Australian Bananas

Issue 42, Spring 2014

Showtime!

Best of bananas at four local shows.

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Next-gen grower Paul Johnston

Naomi Brownrigg at the Tully Show
Photographer: Rhyll Cronin

Transition begins for levy body HAL

Growers will be able to become the direct owners of a restructured Horticulture Australia Ltd (HAL) under changes being made following a review of the funding body.

A "transition" entity is to be in place by November as part of the process to change the body which administers horticulture project funding.

The funds include about $6.5 million in annual levy funds contributed by banana growers for research and development and marketing projects.

Horticulture's peak industry bodies, including the Australian Banana Growers' Council (ABGC), have overwhelmingly supported the proposal to change the ownership structure.

The bodies, who are the current owners of HAL, voted on the proposal at a Cairns extraordinary general meeting in June. They had earlier given their initial support for the move when they met at a HAL Members' Forum in Melbourne in May.

HAL is now preparing the transition and implementation plan.

Under the proposed change, HAL will become a grower-owned Research and Development Company (RDC). HAL is currently owned by 43 organisations, including 41 national peak industry bodies.

The transition entity is planned to be in place by November 3 as this is the last day of the current Statutory Funding Agreement (SFA) between the Federal Government and HAL. Under the agreement, the Federal Government supplies matched funding to HAL for horticulture research and development projects.

The new structure was one of nine recommendations from an independent review commissioned by HAL and undertaken by consultants ACIL Allen.

The other eight recommendations have also been discussed with HAL members and consultation will continue over the next year or so.

HAL Board approves banana strategic plan

The proposed new five-year investment plan for about $35 million in banana growers' levy funds has been approved by the Board of Horticulture Australia (HAL).

HAL received the Strategic Investment Plan (SIP) at a Cairns meeting in June.

The SIP was presented by HAL Industry Services Manager Jane Wightman, Australian Banana Growers' Council (ABGC) Chairman Doug Phillips and ABGC CEO Jim Pekin, who represented the Industry Advisory Committee (IAC) in the absence of IAC chair Sue White.

The plan was formed during a year-long process of extensive consultation with banana growers and industry partners.

Main objectives

- Maintain a consistent and quality supply of Australian bananas whilst achieving a 5 per cent productivity gain by 2018/19 by: Improving production per unit of input; and/or reducing production and supply costs per unit of marketed product
- Increase demand for Australian bananas by: Increasing the value of the banana category by $10.2m per annum and maintaining bananas' "number one fruit" status
- Improve industry capacity and R&D adoption; and demonstrate Return On Investment (ROI) of levies by engaging more than 50% of production acreage in the technical update series, increasing participation in the Banana Best Management Practice Guideline to more than 50 per cent of production area and continuously increasing adoption of best management practice across the industry and achieving a ROI of banana industry R&D levy funds of 4.1:1 over the life of the plan.

Growers to get a share of the new HAL

Hopefully all of you have heard something about the review of the company that invests our levy funds into industry projects, Horticulture Australia Limited (HAL).

I'd like to give you a quick run down of what's occurring because all banana growers need to be across this issue. That's because in the coming months the review's changes mean all growers, including banana growers, will be eligible to be direct shareholders of a reformed HAL.

As I mentioned, HAL is responsible for the expenditure of money collected through our compulsory marketing and research and development levy. Currently it is owned by the various Peak Industry Bodies (PIBs) in the horticulture sector – such as the Australian Banana Growers' Council (ABGC).

One of the clear recommendations of the review was to transition HAL to a new organisation that has individual levy payers as the owners. This is being done to address any potential conflict of interest issues inherent within the existing structure.

An Extraordinary General Meeting of HAL members in June overwhelmingly agreed to this recommendation and work has commenced to establish a transition entity by November 3 this year.

The review had eight other recommendations relating to operations of the new entity. ABGC has been working through these matters with HAL.

In regard to the operation of the banana Industry Advisory Committees (IACs), we recently received a contract for continued funding till the end of October 2014, and a note of intention to continue funding until the end of June 2015. This will give growers some certainty during the period while the new HAL model and consultation mechanisms are developed and implemented.

Meanwhile, the HAL Board has formally approved the five-year Strategic Investment Plan that was recommended by the Banana IAC.

Grower sustainability

Two big issues facing us now both relate to grower sustainability.

The first is for ABGC and individual growers to ensure the major growing regions don't get an exotic disease. The ABGC in conjunction with the Federal and State biosecurity authorities are currently managing a response to the exotic disease, Banana Freckle, which has been found in the Northern Territory. ABGC is grateful to the NT Department of Primary Industry and Forestry which is managing the eradication plan. We certainly do not want this or any other exotic disease in the main growing regions.

The other main issue is growers' financial sustainability. This is not a new thing, but many growers are increasingly finding the going tough.

Doug Phillips
ABGC Chairman

Change is part of the ABGC success story

The Australian Banana Growers' Council (ABGC) has had a strong track record, now extending for more than 50 years, in representing banana growers' interests.

Throughout that time ABGC has continually evolved. One of the more significant changes for us was the development of our role following the introduction of the growers' national levy fund for R&D and marketing. The levy began on July 1, 2008.

Initiatives such as the national levy have meant that ABGC has adapted its role to best serve growers. We are no longer solely an advocacy body representing the interests of growers to governments and other entities.

