise run off into waterways.

Some of the problems Pat saw during his farm visits, such as the problems with pipes, fittings and valves mentioned above, can be quickly and easily fixed at little cost.

"You don't need to do a lot to get a lot more out of your irrigation system," Pat said.

Pat also had some more in depth tips for growers on installing and upgrading systems, including the addition of fertigation to existing irrigation systems and introducing automation.

Pat, from Daley's Water Service, is based in south east Queensland but consults to a range of farms, including some in North Queensland. He is not a product supplier or reseller and provided independent advice as part of the project.

Here's some tips from Pat:

## Soil condition

Properly assessing your soil condition is the number one factor in success with irrigation and fertigation. Pat says there are "infiltration limitations" that is, limits to the amount of water the soil can handle over time.

Sandy soil means water and nutrients could be flowing through without much benefit. Similarly, there could be a barrier to water and nutrients entering the soil with them ending up as run off.

Once you know what your soil can handle, other factors to then look at include drainage, water quality, irrigation design and scheduling, nutrient application and scheduling and the return on investment you'd like to achieve.

## Crop efficiency

Pat says crop water-use efficiency and crop nutrient-efficiency are what it's all about. "You might find out you have increased production by using the same amounts – you're just using them better," he says.

"What you're wanting to do is drip feed the plant. You need to work out what's needed at any particular time of the crop cycle. Being able to adjust the system to do that is where you really get the benefits."

## Pump factors

"I consider the pump as the heart of the operation, the filters are like the lungs and the pipe work is the arteries and capillaries," Pat says.

"If we don't get that system right it's difficult to get the rest right."

Pat says the capital cost of the pump can be fairly insignificant compared with ongoing energy costs and maintenance.

All pumps have a best efficiency point and Pat says "it's not about how big or how small the pump is - it's about the cost per megalitre."

He also says the pump must fit the job you need it to do. It's something to think about when looking at the size and location of your blocks. "If the pump really only suits 10 per cent of the area then there are probably better ways to do the job."

Growers can look at having a bigger pump that runs at slower revs and provides better suction and longer pump life.

## Variable-speed drives

Growers should also consider using a variable-speed drive which Pat says goes hand-in-hand with automation.

The drive adjusts the hertz and this governs the pump speed. The advantage of the drive is that it avoids burning off energy because it ramps the speed up or down to suit what's needed to irrigate different blocks. Pat advises setting pump pressure at the controller.

To get the most out of a variable-speed drive, team it with a pump that has a steep performance curve.

An advantage of the drives are that they can clean up "dirty power" – electricity that doesn't flow constantly but has spikes. This keeps the motor running efficiently and reduces the current draw on start-up.

It can also help reduce suction cavitation – voids created within the water as it's drawn into the pump - that can damage pumps on start up.

## Locating the transducer

The pressure transducer should be located away from the pump. Pat prefers to see it before the filter and not after – the worst place to locate it is on the discharge valve of the pump.

Having the transducer correctly positioned will help give more accurate



An Electrical and Conductivity (EC) and salinity meter checks the amount of nutrient passing through the fertigation system.

readings and send more accurate signals to the drive.

## Cost efficiency

Pat says growers need to think about the cost of every megalitre of water used and how many megalitres are required to irrigate each hectare.

The pressure the pump runs at has a big impact on running costs. "Every PSI is costing you," Pat says. An analysis he has done shows the costs for irrigating with one megalitre of water can vary dramatically - from \$45.25 to \$175.13.

Pat says the best efficiency for pump operation is one that achieves the best efficiency point for both pump and motor.

Things to look out for are pump speed and the creation of damaging cavitation that can cause changes in pressure and reduce the pump's life.

Continued next page >

Growers should calculate the output of sprinklers in millimetres-per-hour.



# Blenners

TRANSPORT

REFRIGERATED HAULAGE CONTRACTORS

"we go the extra mile"

Loading vans daily from North Queensland for

Brisbane • Sydney • Melbourne • Adelaide • Perth

Modern airbag fleet specialising in bananas

Tully	07 4068 4444	Innisfail	07 4061 4300
Cairns	07 4033 1544	Brisbane	07 3055 3555
Townsville	07 4774 3782	Mackay	07 4952 4881



### Kilowatts V Kilowatt hours

These are not the same and Pat warns growers not to confuse the two when calculating the expected cost of running their pumps.

He also advises to think about the cost of diesel versus electricity, as well as diesel versus biodiesel fuels when looking at running costs. For instance, biodiesel may be better priced but may not produce energy as efficiently as conventional diesel.

### Fertigation

The placement of fertigation tanks can have a big impact on the efficiency of the fertigation and the life of the pump.

“Many people are putting their fertigation on the suction side of the pump,” Pat says. “If it’s cavitating and you’re putting fertigation in there it will reduce the pump’s life expectancy. It’s a pretty important one to get right for the life expectancy of the pump and the results you’ll get from fertigation.”

Pat says the setup of the irrigation blocks will affect fertigation rates across a block. “Some plants will not be getting enough nutrients and others will be getting more than they need.

“It’s usually a maintenance issue rather than a design issue.”

### Soil-moisture monitoring

There are a variety of devices to monitor soil moisture including hand-held devices that take a vacuum reading, gypsum probes which show a green light when the moisture profile is reached, and solar-powered systems that can send data straight to a smartphone.



Pat, Rob and Robert at Rob's upgraded pump station. A check found excellent nutrient flow rates had been achieved by the fertigation system.

Pat says an irrigation diary is a good way to start documenting water use and requirements and working out the megalitres used per units of fruit.

Pat is very much in favour of using probes but warns there are some traps.

“I’m very pro using soil moisture probes. But you need to know that it gives you a snapshot and it’s not indicative of the whole farm. Going out on the farm and checking trees is still important.”

Pat says the simple manual-read systems are best and he doesn’t favour probes being connected to automated systems “because you can get it wrong pretty quickly by going down that track”.

He also says growers should look at their under-tree sprinkler design to check for leaks where the poly has not sealed around the sprinkler connecting-tube barb. Placement of probes in relation to sprinklers was also important to make sure readings were as accurate as possible.

### Watering at night

Pat’s advice on night time watering was one of the most informative for growers who take advantage of night-time electricity tariffs to cut watering costs.

“You need to question why you irrigate at night time,” Pat says. “Plants, apart from those in the pineapple family, take water up during the day. All other plants, including bananas, don’t feed at night. If you’re on sandy soil you need to think about the wisdom of irrigating at night.”

Pat advises to make sure if you’re taking advantage of lower night-time electricity tariffs to ensure that the water used will still be available to the plants for their daytime uptake.

### Using crop factors

Growers should look at crop factor ratings when working out how much water their plants need. For example, a small tree might have a crop factor of 0.4 but a mature tree that’s filling a bunch could be 1.2.

Pat says the value of using the crop factors is that you can look at rainfall and evaporation data from the Bureau of Meteorology and work out what the evaporation loss has been for a day and what needs to be put on the next day to satisfy the plant.

There are calculators to allow growers to work out how much to irrigate

depending on evaporation loss and irrigation efficiency.

Growers need to know the output in millimetres-per-hour of their sprinklers.

### Fertigation tanks

Growers should look at the design of their fertigation tanks. Pat says tanks with a conical bottom, like aquaculture tanks, have advantages – for example, there are no internal edges to clean.

He advises against systems using butterfly valves and says valves should never be used to control the flow of water.

Some systems allow fertigation of different nutrients, flushing out the system before moving to the next product.

Pat also advises to use an EC (Electrical and Conductivity) meter rather than dye when checking nutrient distribution. A handheld meter will check the level of nutrients getting through and the time taken to reach the paddock.

### Air valves

Pat says air valves are a critical part of an irrigation system. Without them, air builds up inside the pipes and, with nowhere to go, it reduces the space for water flow.

At the banana farms he visited, about half did not have enough air valves.

He recommends an air valve on the upstream side of every water valve, placed at the highest point on the pipe.

“Without an air valve, no matter what velocity you have in the flow you’re not going to be able to get the air out of there – there’s nowhere for it to go,” he says.

“The air in there will restrict the flow of water through the line. The air bubble takes up room in the pipe.”