Now we are also responsible for ensuring effective and efficient industry outcomes for marketing and R&D initiatives – and that's because ABGC was responsible for gaining grower support for the levy via a ballot held in 2007. As a result, ABGC has been influential in shaping the investment of the national levy funds, through the Banana Industry Advisory Committee and its sub-committees.

ABGC also runs several industry development projects which I mentioned in my column published in the last edition of Australian Bananas. They include HAL projects for Banana R&D management, yellow Sigatoka, Banana Bunchy Top, communications, across-industry consultation, capacity building and the 2015 Banana Industry Congress.

ABGC also has a contract with the Terrain NRM group, which enabled us to employ Robert Mayers in December on the Banana Reef Rescue project.

A new joint project, between HAL and ABGC started on July 28. It is a Strategic Investment Development project to be managed by Michelle McKinlay who will work in the ABGC's Brisbane office. She will be guiding and helping the industry on a range of issues including biosecurity, environment, workplace health and safety and varieties.

Of course, formulating and advocating industry policy remains a major part of ABGC's work.

At time of writing (July 2014), the key issues being addressed are:

- exotic incursion of Banana Freckle in the Northern Territory
- Queensland's regulatory environment, especially for Yellow Sigatoka and Bunchy Top
- HAL reforms
- replacement model for QBAN (Quality Banana Approved Nursery)
- planning for a future banana marketing program.

The banana industry is a success story. ABGC plans to continue that success as growers and the industry face challenges and changes in the next year or so.

Our role will keep changing and adapting but we remain focused on advancing our industry. And while much of what we do benefits all growers, including those who are not members, we can maximise our successes even more when all banana growers contribute their views, and their three-cents-per carton membership fee as well.

Jim Pekin, ABGC
Chief Executive Officer

Origin and Congress in Melbourne kick-off

State of Origin fever is already hitting Australia's banana growers with news the second match of next year's Origin series coincides with the biennial Banana Industry Congress in Melbourne.

Hundreds of banana growers will be in Melbourne for the Congress, set for June 17 to 20 in 2015 at the Crown Promenade, Southbank.

With the announcement that the second State of Origin match for 2015 will also kick off on June 17, at the Melbourne Cricket Ground (MCG), banana growers will have the chance to combine the industry's major event with attendance at an Origin match.

Tickets for the MCG match went on sale on July 22. More information is available at www.mcg.org.au or premier.ticketek.com.au

Congress Management Committee chairman, north Queensland grower Steve Lizzio said many banana growers were fanatical rugby league followers. The industry was also proud to have State Of Origin, Australian and Melbourne Storm fullback Billy Slater, who comes from the banana-growing region of Innisfail, as a banana industry ambassador.

"The chance to see a State Of Origin match will definitely be an added incentive for banana growers from all over Australia, and particularly Queensland and New South Wales, to attend the Banana Industry Congress," Steve said.

"This will be the eleventh Congress and the first to be held in a capital city and in a non-banana growing State. We've selected Melbourne as the venue because it offers opportunities for growers to see supply-chain facilities such as the new Melbourne Wholesale Fruit Vegetable and Flower Market and produce distribution and retail outlets. State Of Origin will be a real bonus and a great addition to our social program."

Steve said the event's Program Committee was currently compiling suggestions for speakers and events for Congress 2015.

Mullumbimby grower Peter Molenaar leads the Program Committee with other members including north Queensland growers Adrian Crema and Marc Darveniza, wholesaler Michael Engeman of Costa, scientists Juliane Henderson and Naomi King, Horticulture Australia Ltd marketing David Chenu, industry consultant Jenny Margetts and Australian Banana Growers' Council CEO Jim Pekin, Research and Development Manager Jay Anderson, Office Manager Alix Perry and Communications Manager Rhyll Cronin.

The Congress Management Committee is led by Steve Lizzio with other members including Tully grower Paul Johnston, Peter Molenaar and the ABGC's Jim Pekin and Rhyll Cronin.

Congress organisers are ICMSA, led by Suellen Holland and Fallon Beatty.

Steve said: "There's already a lot of excitement about Congress and now the announcement that it will coincide with one of Australia's great sporting clashes, being held at the iconic venue of the MCG, will really have growers talking."

More information about the Banana Industry Congress is available at www.bananacongress.org.au

Banana Industry Congress
June 17 – 20, 2015
Crown Promenade, Southbank, Melbourne
www.bananacongress.org.au

Above: Maroons defenders stop the Blues' Beau Scott in game three of the 2014 State Of Origin series. Melbourne will host both the first day of Congress and what could be the deciding match of the 2015 Origin series on June 17.

Partners on the program for Melbourne

Banana-grower partners and families are already looking forward to all the fun on offer in Melbourne during Congress 2015.

Activities for partners and families are a major focus of the event. One of the main reasons Melbourne was chosen as the host city is the great entertainment options on offer for those attending with delegates.

To make sure Congress will be a rewarding event for partners, Tully's Jenny Crema is helping the event's organisers assemble an exciting Partners' Program.

And she's looking for suggestions and ideas to make sure it includes all the activities partners are most looking forward to.

"We've already started talking about all the great things to see and do in Melbourne. Some of the activities we're talking about are trips to the shopping, cafe and restaurant precincts, a special lunch – maybe on a restaurant tram, a high tea or seeing a theatre production," Jenny said.

"Congress is one of the few times partners get the chance to socialise together and at Southbank in Melbourne it's all so accessible.

"Partners can attend some Congress business sessions and the exhibition and also get away for a few hours to enjoy some social activities."

Jenny and Adrian Crema on the family farm at Tully. Jenny is helping to organise the Congress Partners' Program.

Jenny, married to grower and ABGC director and Congress Program Committee member Adrian Crema, said a highlight of Congress was catching up with other banana-growing families.

"It will be great to see as many partners as possible attending Congress – it's one of the few opportunities we have to take some time away from the farm and socialise.

Jenny said another big draw card for partners was the Banana Industry Ball – at Congress 2015 it will be held at one of Australia's best known ballrooms, Palladium At Crown. The venue hosts prestigious events such as the Logie and Brownlow Medal awards.

"The girls really look forward to the Ball and having the event at the Palladium will make it even more special," she said.

Jenny would like to hear from partners in all banana growing regions wanting to share ideas on the Partners' Program. Contact Jenny by email jencrema@bigpond.com or 0427 069 452.

Partners at Congress 2013, from left: Katie-Ann Flegler, Jenny Crema, Mel Le Marr and Alicia Johnston.

Is this Melbourne's Top 20?

Partners – to let us know what you'd like to see during Congress, contact Jenny Crema (details are in the accompanying story). Here's some suggestions:

- CBD arcades and laneways
- Shopping tours
- Theatre and musicals
- National Gallery of Victoria
- Fitzroy Gardens and Cook's Cottage
- Royal Botanic Gardens
- St Kilda Beach and Luna Park
- Ferry ride to Williamstown
- Sea Life Melbourne Aquarium
- MCG tour and the National Sports Museum
- Melbourne Museum
- Melbourne Zoo
- Southbank
- State Library of Victoria
- Immigration Museum
- Old Melbourne Gaol
- Queen Victoria Market
- Federation Square
- City Circle Tram
- Street art tours.

Lakeland spreads cyclone risk

When Tropical Cyclone Ita crossed the Queensland coast near Cooktown in April it headed for the place some growers had targeted as a potential cyclone bolt hole. Story by Rhyll Cronin, ABGC Communications Manager

With no severe cyclones experienced in more than 50 years, Lakeland, 80 kilometres south west of Cooktown, had become home to four banana farms, including the new farm planted in late 2012 by Tully's MacKay family.

Lakeland is located hundreds of kilometres from major coastal growing regions around Innisfail and Tully and further north than the Tablelands region west of Cairns. The Lakeland farms, with the Hope Vale indigenous community banana farm north west of Cooktown, have been producing about five per cent of Australia's bananas.

While Ita devastated the Hope Vale banana farm, it did little lasting damage at Lakeland – nor to most of the other north Queensland growing regions it passed through – although some regions suffered isolated pockets of serious damage.

Now Lakeland continues to attract further interest from banana growers looking at "cyclone insurance" after suffering from the damage caused to major coastal banana growing regions by Cyclone Larry in 2006 and 2011's Cyclone Yasi.

Peter and Franziska Inderbitzin at Swiss Farms, Tom, Paul and Martin Inderbitzin at Kureen Farms and Dole have already established banana plantations at Lakeland. Newcomers include the MacKays and now the Collins family – the Collins' crop being the latest to go in.

There is speculation more growers from the Cassowary Coast are looking at regionally diversifying their interests with a Lakeland farm.

A key to the region's development for banana growing is will be improved access to good volumes of water for new blocks.

Franziska Inderbitzin with the ABGC's Louis Lardi at Swiss Farms, Lakeland

Climate a plus for Mackays

Australia's biggest banana producers, the MacKay family, are pleased with the addition of a Lakeland farm to their plantation portfolio.

The MacKays first planted in Lakeland in late 2012 after securing the Gold Tyne property earlier in the year.

The purchase was the family's second attempt to buy the property after they began looking at regional diversification following Cyclone Larry in 2006. An initial attempt to buy in 2008 was unsuccessful.

Cameron MacKay said the newly established farm had much higher production levels than the family's Tully farms. "We use the same inputs, same water for 50 per cent extra production," he said.

Cameron MacKay at Gold Tyne's packing shed.

"It outperforms any of our Tully farms by quite a long way. There are a lot more sunny days and the growth rates are better."

There are 230 acres planted at Gold Tyne with plans for more. Cameron said the farm suffered some damage from Cyclone Ita but it was "nowhere near" the impact of a major cyclone.

"We've always known it was the place to try to go to," he said. "The climate is so nice up there, it seems to have less extremes." He said the entry of his family and the Collins to Lakeland showed confidence in the region's further banana production prospects.

Collins family comes to Lakeland

Leon Collins, Len Collins and manager Neville Williams at the Collins's new Lakeland property just prior to the start of planting in late July.

Banana industry stalwart Len Collins has become the latest grower to plant at Lakeland, diversifying from the family's Tully base to secure some cyclone insurance.

After growing bananas at Tully for more than 40 years, Len is in the process of planting away from the district – putting in 100 acres on a Lakeland farm, about 400 kilometres from home, with plans for a further 100 acres.

"It's a risk management measure," Len said. "We're going there for no other reason at all.

"We had the two cyclones in five years (Larry and Yasi) and so we've just gone there for risk management.

"We didn't go to the Tablelands because it's just too close (to Tully). A cyclone could take both of us out and how much of a disaster would that be?"