### Contour

Pat says growers who are setting up irrigation systems from scratch should consider designing them to follow block contours.

“For those who have been in a ‘square world’, farming in rows, it may be difficult to get your head around, but there are a lot of advantages in going with the contour.”

Included is better pump operation and consistency of water flows and distribution of nutrients.

# Growers work on reef brief

Most of the north Queensland banana farm projects that are improving water quality in the Great Barrier Reef lagoon are complete or due to be in place by next June. Meanwhile, applications for the next round of grants are set to open in late January 2015.

More than 40 projects were approved in 2014 as part of the Reef Water Quality Grants Program which gives banana growers financial subsidies for projects improving farming practices.

Australian Banana Growers’ Council (ABGC) Reef Rescue Officer Robert Mayers is working with grants manager Terrain Natural Resource Management on the Commonwealth Government-funded project.

“Banana growers in all the north Queensland growing regions have participated in the latest two rounds of grants and the response has been overwhelmingly positive,” Robert said.

“The grants are helping growers to improve farming practices as well as making farming tasks, such as running and maintaining irrigation systems, more manageable.

“Projects are prioritised to make sure the investment being made has the

maximum benefit to the environment. Funding is being used for things such as manual or automated fertigation systems, side-throw slashers, fertiliser spreaders and improvements to block levels, contouring permanent beds and better on-farm roads and drainage.

“The end result is that farms are making better use of water and nutrients and are improving the quality of the waterways that feed into the Great Barrier Reef lagoon by reducing run-off and erosion.

“A great benefit of the program is that there is also support extended to growers to help ensure they are making best use of new equipment, such as slashers, fertiliser spreaders and irrigation and fertigation systems.

“It’s a great win for the environment and the growers are very happy to be improving their farming practices and farming more sustainably. As an added incentive, the projects are also helping to make some farming tasks a little easier.”



Robert Mayers checking a pump station as part of the project's extension activities.

In the two rounds of projects approved this year, Round 6 projects have mostly completed, with a final deadline of December 31. Round 7 projects have until June 30 next year to be completed.

The grants are divided into categories of small grants, single farms and multifarms. The grants provide a maximum of 50% support - from \$2,000 to \$5,000 for the small grants, \$5,000 to \$30,000 for single farms and \$5,000 to \$150,000 for multifarms.

## Tiger drives an automatic

“How good is this thing?” is East Palmerston grower Tiger Mereider’s thoughts on the automated irrigation system he had installed with the assistance of a Reef Water Quality grant. “I should have done this ten years ago.”

Tiger is a banana farmer who believes in giving his bananas all they need to ensure top quality fruit. “I’m pretty dedicated when it comes to my babies,” he says of his crop. “I put everything into it.”

Tiger was used to running his irrigation and fertigation system manually, and all that went with it – including about six visits to the pumping station daily and sorting out problems at all hours. “I’d go down there at night and be holding a little LED torch in my mouth to be working on it – undoing filters, washing

that one, then washing that one. I did that for years,” he said.

Tiger initially had some reservations about making the change thinking “I’ll never be able to drive it, I’m lucky to drive a telephone!” But he took some time to learn the system and finds it quick and easy to use.

He now gets better irrigation and fertigation results and has freed up time for other farm work.

East Palmerston grower Tiger Mereider at his newly automated pump station.





# James finds ways to kill a bill

When Walkamin-based growers Howe Farming Enterprises decided it was time to start cultivating some energy-saving measures to reduce costs, they called the Kill-a-Watt campaign.

Regional Development Australia has launched the campaign – funded by the Commonwealth Government’s Department of Industry and exclusive to Far North Queensland – to help local businesses and community organisations identify ways to slash their electricity usage.

Howe Farming Enterprises manager James Howe asked Kill-a-Watt energy assessor and qualified engineer, Cary White, to investigate power-saving opportunities on one of their farms which includes a packing shed, cool room storage, administration block and outdoor canteen.

“I’ve noticed a lot of areas I would like to improve in terms of efficiency, but didn’t know the right approach,” said Mr Howe. “The opportunity to have a government-subsidised energy assessment was too good to pass up.”

James Howe at the Walkamin farm. Recommendations on cool room operations were part of the energy audit.



For the cost of a Level 2 assessment (\$990), Cary White undertook a comprehensive on-site survey and equipment analysis that identified thousands of dollars in potential energy savings per year for the banana farm.

Refrigeration costs are a hot-potato issue for most growers, and Howe Farming Enterprises is no exception. Their refrigeration system accounted for almost 60 percent of total energy consumption on site – costing about \$60,000 annually to operate.

When Mr White inspected the cool rooms in August he found a significant amount of energy was literally walking out the door, because the main doors to the chiller room were being left open for extended periods, allowing cool air to escape. Low stock levels at the time just exacerbated the energy wastage.

“These factors combined could be inflating the running costs of the refrigeration system by up to 300 percent,” he calculated “because the cool rooms are not reaching their set temperature quickly – if at all.”

Mr White advised Howe Farming Enterprises to consider installing automatic doors. “This will lead to a reduction in the duty cycle of the refrigeration system – and automatically reduce energy consumption.”

If automatic doors were not practical to operate, placing flexible plastic blinds over cool room entrance ways was an alternative option. “These need to hang from top to bottom with minimal air gaps,” he added.

Lighting is not often viewed as a high-energy consumer, but it can eventually make growers such as Howe Farming Enterprises see red when it comes to power costs.

“Over time, the large amount of fluoro lighting – mainly T8 battens – used in the factory not only add to power consumption, but also the base load demand charges incurred under Ergon Energy’s Tariff 44 for large businesses,” Mr White said.

Replacing the 90 fluoro tubes in the cool rooms with more energy-efficient LED lights would save the business almost \$2,300 per year, he calculated.

If Howe Farming Enterprises also swapped the remaining 50 fluoro tubes used elsewhere on site with LED lighting, they would save almost another \$1000 per year. Replacing the high bay induction lights in the main packing area and extension shed with LED equivalents would slash an extra \$1,250 from their annual power bill.

Sometimes it is easy to overlook small areas of energy wastage, while focussing on the big ticket items. However, even minor savings can add up.

The energy assessor noted that one of the display fridges in the outdoor canteen was leaking and not closing properly – allowing cool air to escape from the bottom of the seals.

He also recommended turning off the canteen kitchen appliances, including ovens and grills, when not in use, to reduce both their power use and the amount of energy required by the air-conditioner to deal with the heat they generate.

Howe Farming Enterprises already have a roof-top 30 KW PV solar system installed last year. Mr Howe said figures on solar energy output from November through to the end of July showed that, based on the electricity tariff being used for that period, the solar system had saved about \$8,900 in electricity charges. After discounts, the solar system cost about \$50,000.

Mr White advised Howes to consider extending it to a 100 KW system.

“The annual yield from a 70 KW extension, facing north/south, would be 115,000 KW,” he calculated. “However, they would need to obtain approval for the extension from Ergon Energy first.”

The energy assessment provided Howe Farming Enterprises with plenty of food for thought.

“It was very thorough and alerted us to certain practices we had never considered inefficient – but it turns out there are better ways of going about it,” said Mr Howe.

More information on the Kill-a-watt campaign is available at [www.kill-a-watt.com.au](http://www.kill-a-watt.com.au). To book a Kill-a-Watt energy assessment, phone 1300 545 529.

Kill-a-Watt facts, Page 27 >

# Orchards find ways to lay off the juice

Major savings in farm energy use and costs have been identified in a year-long study of fruit orchards.

An estimated \$921,302 in combined annual energy savings were identified for 30 orchards that participated in the nationwide study – more than \$30,000 on average for each business.

And while the study was conducted for the temperate fruit industry – including apples, pears, summerfruit and cherries – its findings are also of interest to banana growers.

Energy savings were identified for equipment also used on banana farms such as irrigation pumps, cool rooms, packing shed equipment and lighting as well as in electricity tariffs.

The Watts in Your Business program, developed by the Apple and Pear Australia Ltd (APAL) Watts in Your Business team, was funded by the Commonwealth Government’s Energy

Efficiency Information Grant (EEIG) program.