At time of writing, Len had begun planting in late July, more than a year after beginning a thorough search for a block in the area with good water and soil.

He bought a 1050-acre cattle block, which had previously grown peanuts. Preparation for planting began this year after bore tests produced good water volumes.

In what will be a multi-million venture, Len is planting 100 acres this year and plans to plant another 100 next year and build a packing shed.

"Our thinking is to grow 200 acres and that'll be enough to get us through if there's another cyclone.

"I hope we never have another one, but the last cyclone (Yasi) cost me many millions of dollars. We were one of the fortunate ones to be in a good financial position when the cyclone hit. We had the money to get ourselves through but I wouldn't want to have another one."

Cyclone Ita passed through the area in April but caused no damage at the Lakeland block or manager's residence.

Len said the Lakeland venture was "capital intensive" due to its more remote location.

"It's dear to set up. We are totally separate. To put in 200 acres more here (in Tully) would be quite easy but up there there's no local infrastructure (at Lakeland) so you've got to buy all new gear. You can't just go to town if a tractor breaks down."

Other set up costs have included 4.5 kilometres of fencing around 350 acres of the farm with the fencing keeping out destructive wallabies.

Len completed extensive research on soil types in the Lakeland area as well as water availability before making the final decision to proceed.

"And water is the secret up there of course," he said.

Some advantages of growing in the region were good climate with no winter chilling of fruit, he said. The region was windy but this is addressed through the use of lined bags and slip sheets between bunch hands.

Len said regional diversification was good not only for individual growers but for the industry, helping to ensure supply if one banana growing region was affected by cyclone. "It's definitely good for the industry," he said.

Northern exposure for young growers

Twenty-five young growers from Tully, Innisfail and the Tablelands made the journey north to the Lakeland production region to see the latest on their composting, harvesting and packing systems.

The tour was the first for the Next-gen Banana Group, a group of young north Queensland growers. It gave them the opportunity to visit the Lakeland production region and see the farming systems first hand.

Swiss Farms, Kureen Farming and Mackay Estates hosted the visit.

The March tour took place about two weeks before the region was hit by Tropical Cyclone Ita. The cyclone caused some damage to bunched trees but fortunately left production and infrastructure intact.

Visiting Red Valley

First stop on the tour was Red Valley, Swiss Farms' newest banana farm. This farm has been designed with a harvesting and packing system similar to those in Central America.

Features include:

- Bunches are brought into the shed on a cable system, rather than tractor and trailer
- Fruit is dehanded into large concrete troughs using water to move the fruit rather than conveyors
- Clusters are placed on trays, post harvest treatments are applied and the trays are checked for weight
- When the trays reach the packer, they pack exactly what is on the tray, removing the need for the packer to select fruit and check box weight.

Swiss Farms' Inderbitzin family redesigned their main farm shed after Peter Inderbitzin saw the system overseas. The establishment of the newer Red Valley farm allowed them to design the farm and shed from scratch using this new system.

The Red Valley shed also has a hydro-cooling system installed in their trough which rapidly reduces the pulp temperature of the bananas prior to them being processed through the packing shed. The visit to Red Valley also included a look at their extensive composting facilities.

Matt Abbott and Daniel Serra (foreground) inspecting cable lines at Swiss Farms

Above: Martin Inderbitzin and Dean Sinton view the compost at Swiss Farms. Below: Gavin Eilers with a bunch at Swiss Farms.

Above: First tour for the Next-gens – the group at Lakeland. Below: Young growers inspect the concrete trough system at Swiss Farms.

Kureen Farming

At Kureen Farming, the Next-gen group was able to see a similar packing system, with stainless steel troughs rather than concrete, providing easier shed modification options.

Farm manager Paul Inderbitzin is the current Nuffield Scholar for the banana industry. He shared photos from his scholarship study trips undertaken to banana production regions in Taiwan, China, Martinique and Central America.

Cameron MacKay, Craig Buchanan, Peter Inderbitzin (back to camera), Gavin Eilers and Chris Borsato.

Mackay Estates

The final visit was to Mackay Estates' newest farm, GoldTyne, which the Tully-based MacKays established in 2012.

While Mackay Estates uses the traditional trough and conveyor system at their coastal farms in Tully, they have installed the concrete trough system at Lakeland.

This visit provided the opportunity for the group to discuss the merits of the different packing systems in use at Lakeland and in their own growing regions.

A big thank you must go to the farm owners and managers who welcomed the tour group onto their farms and took the time to show us around.

The trip was a great opportunity for young growers to see working examples of some of the innovations in harvesting and packing and to compare them with the systems in place on the coast and the Tablelands.

The Next-gen group is targeted at far north Queensland banana growers 40 years and under, and encourages them to become more involved in the future of the banana industry. Growers wanting to become involved in the group, which meets regularly to discuss industry issues, should contact me on 4064 1152.

Story by National Banana Development and Extension Program leader Naomi King. Photos by Sarah Schultz.

Life after Ita: Hope Vale plans its return

Hope Vale Banana Farm plans to return to close to full production by next March after losing all its trees when Tropical Cyclone Ita hit on April 11.

The near year-long interruption to production at the indigenous community's 100-acre farm came only two months after its packing shed was officially opened in February. The farm had employed 32 community members and some have been retained with the help of assistance packages while production is re-established.

Hope Vale farm was the worst affected when the cyclone crossed the Queensland coast near Cooktown and passed through all of north Queensland's banana production areas. It tracked hundreds of kilometres from Hope Vale in the north, through Lakeland and south to the Daintree and Tablelands regions and through the coastal regions of Innisfail, Tully and the Kennedy Valley.

While most farms were unaffected and the average damage to bunched trees was less than five per cent, there were total losses at Hope Vale and serious damage to bunched trees at Lakeland, Daintree and parts of the Kennedy Valley.

The cyclone hit at the end of the north's cyclone season and was another reminder for growers to consider cyclone preparation strategies including de-leafing and topping trees to, where possible, minimise cyclone damage and plan post-cyclone production.

Queensland Government measures announced after the cyclone included financial assistance packages and a two-week opportunity to harvest felled bunches due to special ICA-16 market access arrangements.

While most banana-growing regions were unaffected there was damage throughout the north Queensland growing region, including Lakeland in the north (top) and Kennedy in the south (below).

Above: Hope Vale Banana Farm plans to be in full production by next March. Packer Phyllis Gibson and grandson Dwayne Bowen are pictured after the cyclone hit in April. Below and below right: Lakeland growers used cyclone preparation practices such as de-leafing and topping trees on some blocks as Cyclone Ita approached.

Kathy keeps an eye on leaf disease

Control of leaf disease is one of the biggest issues for the banana industry. Mareeba-based Queensland Department of Agriculture scientist Kathy Grice works with the Banana Plant Protection Program and has almost 20 years' experience in leaf disease diagnostics. In our continuing series where we meet our banana scientists, we ask Kathy ten questions.

Leaf spot management and fungicide resistance are hot topics for plant pathologist Kathy Grice.

Tell us what got you interested in the banana industry

In my situation it was where the project funds were and it was in the Banana Replacement Program (1995). That's were I learned to differentiate between yellow and black Sigatoka and nurtured thousands of yellow Sigatoka-resistant banana plantlets.

Where did you do your training, both academic and in the field

Most of my plant pathology experience has been gained through on-the-job training as there was a wealth of knowledge in the department when I first joined in 1986. In most research projects there is a laboratory and field component and it is nice to get out into the real world to see first hand what growers are up against.

Tell us what happens on a good day in banana research? And on a not-so-good day?

Solving a grower's problem and being able to give management advice on the issue is a good day. A bad day is the detection of black Sigatoka and historically that has always occurred on a Friday or just before school holidays!

How does your work help the industry and tell us about a breakthrough moment you've had on a project.

Leaf disease diagnostics has been a component of a number of projects since 1995 and has been essential in ensuring the Australian banana industry has remained free from exotic diseases.

The biggest break through in my mind was when the Tully Banana Production Area was declared free from black Sigatoka in 2004, a world first achievement. It was a lot of hard work from a group of dedicated people and it proved all those Doubting Thomases wrong.

What's one of your favourite things about working in the banana industry?

Banana production and research is conducted around the globe and in a range of environments. I'm based in Mareeba and have been lucky enough to travel to a number of places, including trips to the local growing regions of Innisfail and Tully as well as further afield to Weipa, Bamaga and the Torres Strait. I have also travelled to the NSW DPI Research Station at Wollongbar and surrounding growing regions in northern NSW. Overseas research destinations have included Malaysia, Costa Rica and France.

When you tell people your work includes banana research, what do they usually ask about?

Probably the most common question I get relates to why their backyard bananas are not looking healthy or don't perform well anymore and "can you come and take a look?"

What's one of the things most people don't know about bananas?

Most people would be aware that seeds form in the fruit of ornamental and 'wild' bananas but they probably don't know this can also occur in commercial cultivars. I nearly broke a tooth on a seed that had formed in a Ducasse banana.

From a science perspective, what's a current hot topic about banana production?

I don't think it matters what part of the industry you're involved in, there will always be a 'hot topic'. On the leaf spot management front, it's the issue of fungicide resistance that has developed in recent years, particularly to the strobilurin group.

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

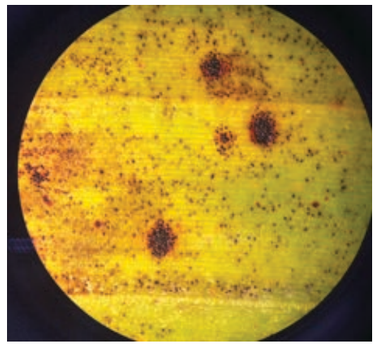
I'm not a fan of cooked banana – at all. Give me a fresh Lady Finger or Ducasse any day.

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

Playing tennis, cooking and gardening are my favourite pastimes when I'm at home. But my partner and I also love to travel abroad and experience the local culture, customs, food and wine of the countries we visit. This year Italy is on our agenda.

Why freckle is a spot of bother

It's worse than black Sigatoka, spreads fast in the wet tropics, cuts yield and increases the need for fungicide use. Read on for all the reasons why eradicating banana freckle is worth it.



Symptoms of Banana Freckle.

In Taiwan, banana freckle has replaced black Sigatoka as the most serious fungal disease attacking bananas (Tsai et al. 1993).

Climate has a significant impact on the development of disease. If banana freckle were to get into North Queensland (likely if it is left unchecked in the Northern Territory) rainy weather would mean the disease will spread rapidly.