At time of writing a final technical report was being prepared. A draft report showed the following:

- the audited farms spent a combined \$5.7 million annually on energy (Table 1)
- combined savings for the audited farms of 5.5 million kWh of energy use (electricity and LPG)
- the savings represented a 13 per cent reduction in energy usage and a 16 per cent reduction in costs valued at \$921,302 (Table 2)
- electricity was the largest energy cost for the audited farms
- they paid on average \$0.20 per KWH for packhouses and \$0.22 kWh for irrigation

Table 1: Total Program Baseline Energy Consumption and Costs

Energy Source	Usage	Usage (kWh)	Usage %	Costs	Cost %
Electricity (kWh)	20,257,165	20,257,165	48%	\$3,700,501	65%
Fuel (Litres)	1,015,653	10,867,487	26%	\$1,435,805	25%
LPG (Litres)	1,506,331	10,628,002	25%	\$541,521	9%
Natural Gas (kWh)	850,179	850,179	2%	\$34,947	1%
<b>Total (kWh)</b>	<b>N/A</b>	<b>42,545,402</b>	<b>100%</b>	<b>\$5,712,774</b>	<b>100%</b>

Table 2: Total Program Usage and Cost Savings Breakdown – all opportunities

Energy Source	Energy Savings	kWh conversion	Usage reduction	Cost Savings	Costs Reduction
Electricity (kWh)	5,374,874	5,374,874	27%	\$899,761	24%
LPG (Litres)	23,037	142,372	2%	\$21,541	4%
Natural Gas (kWh)	0	0	0%	\$0	0%
Fuel (Litres)	N/A	N/A	N/A	N/A	N/A
<b>Total (kWh)</b>	<b>N/A</b>	<b>5,517,246</b>	<b>13%</b>	<b>\$921,302</b>	<b>16%</b>

Table 3: Total Program Cost Effective Usage and Cost Savings Breakdown

Energy Source	Energy Savings	kWh savings	Usage Reduction	Cost Savings	Costs Reduction
Electricity (kWh)	2,860,790	2,860,790	14%	\$508,399	14%
LPG (Litres)	15,714	77,853	1%	\$10,761	2%
Natural Gas (kWh)	0	0	0%	\$0	0%
Fuel (Litres)	N/A	N/A	N/A	N/A	N/A
<b>Total (kWh)</b>	<b>N/A</b>	<b>2,938,643</b>	<b>7%</b>	<b>\$519,160</b>	<b>9%</b>

Table 4: Program Breakdown of Industry KPIs

Energy Source	Usage Key Performance Indicators (KPI) (energy source per tonne of fruit produced)	Cost KPI (dollars per tonne of fruit produced)
Electricity (kWh)	147	\$27
LPG (Litres)	11	\$4
Fuel (Litres)	15	\$21
<b>Total (kWh)</b>	<b>309</b>	<b>\$41</b>

findings on “cost effective” saving opportunities with a payback period of six years or less showed savings opportunities valued at \$519,160 – representing reductions of 7 per cent in usage and 9 per cent in costs.

The report found there was a lack of knowledge among temperate fruit industry small-to-medium enterprises (SMEs) on tariffs, energy consumption and efficiency.

“Many SMEs in the industry already struggle financially and therefore were eager for information on practical ways to reduce their operating costs and improve cash flow,” the report stated. “Reducing energy costs, with resulting benefits of lowering their carbon footprint, is an important part of reversing this situation.”

The study also produced fact sheets including:

- refrigeration in packing sheds
- irrigation in orchards
- grading in packing sheds
- lighting in packing sheds
- electricity tariffs and case studies including:
  - voltage power optimisation – optimising incoming site voltage to assist inductive loads in operating more efficiently
  - VSDs for irrigation – using variable speed drives to reduce unnecessary pump energy
  - Installing VSDs in cool rooms
  - automated cool room doors – keeping doors shut and reducing operation of the refrigeration system
  - LED lighting – installing energy efficient lighting
  - solar energy – Installing solar PV panels to generate electricity on site
  - timing peak energy use – installing Smart Meters or staging irrigation for use in the off-peak period.

Both fact sheets and case studies are being shared with the broader horticulture industry and can be viewed at <http://apal.org.au/watts-in-your-business/>

The final report, “Watts in Your Business: Final Technical Report” will also be posted on the website.



## Studies grow Emily's science-career hopes

Who'll be part of the next generation of horticultural scientists? We talk to University of Queensland agricultural science student Emily Pattison, of Innisfail, who sees some exciting career opportunities in horticulture.



assignment and then began to start showing an interest in the agriculture around Innisfail, which led me to really enjoying working with bananas.

**What was your favourite subject at high school and where are you studying now? Tell us a bit about your course and what you like about your studies so far.**

I have always really enjoyed biology. In high school I topped the biology cohort for three years in a row.

I am one of the few people in my course who comes from a scientific background and am now struggling to learn the practical component. Most people are from farms and come here to learn the scientific component.

I really enjoy the pracs especially. My course (Agricultural Science at UQ's Gatton campus) is very broad so it often doesn't cover my specific interests, but I am still really enjoying learning about farming from a broad perspective. However, I really can't wait to specialise.

**Tell us about the opportunities you've had to work in horticultural science and some of the experiences you've enjoyed the most.**

I think I am pretty lucky and have had some wonderful opportunities. One of the best opportunities I've had is to work with Stewart Lindsay at South Johnstone DAFF during the summer break after my first year.

**Tell us a bit about where you're from and what got you interested in horticultural science. Was there any event in particular that got you interested?**

I grew up in Innisfail and have always been around horticulture, especially bananas, but I really didn't begin to show a keen interest in pursuing the field until late high school when we were expected to start choosing our career paths.

I realised that I really enjoyed working with plants during a high school

Stewart has been a great mentor and his passion for bananas is contagious. I am hopefully going to be able to find a place back there these holidays.

Another amazing opportunity I've had is to attend the International Horticultural Congress in Brisbane in August. I really enjoyed being able to experience what it's like to be in the industry and find out about some of the projects that are being run.

**What do you like about horticultural science the most?**

I like horticulture science because it's not boring. There is such a diverse range of crops and, because of the value of these crops, the processes are so specialised.

It is certainly one of the most innovative branches of agriculture and quickly moving forward. Traditionally, it is the least recognised in Australia, but I think that's about to change and it's going to boom soon. I really can't wait to be a part of that.

**And what do you find to be the thing that might take a bit of getting used to?**

For me it would definitely be the practical side of agricultural science.

I really love agricultural science in that everything that is done needs to be able to improve farm productivity and practices. My biggest fear is not having a good enough understanding of what is already happening on farms to be able to develop ideas that are useful.

I am lucky to have a few people who have taken time to try and teach me, but I definitely still have a lot to learn.

**Tell us about some of the research topics in the banana industry you think would be the most interesting to work on.**

I spent last holidays helping with a project that was developing a new method of nurse suckering, which I really enjoyed.

Another project I have worked in is using crop rotations with brassicas and Rhodes grass to decrease nematode numbers. I loved them both even though they are not that similar.

This has brought me to the conclusion that I would probably enjoy any project that I get to be a part of. I haven't yet heard a research idea that I wouldn't want to be a part of.

**What would be your ideal role in horticultural science?**

At this point in my life I'm not ready to have a job that spends too much time indoors. And I definitely want to be involved in research. I feel like a field-technician role suits my desires pretty well, because I still get to be involved in the research and I get to spend my time outside, being able to observe plants and see physical results.

**If everything goes to plan, what type of work do you think you might be doing in ten years' time?**

At the moment, I would like to end up at South Johnstone working for DAFF with a role in banana science. I don't really want to make plans though, but I think keeping my options open might lead into something I would enjoy just as much. I always use my father (DAFF nematologist Dr Tony Pattison) as a role model. He started out studying

agricultural science to go into the sheep industry, but after university went into nematodes in wheat and then for the last 20 years has been working with nematodes in bananas. I know how much he loves that, and he certainly wouldn't have seen himself ending up there.

**How do you like your bananas, fresh or cooked? What's your favourite banana recipe and how often do you make it?**

I am one of those people who love to leave their bananas out until they're almost fermented and are starting to attract fruit flies. They are just so much sweeter that way!

As a university student still living in college I can't cook, so sorry, can't help you there. But my sister makes a killer banana smoothie. I would have no idea how to do it myself though.

**When you've got some time off, what are some of your favourite pastimes?**

I am a die-hard cyclist. I haven't been in a while because I'm scared of the magpies around Gatton. But when I get back to Innisfail for the uni holidays I will definitely get back into it. I really enjoy being able to go to the rodeos around Gatton on the weekends, they're a lot of fun too!



For more information contact: Alf Canino Tully Manager

P 07 4068 3783 F 07 4068 3786

M 0429 721 700 E [alf@jattransport.com.au](mailto:alf@jattransport.com.au)



Depots: Tully, Cairns, Mareeba,  
Townsville, Mackay, Brisbane & Sydney  
Delivering to all Southern Destinations.



Forget staffing stress and get on with growing your business...

Do you require a guaranteed, strong, committed, enthusiastic, reliable, and re-turning workforce?

With our network of 17 offices in Australia and the South Pacific, enquire now to see how we can boost your efficiencies. No commitments, no obligations, 100% compliant and no up-front fees.

Phone 1300 79 2220  
[seasonallaboursolutions.com.au](http://seasonallaboursolutions.com.au)

Approved Employer



## Kill-A-Watt facts

... continued from Page 24

Some tips from the campaign fact sheet include:

- remotely located, stand-alone pumps can cost more to run – transmission losses increase power usage and affect operating capacity
- using a smaller pump for long-distance water distribution lowers efficiency and costs more to maintain
- the size of pipe connections influences the load placed on the motor
- refrigeration is one of the largest consumers of energy
- a poorly maintained refrigeration unit runs 100% of the time – up to five times the cycle time of a well-designed system
- continual opening and closing of refrigeration equipment can increase cycle times by 50 per cent, lifting power use accordingly
- consider using T5 fluoro light replacements for an energy saving of around 30 per cent
- using LED lights achieves a saving of up to 50 per cent
- lower heat from LEDs generates further savings in air-conditioning costs.

For more information, see: [www.kill-a-watt.com.au](http://www.kill-a-watt.com.au)



## Fresh-food passion brings young chef home

A passion for cooking took Rob Johnson from the family banana farm across the country. Now the young chef is back and enjoying growing bananas. Rob answers our next-gen grower questionnaire.



Rob with some Little Gem bananas in the packing shed at Clothiers Creek.



**How long has your family been in the business of farming bananas and tell us how they became involved?**

The Johnson family began growing bananas in Clothiers Creek in the 1940s when my great grandfather started growing them. Back then, growing bananas was more financially feasible as the subtropics had the market share.

I and my uncle, Tim Johnson, farm Cavendish, Ladyfinger, Goldfinger, and a new variety owned by Tim called Little Gem.

**Did you come straight from school to begin work on the farm or have you also done some other type of work?**

I grew up on the farm but wasn't overly involved in the fruit farming. I began my cheffing apprenticeship during school and ventured into full-time commercial kitchen work straight after the HSC. Cheffing took me to Western Australia where I lived for three years.

I gathered a deep understanding of the importance of using fresh, quality, authentic produce in the kitchen, and this drew me back to the farm in my early 20s.

**What do you like about banana farming?**

Dig, cut, dip, dig, plant, water, fertilise, water, spray, de-sucker, strip, bunch-cover, cut, hump, drive, de-hand, water, pack and send. The whole process fascinates me. I love talking with other farmers about new and old farming practices. I enjoy the fitness that I get from farming bananas.

**What don't you like about banana farming?**

Unreliability of workers. Unreliability of income due to price fluctuation. Always not knowing.

**What are your other interests apart from farming bananas?**

I thoroughly enjoy cooking, growing and supplying fresh local produce around the Valleys, from the Tweed to Nimbin. I love selling my produce to customers at the local farmers markets. It's great to receive personal appreciation for my passion.

A section of the Johnson family farm.



**What do you see for your future in the banana industry?**

Personally, I would like to see more appreciation for the effort that farmers go to for the consumer to be able to purchase bananas from their local supermarket. There's a lot of uncertainties in banana farming. I think if there was more of an appreciation for the effort that goes in to producing the bananas consumers buy it would help farmers to get a better return and help ensure banana farming has a future. I think letting consumers know about all the work banana farmers do to improve their practices and try new things is one way of helping to develop an appreciation for

the work that goes into producing the best quality fruit possible.

Banana farming isn't just a job for me, it's a real passion and I'd like to be able to keep farming for as long as possible.

**What do you see for the overall future of the industry?**

Standardised packaging and a minimum price per carton guarantee. This would encourage growers to take more effort in producing better quality fruit.

**What would you like to see happening in the banana industry?**

I would love to see more of the disease-resistant varieties available to growers, such as the Panama Race 1-resistant varieties from the Duranbah trial blocks

The Johnsons in August hosted a farm visit for global banana scientists who were in Australia for the International Horticultural Congress.

David Peasley manages for the industry's Banana Plant Protection Program. The variety that my uncle, Tim Johnson, has discovered – Little Gem – has been trialled there. Little Gem is being grown under licence by some local growers and I'd love to see more of these trial varieties getting out to subtropical growers so they can find some niche markets for fruit that grows well in local conditions.

**Are you looking to introduce new or different methods to your farm practices?**

We tried a closer row spacing to achieve a more enclosed leaf canopy cover, which ultimately reduces the amount of chemicals used for weed spraying. I also feel that frequent strip-ping enables more sunlight to penetrate each stool, which deters some insects and diseases.

**Where do you see yourself in 10 years' time?**

That is 100% unpredictable. Hopefully what I'm doing now will be economically sustainable for my family and me.



Little Gem bananas on the wheel at the Johnsons' packing shed.



# Matt on a mission to help growers

The NSW Department of Primary Industries' newest industry development recruit has been working towards a move to the Northern Rivers area since the 1980s. Finally, after two decades in various agricultural roles in Australia and overseas - he's arrived.

By Stephanie Dale.

And it's not just the attractions of living in the area that have been calling him. As the new Banana Industry Development Officer (IDO), Matt is on a mission: to reinvigorate the subtropical banana industry in NSW.

Matt's new position is jointly funded by DPI, national banana industry levy funds and NSW grower association funds. He is one of eight IDOs working within the DPI across a broad variety of horticultural industries.

Over the next 12 months, Matt plans to attend the meetings of Banana Growers' Association branches between Macksville and Murwillumbah, in order to better understand the needs of the local industry.

He started the role in October and the biggest surprise for Matt in his first few weeks in the job has been the disparity in

growers' views on the state of the NSW banana industry.

"I've heard two stories as I've travelled around the region," Matt said.

"Some growers say 'the industry is doomed' others say they can't keep up with demand.

"It's a curious situation to have viewpoints at such extremes."

For Matt it's an exciting time for the NSW subtropical industry, which has suffered severe decline in recent years due to pests, disease, competing land use and competition from North Queensland banana production.

North Queensland currently produces more than 90 per cent of Australia's bananas with other growing regions, including New South Wales, southern Queensland and Western Australia, growing the rest.

"For growers who are willing to change - to renew plantations, trial new varieties and plant new ground - the opportunities for the future are tremendous," Matt said.

"For those who don't want to change - well, as with anything, if you keep doing what you've always done then logic says you'll keep getting the same results."

Matt's IDO position is funded for three years. He said it was his hope that in that time, all NSW subtropical growers would fall into the category of 'can't keep up with demand'.

"From an agricultural perspective, being unable to keep up with demand is a brilliant situation to be in!" he said.

Other targets are better farm practices and fruit quality resulting in improved sustainability for farming businesses.

"One aspect of my role is to help growers increase production of fruit that meets market specifications," he said.

"I'll be working with growers to achieve better production through improved farming practices, including

**Tweed Brunswick and District Banana Growing Association president David Perry (left) with Matt Weinert.**



Matt with competitors at Macksville's Banana Hurl in November (see full story, Page 37).

better nutrition, soil health, trialing new varieties and better pest and disease control."