Banana freckle has the following impacts.

Yield reduction

For bananas, yield is directly related to number of green functional leaves at the time of harvest (Stover and Simmonds, 1987). Leaf spot diseases affect the area of functional leaf and reduce yield.

As a demonstration of the effect of freckle infection on yield; a fungicide trial conducted in India (Thammaiah et al. 2009) recorded yields ranging from 27.7-37.7 tonnes/ha for plants sprayed with various fungicide treatments (at 2 or 3 weekly intervals) compared with 24.6 tonnes/ha on unsprayed (control) plants.

Increased fungicide use

Reports from various parts of Asia where banana freckle is a significant disease indicate 52 applications per year are being applied to try to achieve control. In contrast, in Australia up to 24 fungicide applications per year are used to control existing fungal diseases. Corcolon and Raymondo (2008) reported that even after applying weekly fungicide applications, 43 per cent of leaves were still infected with banana freckle. The increased usage of fungicides is a problem due to:

- increased costs of production and
- undesirable environmental impacts due to increased pesticide applications.

There are also increased costs of production related to more frequent de-leafing and the increased costs of bagging to protect the developing fruit from spores.

Reduced longevity of heavily infected leaves

In Taiwan, Chuang (1984) has recorded banana freckle shortening the life of infected leaves by 50 per cent with significant impact on yield.

Downgrading or rejection of infected fruit

A study by Corcolon and Raymondo (2008) in the Philippines reported that in the absence of fungicide sprays, banana freckle affected up to 78 per cent of fruit with 58 per cent rejected.

Reduced storage life

According to Tsai et al. (1989), in Taiwan an effect on shelf-life in storage has been observed, the extent of this effect is unknown. Fruit from plants with less than eight functional leaves at harvest will have a shorter shelf life (Stover and Simmonds, 1987).

Further background information

Phyllosticta cavendishii has two closely related species, *Phyllosticta maculata* and *Phyllosticta musarum*, which attack a different range of banana cultivars:

- *Phyllosticta cavendishii* – strong pathogenicity to Cavendish cultivars of the AAA genomic group, and cultivars of AAB and ABB genomic groups
- *Phyllosticta maculata* and *Phyllosticta musarum* – only occurs on cultivars from the AAB and ABB genomic groups (Wong et al. 2012).

Phyllosticta cavendishii and *Phyllosticta maculata* have been recorded from some parts of northern Australia and all three species have been recorded in parts of Asia and the Pacific Islands (*Phyllosticta maculata* only in Fiji, Palau and Western Samoa) (Wong et al. 2013). *Phyllosticta cavendishii* was only scientifically described in the last few years (Wong et al. 2012, 2013) and we are still clarifying its worldwide distribution. Some papers published before these recent studies, may therefore attribute the impacts of banana freckle to the wrong species of the disease.

Phyllosticta cavendishii had been present in parts of Australia since the 1990s but had only occurred on non-Cavendish bananas, except for two detections from northern Western Australia in Kalumburu (2001) and Kununurra (1979), which were both successfully eradicated.

Milestones in a year of freckle

July 2013
Banana freckle (*Phyllosticta cavendishii*) suspected on backyard Cavendish plants at two rural residential properties at Howard Springs, south east of Darwin. NT Government begins quarantine and surveillance action

August 2013
Freckle find confirmed as first outbreak on Cavendish in the NT. Qld Government acts to ban travellers from bringing NT bananas into the state. Further finds of freckle further south at Batchelor and Rum Jungle, including on a one-hectare organic banana farm.

October 2013
The joint consultative committee overseeing freckle response decides to proceed with an eradication response plan. Freckle now found on nine properties

November 2013
Continuing surveillance finds additional freckle infections south of Darwin at Humpty Doo and Acacia Hills

December 2013
Total of infected properties found is now 18 after continuing surveillance ahead of the wet season

March 2014
More than 6,000 properties now inspected. 22 Infected properties found, including another three south of Darwin and one off the coast, on Melville Island

June 2014
More than 16,000 properties now inspected. Backyard banana plants in Darwin suburbs are targeted. Total of infected properties is now 50 with inspections continuing.

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Story by Dr Jay Anderson, ABGC R&D Manager and Dr Juliane Henderson, Research Fellow (Banana Diagnostics) at the Centre for Plant Science, QAAFI, University of Queensland in collaboration with the NT Department of Primary Industry and Fisheries.

Protecting farms from pest risks: growers ask the tough questions

They're the questions many growers ask. Is the farm gate the new frontline in the war on pests? Can I really do anything to protect my farm? In response, Biosecurity Queensland explains how national, state and on-farm measures work together.

Can biosecurity threats be stopped at our national and state borders rather than growers having to use on-farm measures?

Some can, but many can't. Measures are taken at national and state borders to reduce biosecurity risks by both the Australian and State Governments. But it is not possible to keep all exotic pests out and industry groups and individual growers have important roles to play as well. It helps to think of national and state governments, industry groups and growers like the layers of an onion with each layer supported by the layer above and below it. The integrity of the whole onion relies on each layer doing its part.

If growers are being asked to step up on-farm biosecurity, does that mean border protection isn't working?

No. It means that we don't want to rely on just one or two layers of protection. As mentioned in the previous answer, it's like the layers of the onion – reducing risks works best when all the layers work together. Biosecurity needs to be a partnership between various levels of government and industry. Growers are at the front line of protecting their own farms and this provides protection for the whole industry.