Matt grew up on a broad acre dryland grain farm on the Darling Downs, west of Brisbane. He spent 15 years in research and development in Brisbane with Queensland's Department of Agriculture, Fisheries and Forestry (DAFF, then known as the Department of Primary Industries), CSIRO and the University of Queensland. He then headed to the Top End, where for three years he was based in Darwin working as a plant pathologist for the Northern Australia Quarantine Strategy.

He then moved to North Queensland, doing the same work from Mareeba before returning to Queensland DAFF, focussing on industry development in the avocado and mango industries.

"Then I was fortunate enough to get this job," he said.

"I've long had a passion for bananas and it's exciting to be finally working in the industry."

On top of a challenging mission, Matt has a substantial vision for the industry.

"There are massive challenges facing the subtropical industry, all of which can be overcome by improving farming practices and developing strong niche markets," he said.

"My strengths are building networks and troubleshooting. It's my intention to

work closely with growers to reinvigorate the industry - to connect like-minded growers with each other, as well as people throughout the supply chain, to ensure we use all the resources we have available to us to solve the problems facing the NSW industry."

A primary concern for many NSW subtropical growers has been the exodus of young growers. Matt would like to see an increasing number of young players in the industry.

"Some of the younger growers are from banana-growing families - others are newcomers," he said.

"It's my role to encourage the new growers, connect them with the existing wisdom in the industry, oversee what can be achieved with the best use of the resources and support available - and, ultimately, help growers accomplish their own vision for their industry."

Matt's IDO project has the support of a Project Reference Group which includes banana industry representatives and grower representatives from the NSW growing regions.

"We've got a great project reference group for the project and I'm looking forward to working with them," Matt said.

"It's a really exciting time for banana growers in New South Wales."

## Matt Weinert's banana IDO role includes:

- attending BGA meetings
- helping growers increase production
- assisting with the development of new markets
- supporting growers to manage pests, disease and industry challenges
- organising field days
- developing networking opportunities for growers and others in the industry
- reinvigorating the NSW industry.



# Taking a trip to banana central

Australian growers visited some global banana-export frontrunners in Central America to bring back the latest information on fruit quality and chemical use. ABGC CEO Jim Pekin reports.

It's not often Australian banana growers have the chance to see how farming and packing happens in some of the world's biggest banana export markets.

But ten banana growers and a nurseryman were among those who travelled to Central America to learn first-hand how growers in Ecuador, Costa Rica and Martinique run their operations.

The study tour provided participants, as well as all growers wanting to share in the information, a rare opportunity to look at some international production trends.

The Ecuadorian and Costa Rican industries are respectively the largest and third largest exporters of bananas in the world. Martinique, on the other side of the Caribbean from Costa Rica, is a French West Indies island selling bananas mainly to France and was visited because it is a banana producer in a developed nation.

In this report, growers share some of the highlights of the tour, including their main messages of placing more emphasis

Below: Study tour participants during a plantation visit.



on bunch protection and the use of chemicals.

## Fruit Quality

In his assessment of fruity quality, Tully grower Stephen Lowe said it was widely evident at all farms that great care is taken to ensure the bunch reaches the packing facility in pristine condition.

"In Ecuador and Costa Rica, the system used in the field was a cableway to transport bunches to the shed," Stephen said.

"Martinique farmers use sophisticated tractor-drawn trailers which allowed bunches to hang freely without touching each other on way to the shed.

"The use of pads and jigs to avoid pressure injuries to the bunches when they are being humped is something that could also have benefits to the harvesting process used in Australia.

"The evidence was clear that packing facility operations are much improved when fruit is arriving at the shed clear of damage. The additional care in the plantation may pay off for some via better quality and less waste in the packing shed."

Tully grower Gavin MacKay observed that in Ecuador they removed four hands in summer and five in winter to produce about five hands of Extra Large.

## Not a hospital

Study tour participants saw first-hand what Nuffield Banana Scholar Paul Inderbitzin meant in the video he made of his international studies. In that video, shown at the recent banana roadshows, Paul noted the importance of protecting the bunch saying "the packing shed is not a hospital".

Practices that protect the bunch are taken very seriously with workers in many cases held directly responsible. Tully grower Paul Johnston noted that in some packing sheds the wages of field workers were docked if damage was caused to fruit on the bunches as they were brought into the shed.

Adrian Crema, also from Tully, was particularly impressed with the quality of fruit in both Ecuador and Costa Rica.

"There was a lot of emphasis on the bunch-bagging operation," Adrian said. "Their farms had plastic slips between the hands that kept the fruit from being bruised. Quality was excellent."

Tully grower Dino Costa was impressed with the overall industry standards.

"I think one thing that really stood out for me across all three countries we visited was that they had a strong industry standard that all growers followed," he said. "Each grower was not trying to gain an advantage over the other by doing something different, but instead they had collectively decided the best way to grow and package their product. I think that gives them a strong, known product to deliver to the world market."

## Chemical Use

Innisfail grower Craig Buchanan noted the very low chemical use and Stephen Lowe summed up the reason.

"All farms exported to Europe and had stringent conditions placed on them with regards to what chemicals they can use," Stephen said. "No farm we visited used any insecticides on their soil. Nematicide use was either low or non-existent."



Gavin MacKay noted that demands from European supermarkets were determining chemical use on farms in all three countries.

Mullumbimby grower Peter Molenaar said: "Europe was strong on environmental and social standards, hence less likelihood of food quality issues. If an outbreak did occur then there is only government-to-government communication to resolve the issue. The farmer is left out of the resolution."

## Borer traps

The group noted non-chemical management of banana weevil borer in Martinique.

Mareeba grower Andrew Coulson said the use of pheromone lures would help reduce insecticides used, but the issue might be labour cost as it is labour intensive to insert traps and to count and kill borers.

"On a medium farm infestation, eight traps per hectare were required," he said.

Craig Buchanan said he would like to see these traps sourced for the Australian industry, and this has subsequently been arranged via a trial shipment.

Stephen Lowe said the only chemical treatments were for black and yellow Sigatoka, post-harvest crown fungus control and impregnated bunch covers or strips.

All farmers and agronomists indicated that root and soil health were the key to being able to farm successfully without traditional chemicals.

Black Sigatoka was an issue in all three countries. Paul Johnston noted that in Ecuador the climate seemed to dictate only 24 sprays-a-year to manage the disease.

The group visited a higher-rainfall farm in Costa Rica that had sprayed for black Sigatoka 74 times-per-year, mainly preventatives and not systemic fungicides.

The group was advised that Martinique first detected black Sigatoka in September 2010 and it is now endemic. However, in March this year the French Government banned all aerial applications.

Nurseryman Steve Lavis noted that this restriction had led to labour saving, innovative mechanisation.

"We saw quad bikes adapted to mist the plantation with fungicide. The same farmer had added a herbicide set-up that sprays six metres."

A final study-tour report has been submitted to Horticulture Innovation Australia for publication and will then be available on the ABGC website. The report details many other important messages for Australian banana growers.

## Study tour participants were:

- Craig Buchanan, Innisfail grower
- Adrian Crema, Tully grower
- Dino Costa, Tully grower
- Andrew Coulson, Mareeba grower
- Paul Drury, Tully grower
- Marc Jackson, tour leader
- Chris Jamieson, Lakeland grower
- Paul Johnston, Tully grower
- Stephen Lavis, Mission Beach nurseryman
- Stephen Lowe, Tully grower
- Gavin MacKay, Tully grower
- Peter Molenaar, Mullumbimby grower
- Jim Pekin, ABGC CEO

Above: Pisang bananas being packed on a small farm in Costa Rica.

Below: Bunch protection was a priority with slips placed between hands.





## Toxic past challenges French West Indies

**French West Indies banana plantations have cut pesticide use but are battling revelations of toxic residues stemming from decades past. Jeff Daniells and Christian Chabrier report on Martinique and Guadeloupe banana production.**

**In the French West Indies, pressure has been brought to bear from several quarters on the use of pesticides in recent years, leading to major changes to the Martinique and Guadeloupe banana industries.**

Included is the elimination of insecticides, phasing out of nematicides, reductions in herbicide use and, more recently, legislation against aerial application of fungicides.

The industries have been making a major effort to turn these challenges into an opportunity to position their product as the global benchmark in sustainability. Overall use of insecticides and nematicides has declined from 9.8 to 1.1 kilogram per hectare from 1996 to 2009. This is mainly a result of adoption of fallowing or crop rotations (sugarcane in particular) combined with tissue cultured planting material and mass trapping of banana weevil borer.

### 20-year toxic trail

However, the industries are in damage control because of major media attention over the revelation of the seriousness of an environmental contamination and health disaster brought about by indiscriminate use of the toxic pesticide chlordecone more than 20 years ago in the French West Indies banana plantations.

Chlordecone (Kepone® before 1976, Curlone® after 1978) is an organochlorine pesticide that was used for banana weevil borer control from 1972 to 1993. It is an endocrine disruptor (that is, it interferes with the hormone system) and was listed as carcinogenic in 1979.

Pollution surveys conducted in 2001 by the French Department of Health revealed the presence of chlordecone in soils, rivers and springs over large areas in Guadeloupe and Martinique.

Contamination of drinking water, food crops (particularly root crops such as yams) and aquatic species by chlordecone has been observed as well as its widespread presence in human blood. There is therefore a large social concern about the extent and evolution of chlordecone

pollution in the French West Indies and its impact on human health, ecosystems and people's livelihoods.

As the contamination has spread, fishing had to be stopped and freshwater prawn farms closed. The same soon applied to the crabs caught in the mangrove swamps and it remains to be seen which deepwater species will be allowed to be caught in the future.

The main banana soil, the andosol, has a very high capacity to adsorb the chemical and is not broken down. It is estimated that chlordecone will slowly 'leak' from these andosol soils causing ongoing environmental contamination for more than 500 years (Environmental Pollution 157:1697-1705) unless a soil remediation strategy is discovered!

The chlordecone story is a sobering reminder of the consequences of poor decision making leading to serious impacts for generations to come. Fortunately chlordecone has never been used in Australia.

### Pheromone borer traps

Potential pesticide residues in harvested product brought pressure from the EU to remove insecticides and nematicides from the production system. This led to the eventual adoption of pheromone trapping of banana weevil borer with products such as Cosmolure®.

When the product was first released it had poor efficacy. A better capture system and a better attractant were subsequently developed. There were also issues related to insect behaviour that had to be taken into consideration to better target the pest.

A recipe approach would not work. The insect's gregarious behaviour necessitates more management to carefully monitor the pest distributions and move traps around accordingly. Traps need to be inspected weekly/fortnightly to remove weevils and to ensure the reservoir remains filled with water plus detergent so that it remains effective. There is a need to trap hard when taking old plantations out to prevent major

incursions into other plantations. Weevils can remain for two to three months or more in the old decaying corms following glyphosate injection. In the French West Indies Cosmolure® is authorized for 'monitoring' but not for 'control'.

How different things might have been in Martinique and Guadeloupe if someone had come up with pheromone trapping of banana weevil borer 40 years ago!

### Aerial spray ban

Strong environmental group pressures have now contributed to the ban on aerial application of fungicides in Martinique and Guadeloupe. On one of the farms visited they had already grounded their helicopter spray fleet and are now applying fungicides by tractor-drawn misters even though at the time of his visit growers had a special dispensation to continue aerial application for six months.

### Black Sigatoka

Black Sigatoka was first detected on Plantains in Martinique in 2010 and in Guadeloupe in 2012. Plantains (AAB, Plantain subgroup) are a common cooking banana in the Caribbean and Central & South America. They are relatively resistant to yellow Sigatoka but quite susceptible to black Sigatoka and so acted as a sentinel to the arrival of the pathogen.

The arrival of black Sigatoka has led to an increase in the number of fungicide applications required from about eight each year, up to between 10 and 12, and is steadily increasing. This number of applications is nevertheless low by most standards because of the biological forecasting approach to scheduling fungicide applications which continues to be used. The system was developed in the 1980s by CIRAD and is based on the use of mineral oil, which has fungistatic effect, and a mixture of systemic fungicides (of five different chemical families). To be effective the treatment must be applied to an entire production area.

Fortunately the black Sigatoka which arrived is a 'wild' strain, so it is relatively sensitive to two registered triazoles Tilt® (a.i. propiconazole) and Sico® (a.i. difenoconazole) and so is kept in

check almost as well as yellow Sigatoka which has for some time had tolerance to triazoles. Thus yellow and black are currently cohabiting. Black has not yet replaced yellow even though temperatures in all regions are favourable. However, eventually black could be expected to develop tolerance and the current balance should shift rapidly.

But all this coupled with the imminent loss of aerial application does not augur well for good control of leaf disease. When their industry has only ground rigs available we expect spray applications to greatly increase in frequency.

This will be due to less timely and synchronized fungicide application and poorer targeting of chemical on the young emerging leaves requiring protection. With the resulting poorer disease control sensitivity to systemic fungicides could also be expected to develop more quickly.

There will be a need for more and more applications per year and thus reduced profitability and viability. There is a great need for genetic resistance. The banana industry is closely involved in CIRAD's breeding effort which may be the lifeline they need in the not too distant future.

*This report follows an earlier report in the Sprint 2014 edition of Australian Bananas from Jeff Daniells, of Queensland DAFE, and Christian Chabrier of the French Research Centre, CIRAD.*

## Global look at bananas

**Some of Australia's top banana scientists helped lead a global symposium on banana and plantain science at the International Horticultural Congress (IHC) in August.**

**Thousands of horticulture industry representatives attended the six-day Congress held in Brisbane.**

Banana science topics discussed included banana genetics and breeding, development of disease-resistant varieties, management of Panama disease and farm practices.

Australian banana scientists chaired sessions, presented symposium sessions and workshops. They also presented five-minute summaries of their research findings at poster sessions held in the Congress exhibition area. Australian scientists included James Dale, André Drenth, David Turner, Jeff Daniells, Mike Smith, Juliane Henderson, Kathy Parmenter, Stewart Lindsay, Naomi King, Suren Samuelian and Elizabeth Czisowski.

International banana scientists also toured Brisbane research labs and visited a banana industry trial block and banana farm in northern New South Wales.

The event is held every four years with the next Congress to be held in Istanbul, Turkey.



**Plant pathology Professor K. Anita Cheriau from India's Kerala Agricultural University and Burundi Institute of Agronomic Science plant pathologist Dr Célestin Niyongere during a rainy visit to the Duranbah trial block.**

**Below: Banana farms in the French West Indies have cut chemical use.**





## Younger growers stand out at Murwillumbah

Younger growers displayed the stand-out fruit, taking the majority of prizes at this year's Murwillumbah Show in Northern NSW.

Eungella growers Andy and Sue Everest were the most successful exhibitors with wins in five categories, and Andy's brother, Will, grew the banana exhibit's champion bunch and took out two other awards.

Growers Matt and Jenny Hesse also had major show success with their Cavendish exhibits, taking out four awards for best commercial bunch, heaviest bunch, best hand and champion hand.

Another highlight was the success of new local variety Little Gem with a bunch grown by Wayne Shoobridge winning the best "other variety" award.

Eungella grower Will Everest with the Murwillumbah Show's champion bunch.

Will Everest's other wins were for Lady Finger exhibits taking the prizes for best commercial bunch and heaviest bunch (44.5 kg).

Andy and Sue's wins were for best hand of Lady Fingers, best commercial cartons for both Cavendish and Lady Fingers, and champion carton.

Exhibition co-judge, wholesaler Greg Bradshaw said the Lady Finger exhibits were impressive. "These young growers have a good strain in the variety of Lady Fingers that they grow. They are conscientious, don't cut corners and they feed and work their plants well, resulting in high quality fruit. Given the current dry conditions, the fruit quality was surprisingly good."

High prices in the market in the lead up to and during the October show were

perhaps too tempting for some growers who chose to get the fruit packed rather than exhibiting.

"It was disappointing that more local growers chose not to exhibit this year, preferring to chase prices," Greg said.

"These annual shows are a key opportunity to showcase the local banana industry to the Tweed community and it would be good to see more growers participating in the future."

The National Banana Bunchy Top Project also had a display at the show featuring a treated and inert plant showing the symptoms of Bunchy Top.