Is it a grower's choice to use on-farm biosecurity measures or is it compulsory?

It is a grower's choice to decide how to undertake relevant measures to protect their farm and the industry. However, under Queensland's new Biosecurity Act people are expected to play their part in reducing biosecurity risks, and farm biosecurity measures are an easy way for growers to meet this expectation. Practicing good on-farm biosecurity will also help to reduce the impact of endemic pests and diseases (i.e. pests and diseases that are already present), as well as protecting Australia from new or exotic pests.

There are many actions that growers can take to reduce their risks, and many ways to implement those actions. To begin with, you should look at identifying the risks to your property, and then at ways to mitigate or reduce those risks. A good place to start is with the "six easy ways" listed on the page opposite. This list is based on recommendations in the Banana Farm Biosecurity Manual, which contains some other good ideas to get you started. A copy of the manual is available at banana industry website www.abgc.org.au, under the "projects and resources" tab.

We advise growers to start small and build up. Figure out what your biggest risk is and do something about it. Once you have that under control, move onto your next biggest risk. Implementing biosecurity measures is like riding a bicycle, when you first start it takes all your concentration just to stay upright, but with thought and practice, you are soon whizzing along focused on where you are going, not what your feet are doing. The first few times you introduce "biosecurity thinking" into your business practices it will take a bit of thought, but after a while you will become so used to it… you will barely notice it.

Queensland's new Biosecurity Act has introduced a general biosecurity obligation. What do I have to do to make sure I meet that obligation and when do I need to have that done?

The new General Biosecurity Obligation (GBO) will come into effect when we change over to the Biosecurity Act 2014, and its subordinate legislation (new regulations – under development now), on or before 1 July 2016.

Under the former legislation there were specific required actions for specific pests. Under the new legislation the GBO means that everyone will be obliged to take an active role in minimising biosecurity risks.

Thus by adopting good on-farm biosecurity practices you will be protecting your farms productive capacity and covering off on your legal obligations In essence, the Act imposes a universal biosecurity obligation on all persons which requires them to take all reasonable and practical measures to minimise the likelihood of causing a biosecurity risk and minimise the adverse effects of dealing with a biosecurity matter or carrier.

For example, inappropriately disposing of leaf litter containing a plant virus or disease, along with failing to take reasonable steps to reduce contaminants in plants and animals, is now, and will continue to be, illegal.

What if my property is going to be difficult to protect because of its location. For instance, if I'm on a main road, don't have fences and have "dirty" neighbours? Is there any point even trying to do on-farm biosecurity?

This is a tough one. It can feel like you have no control in this situation. But even by recognising your risks, you are making a start. You might be surprised by what you can do. Even if you don't have a fence, installing biosecurity signs on your entry ways makes it clear to your visitors and passers-by that you take biosecurity seriously. Improving on-farm biosecurity can be as simple as: restricting initial access by visitors and their vehicles to a hardstand car park or a designated space near office or packing shed at front of property; using dedicated farm vehicles for internal access; and inspecting contractor's vehicles, footwear and equipment, before letting them into farm production areas.

Alternatively you could consider setting up a local biosecurity group of neighbouring landholders to look at mitigating risk across the district. If everyone else is doing something, it can put gentle pressure on people to change. It only takes one person to get things moving and in the meantime, all the on-farm biosecurity practices you put in place will help to keep your farm productive and profitable, while producing clean safe food for consumers.

Six ways to protect your farm

You have an important role to play in protecting your farm and your industry from TR4. Biosecurity Queensland advises there are simple things you can do to reduce the risk of TR4 (or other pests) from entering and establishing on your farm. Here are six tips:

1. Keep it clean. Good farm hygiene is a very effective preventative measure.

Ensure workers, visitors, vehicles and equipment are clean before they enter and when they leave your farm. In particular, muddy equipment, vehicles and boots should be cleaned before coming on to your place. Let people know before they arrive that you expect them and their gear to be clean. Putting biosecurity signs on your gates is also a good reminder. Keep a record of all people who have entered your farm's productive areas.

2. Be aware of biosecurity threats. Ensure farm workers are familiar with disease symptoms.

Make sure you know how to spot TR4 and are able to distinguish it from other pest or disease symptoms on your farm.

3. Use clean material. Ensure all planting material and other farm inputs are infection free.

Where did your new plants come from? Was disease-free material used to produce them? Keep records of the origin of planting material and other farm inputs, including serial or batch numbers and identification codes.

4. Check your crops for disease symptoms, regularly and often.

Checking crops frequently will help you notice anything new or unusual.

Checking your plants for disease symptoms can become a part of other regular tasks, e.g. when deleafing, bagging bunches or checking irrigation. Keep records of when the crop has been checked and what you found.

5. Report anything unusual. If you see symptoms you don't recognise, ask someone, don't just ignore them.

If you suspect a new pest – report it immediately! Call the Exotic Plant Pest Hotline on 1800 084 881 or contact your local department of Agriculture.

6. Abide by the law. Be aware of legislative regulations protecting the banana industry.

The whole of Queensland is a pest quarantine area for TR4 and banana freckle (caused by *Phyllosticta cavendishii*). This means no movement into Queensland, from a place where TR4 or freckle has been detected, of:

- banana plants,
- planting material,
- fruit or
- soil that has come into contact with banana plants.