The plants have previously only ever been exhibited in a perspex case, but were this time treated and displayed so visitors could get a better look at what Bunchy Top looks like.



Above: Wayne Shoobridge with the prize winning bunch of the new variety, Little Gem.

Below: Andy and Sue Everest's prize winning Lady Finger hand. They were the show's most successful banana exhibitors.



## Bananas an energy gift at Macksville



Energy-giving bananas have again been promoted at Australia's oldest professional foot race carnival, the Macksville Gift.

The fourth World Championship Banana Hurl has promoted bananas as a healthy energy snack each year since joining the Gift program in 2011.

The Banana Hurl attracted dozens of competitors including runners of all ages who were at the 61st Gift on the mid-north coast of NSW for a day of 70-metre, 120-metre and 300-metre foot races.

For those wondering, "how far can you chuck a banana?" The answer is "quite a long way".

The larger bananas are used for the event's Open sections and the hurl's main winner was Jack Mitchell who made a 51.62-metre throw in the Open Male category. Open Female champion Anna Leksinkska hurled a banana 38.39 metres.

Tom Newman competed in the secondary school section and was the overall distance champion for the event, hurling one of the smaller bananas used in the schools sections a massive 62.5 metres. The smaller kids also got in on the fun with some enthusiastic throws. Primary School banana hurl champions were Jade Pond and Tom Sweeney.

The Banana Hurl raised \$200 from its \$1-a-hurl entry fees with the funds donated to the local Nambucca District



Cancer Support Group. Taylors Arm grower Stephen Spear said the Banana Hurl was a popular part of the gift and well supported.

Attending the event was newly appointed NSW Industry Development Officer Matt Weinert who contributed

significantly to the fundraising effort through his numerous unsuccessful attempts to make a throw worthy of a finals berth.

Support for the event, including promotional giveaways, was provided by Australian Bananas marketing.



# 2000 at Innisfail's banana gallops

One of the Australian banana industry's major social events, the Australian Banana Industry Race Day, was held under sunny skies in Innisfail after days of heavy rain cleared on race day eve.

About 2000 racegoers attended the August event at Pease Park, including banana growers and industry partners.

Event sponsors included the Australian Banana Growers' Council, who sponsored the raceday lunch, and Australian Banana marketing.



Above: Jenny Robson, Heidi Quagliata, Andrea Drury and Teresa Betts.



Above: Danny Apap and Ken Barnes at the Innisfail race day.

Below: Lyn and Robert Busato at the Australian Banana Industry Race Day.



Above: At the Australian Banana Industry Race Day, from left, Rosemarie Camuglia, Rosemary Aquilina and Deborah Camuglia.



Above: Diane and Jeff Spring with Margaret and Gary Grima at the race day.

Below: Anthony Camuglia, Mick Grima and Tony Camuglia.



## Diet crazes and how they rate bananas

It is so easy to get caught up in the latest diet craze, where people will embrace a new eating style with little thought.

Depending on the food you sell or market, sometimes that diet can work in your favour, sometimes against you.

### Paleolithic diet (Paleo)

Going Paleo is today's trendy diet, supposedly based on the foods that humans ate 10,000 years ago. To be able to do that today in Australia, you would have to eat bush tucker alone. About the only true paleo food available in the supermarket is the macadamia.

Over time, virtually every food has changed through selective breeding and cross breeding, especially in the last 200 years. For example, yellow corn has been around only 120 years after James Reid selectively bred it for the yellow mutation. Even the Paleo banana had large seeds and probably tasted very starchy.

Followers eliminate dairy foods, legumes and grain foods, all of which have essential nutrients for our health. Anyway, the good news is that all fruits are considered as part of the Paleo diet.

### Gluten-free diet

Another trendy diet. The only folk who need to avoid gluten, a protein found in some grains, are those with coeliac disease, about one in 70 people. The Coeliac Society says that about 300,000 Australians have undiagnosed coeliac disease and may feel better when they choose a gluten-free diet, but they stress that people should be properly diagnosed before they try a gluten-free diet.

Avoiding gluten means that all foods made on wheat, barley, triticale and rye disappear, leaving many with fruit as their snack choice, and that is good news for the banana grower.

Those following Paleo and the gluten-free diets may consider eating bananas as an alternative to highly-processed snack foods.

### Low-carb diet

Yep, this one is still around despite absolutely no evidence that anyone will

benefit from deleting bread, rice, pasta, fruit, root vegetables, and legumes from their diet.

Most people go 'low-carb' to lose weight. This year there have been two review papers published in the science journals showing that a low-carb diet is no better than a low-fat diet or healthy eating for weight loss.

Therein lies our problem – we just can't sell the idea of healthy eating to the masses.

### Low sugar

Sure, if you eliminate confectionery, chocolate, cakes, biscuits, regular soft drink and pastries from your diet you may well feel better and lose a bit of excess weight.

But any primary school kid will tell you that they are 'sometimes' foods, not 'everyday' foods. Where the low-sugar promoters cross the border into lunacy is when they claim that fruit is bad for you.

Some have even said that milk should be avoided because of the sugar content. This sugar is called lactose. It is the same sugar found in breast milk. Bet they don't know that.

### Special sugar

You know that ripe bananas taste sweet because of the natural sugars, like fructose and glucose. Some of those fructose molecules connect to form long chains, resulting in a compound called a fructo-oligosaccharide. A bit of a mouthful so let's just call it FOS.

The FOS don't get digested in the small intestine, so technically they have no calories, and end up in the large intestine where healthy bacteria reside. These bacteria just love FOS so when they are fed FOS they proliferate and bump-out the potentially nasty bacteria.

These healthy bacteria then convert the FOS to other compounds that protect you from bowel cancer.

If people would just stop jumping on any food trend that passes through their television screen and took time to listen



By Glenn Cardwell  
Accredited Practising Dietitian

to common sense they would realise that fresh produce delivers health in many different ways.

We should always look at the company a sugar keeps, as well as the structure of sugar chains.

The sugars in the banana provide sweetness and come with essential nutrients like potassium, folate, vitamin B6 and vitamin C, along with the benefits of FOS.

Food should be judged on its healthiness, not just a single component such as sugar.

### Reference:

Sabater-Molina M, Larque E, Torrella F, Zamora S (2009). Dietary fructo-oligosaccharides and potential benefits on health. *Journal of Physiology & Biochemistry* 65 (3): 315-328



# Congress registrations opening soon

**Banana growers get ready - registrations open in January for our exciting Banana Industry Congress.**

**The Congress is being held in Melbourne from June 17 to 20, 2015 and will feature a series of firsts.**

It will be first time our Congress exhibition opening kicks off on the same day as a State Of Origin match with both events held in the same city.

Both are in the centre of Melbourne - Congress at the Crown Promenade, part of the Crown complex at Southbank, and State Of Origin at the iconic Melbourne Cricket Ground (MCG).

Growers are already looking ahead and grabbing some early airfare specials for Congress as well as the best available Origin seats which are already on sale.

## Congress firsts

In other firsts, Congress will showcase its fresh approach to R&D workshops with shorter, sharper sessions and there will be site visits showing growers the latest trends in supply chain and retail. The event coincides with the scheduled opening of the new Melbourne Wholesale Fruit, Vegetable and Flower Market with opportunities for growers to see the latest in produce management.

Of course the Congress favourites will still be there: our exhibition space where growers and industry partners meet, the Banana Bar, and the Banana Industry Ball and Awards of Honour.

The traditional Congress fridge magnet is also out now - this time featuring

a banana making an impact on the MCG's hallowed turf. The "Bananas in Melbourne" magnet commemorates the historic combination of two favourite events for banana growers - Congress and rugby league's showcase event.

## Melbourne buzz

Congress Management Committee Chairman Steve Lizzio said there was already a lot of excitement about Congress with hundreds of banana growers and their partners expected to attend.

"There's a real buzz about Congress and a lot of growers are getting excited about the 2015 event and all that the Melbourne venue will offer," Steve said.

"The Crown venue is excellent and combines our exhibition, conference and meeting room facilities all on the one level," Steve said.

"We will also be making sure there is great business and social program with plenty for growers' partners and families to do in and around Melbourne.

"The Banana Industry Ball and Awards Of Honour will be a very special event and held in one of Australia's most prestigious venues, the Crown Palladium, which also hosts events such as the Logies and Brownlow Medal awards."

**Congress and State Of Origin both kick off in Melbourne on June 17, 2015.**

## Get your tickets

Steve said many growers were already planning ahead and securing flights as well as tickets to the Origin match.

"There have already been some great airfare specials on offer with more to come over Christmas and into the New Year," Steve said.

"Some growers have already gotten in early and snapped up some great prices on return airfares to Melbourne and there should be more great specials on offer soon.

"We've put the web addresses for flight specials on our Congress website and growers can use the link to sign up for email notifications on airfare sales. There's also links to Ticketek for Origin tickets."

State Of Origin tickets won't be offered as part of event registration but growers are getting friends and family organised to attend the event and buy tickets now. It will be a rare chance for many to see a live Origin game - the second in the series in a year when Queensland will be desperate to take back the title from New South Wales.

## Program highlights

The Program will officially be announced early in 2015. Highlights will include:

- Great value registration price including business and social program events
- Retail tour showing the latest trends in produce markets
- Opportunity to see the new Melbourne Market
- Special R&D session with a new format
- Exhibition, conference and meeting room spaces co-located on the same level
- Partners' program
- Banana Bar in the Crown Promenade's Tonic Bar
- Banana Industry Ball and Awards of Honour.

More event announcements will be made early in 2015. For more information, see the event website [www.banana-congress.org.au](http://www.banana-congress.org.au)



**Proudly Growing, Packing & Marketing Australian Bananas**

For further information contact:  
 Ben Franklin 0417 610 571 Michael Engeman 0417 603 692  
 Gary Fattore 0417 644 033

[www.costagroup.com.au](http://www.costagroup.com.au)

**costa** fresh is our passion

**bloom**



# All on Board after Tully meeting

Two new directors have been elected to the Board of banana industry peak body, the Australian Banana Growers' Council (ABGC), taking it to a full complement of eight directors.

Carnarvon grower Tom Day and Tully's Stephen Lowe have joined, giving the ABGC representatives from across the national growing regions.

Tom took up the position vacated when previous Western Australia/Northern Territory representative

Michael Nixon retired from the Board in 2013. Tom has previously served as an ABGC director.

Stephen Lowe has joined the Board following the departure of South Johnstone grower Marc Darveniza who completed six years' service.



The Board positions were unopposed and both new directors were appointed at the ABGC's Annual General Meeting (AGM) held at Tully on November 26.

ABGC Chairman Doug Phillips was also re-elected and later reappointed as Chairman at the ABGC Board meeting held after the AGM. Adrian Crema continues as deputy chairman, Paul Johnston is treasurer and other directors are Steve Lizzio, from Silkwood; Mullumbimby's Peter Molenaar and Taylors Arm grower Stephen Spear.

The Board's first post-AGM meeting discussed topics including the Banana Freckle eradication in the NT and the proposed new 0.75 cents-a-kg production levy; proposed Queensland biosecurity changes and progress with the creation of the new levy-management body Horticulture Innovation Australia.

The ABGC Board, from left: Tom Day, Peter Molenaar, Paul Johnston, Doug Phillips, Adrian Crema, Stephen Lowe, Steve Lizzio and Stephen Spear.

# Stephen shares industry passion

New ABGC director Stephen Lowe farms in Tully and tells us about his background.

The Lowe family is one of the Tully family's first banana-farming families, farming for more than 50 years. Tell us a bit more about your background.

From a young age I have been exposed to the banana industry and I can remember back to the late sixties when my father Barry grew bananas on land he



leased from the Henry family. Through my schooling years I would work on the farm during school holidays. After finishing high school at Tully State High I completed my Bachelor of Engineering with honours at James Cook University, Townsville. In 1989 I began working with the Department of Defence in Canberra as a secure communications engineer. I remained in Canberra for six years and in this time completed my Masters of Engineering Science at the Australian Defence Force Academy. In 1995 my wife and I returned to Mission Beach and I have been farming bananas on the Tully River since this time.

How many hectares of bananas do you grow and what other crops do you have?

At this point in time the family farming business grows approximately

Stephen Lowe

160 hectares of bananas and around 130 hectares of sugar cane.

Tell us about some of the major challenges for growers in the Tully region.

Farming bananas has many challenges. Major issues for the growers in the Tully region include cost of transport, market access, labour market reliability and the mounting pressure of compliance to government and retailer regulations and specifications.

Tell us why you nominated to become an ABGC director and what you'd like to achieve.

I have known several members of the Board for a period of time and I am impressed with their knowledge and passion for the industry. It was the strength of this existing team which beckoned to me and I hope to be able to share my knowledge of the industry in a constructive manner. As a director I would like to see an increase in the number of ABGC members. I would also like to see a greater awareness by members as to where, and for what purpose, their levies and fees are being used.

# Industry issues bring Tom back

Carnarvon's Tom Day has rejoined the ABGC Board, strengthening the Council's national representation.

You've had a lengthy involvement with horticulture in the Carnarvon region, tell us about your background.

I've lived in Carnarvon all my life, having been involved in industries including transport and earth moving, hospitality and horticulture. I was in local government for 15 years (six years as shire president); a State Government Development Commission Board Member; founding member of Sweeter Banana Co-Op and chairperson for three years; member of Gascoyne Water Co-Op and Gascoyne Assets Mutual Co-Op and current chairperson. I've been a member and active in many local sporting and community groups over the years.

Tell us about your involvement with ABGC and why you've rejoined the Board.

I first joined the ABGC Board when changes were made to achieve the present structure of ABGC so the Council is able to be seen as representing all banana growers and to demonstrate the Carnarvon banana industry support for ABGC. I have rejoined as I believe we as an industry need to be represented on the national stage to protect our industry and also keep across issues that affect the industry today.

What are you farming at the moment?

We have been growing bananas as a main source of income for over 25 years. We usually have around 4 ha in ground at any one time; we have just been through a total replanting program. We also have a small number of mango trees and have grown pumpkin on-and-off at times.

What's it like growing bananas in Carnarvon and what are some of the major issues there?

Bananas have been grown in Carnarvon since the 1930s. Growing bananas in Carnarvon is quite intensive with spacing much closer than elsewhere, hence the production per ha is quite good. The environment is subtropical, hence the size is much smaller than tropical environments. In recent times

we have been very successful in marketing this aspect of our product. Other advantages are there are very little disease issues in the area, plus the ground is flat and easy to manage. The biggest threat to the industry is the lack of water, at the moment with no river flow for almost four years.

Are there some things the industry in Carnarvon is doing that could be useful for other regions to look at?

The Sweeter experience has totally changed the outlook for the Industry, even though it has been frustrating that all growers have not seen the advantages of working as a group. However, Sweeter have now positioned themselves in the market to achieve excellent returns for their members. Our problem now is meeting the demand. Sweeter have done a lot of marketing to the public, hence creating demand in the shop. The message which has come out of this is that if you can create demand for your product it will achieve results. The Compensation Fund has been the saviour of the industry many times during adverse weather conditions, it is a successful scheme which could have good results for other areas but a lot of thought would need to go into how to set it up in today's world as this was started when government still thought they should make a commitment.



Tom Day

What changes would you like to see happening in both the local and national banana industry over the next few years?

I don't know at this stage if there's a need for a lot of change. We need to continue to represent the industry in all forms, we need to ensure imports are rejected and keep diseases under control where possible.

Banana farming in the dry conditions at Carnarvon.







**b a s t a**® 



**SAFE ALL  
ROUND FOR**

**20**   
**YEARS\***

**Protecting your fruit  
since 1990**

[www.bayercropscience.com.au](http://www.bayercropscience.com.au)

 Bayer CropScience

Bayer CropScience Pty Ltd, ABN 87 000 226 022,  
391-393 Tooronga Road, Hawthorn East, Victoria 3123.  
Technical Enquiries 1800 804 479. [enquiries.australia@bayercropscience.com](mailto:enquiries.australia@bayercropscience.com)  
Basta® is a registered trademark of Bayer. \* When used as directed.

BCH10340