Both diseases are currently known to be present in the Northern Territory.

The movement of banana plant material into and within NSW and WA is subject to official approval.

Vehicles should be washed down before entering and on leaving your farm.

Philippines project gives our industry TR4 insights

Australian researchers are working on an international project investigating Tropical Race 4 Fusarium (Panama disease) in the Philippines. Banana scientist Naomi King talks with lead researchers Dr Tony Pattison and Stewart Lindsay about the project and how it will help the Australian banana industry.

Naomi King talks with Stewart Lindsay (left) and Tony Pattison about a new TR4 project.

Naomi The importation of bananas into Australia from the Philippines is allowable under strict quarantine measures. This imports application is something the Australian banana industry fought hard against. Why are we now working with the Philippines on a project?

Stewart We gain a lot more knowledge because we get to research and investigate some integrated management options for Tropical Race 4 (TR4) in Cavendish plantations in the tropics, in production systems much more like our Australian situation.

Naomi What do you mean by "a lot more knowledge"?

Stewart Fusarium wilt TR4 R&D is a very high priority for the Australian banana industry. However, there's a limited amount of industry levy funds available and this project represents additional money for R&D that the Australian banana industry hasn't had to put its hand in its pocket for. This project gives the Australian banana industry the opportunity to look at Cavendish growing in the tropics in the presence of TR4 (in the Philippines).

So what does the Australian banana industry get out of it? Well we get R&D staff who are a lot more experienced in understanding and managing TR4, a better understanding of how the disease is developing and affecting the Philippines export Cavendish industry and linkages with other researchers and extension staff working in these regions. The things we will learn out of this project will help the Australian industry prepare for any eventuality if TR4 should spread to north Queensland or other growing regions.

Naomi Is there an Australian component to this project?

Stewart Yes. Every Australian Centre for International Agricultural Research (ACIAR) project has to have an Australian component. While everyone is very concerned about Tropical Race 4, the reality is the biggest economic impact that Fusarium has in Australia right now is from Race 1. So we'll be able to undertake some soil health and system suppression work on Race 1 that there isn't currently any other funding source for.

Tony We are hoping we will have an impact on Race 1 in the Australian industry too. We aim to work towards developing a system for Lady Finger growers to help them manage the disease.

Naomi For those who don't understand the ACIAR funding stream, can you provide some background?

Stewart So the way it works is, ACIAR is a statutory body reporting to the Commonwealth Government via the Department of Foreign Affairs and Trade. They fund agricultural R&D projects with partner countries to improve their agricultural production and build capacity and skills in their R&D agencies.

ACIAR identifies developing countries that they consider high priorities to work with and the Philippines was identified probably 10 years ago.

Naomi So was the banana industry, and more specifically Fusarium, actually identified, or was it a case of working with the Philippines and they hadn't yet identified which crop.

Stewart ACIAR holds partner country meetings every few years, where ACIAR or AusAid talk to the country representatives about their priorities. Bananas have been raised by the Philippines for the past couple of meetings because of the impact Fusarium wilt is having on their industry.

Naomi How was the Australian banana industry consulted about this project?

Tony The beauty of ACIAR projects are, ACIAR wants to work with the Australian industries. So they're not going to do anything that would be contrary to the industry's best interests or strategic objectives. They have been very keen to make sure that the Australian Banana Growers' Council (ABGC), as the peak industry representative body, has been involved in this project from the start and will continue to be involved throughout the whole project. The Australian industry has a role to oversee the project.

Naomi Which Philippine growers will the ACIAR project be engaging with?

Tony We're only dealing with the small growers. So most of these growers have land areas of one to two hectares or less and form co-operatives to sell their bananas.

Stewart The Cavendish export industry in the Philippines is split into two. You've got the big multinationals and these small land holders. As Tony said, they are mostly very small holdings, run collectively, so it could be two or three hundred hectares, with two or three hundred farmers. As a rule, these growers tend to export into less discerning markets because their quality doesn't always come up to scratch.

Naomi What is the role of the Australian banana researchers in this project?

Tony We're providing technical expertise and guidance so that we can help give them (the Filipinos) the skills and capacity to solve their own problems around Fusarium wilt management. It's not about us solving their problems, it's giving them the capacity to solve their own problems.

Stewart They (the Filipinos) are already investigating some areas such as variety assessments and looking for biological control themselves. So we are assisting them to expand on those things. Primarily with a focus at the end of the project that people in Mindanao, at the Universities and Department of Agriculture, have skills that they didn't have before we started, to help them manage Fusarium wilt.

Naomi What are the specific practices that you will be including in your trials in the Philippines and here in Australia?

Tony It's really about developing the system. So rather than focusing on one aspect and just going down that path, we are trying to build the system. With TR4, looking at some of the somaclonal variants (Race 4 resistant varieties) that have come out of Taiwan and then putting them into a system that we think is more suppressive with vegetated ground cover, fertiliser management, better biosecurity and stopping soil movement. And then we'll see if all of those little things can come together to make a big impact. From what we've seen elsewhere and what they've done with the organic systems in Taiwan, it seems to be how you manage Fusarium.

Stewart To follow on from what Tony was saying, Fusarium research for the past 40, 50, 60 years has largely been looking for the one solution – be it biocontrol, chemical control or genetic resistance. We've taken the approach that, well in fact there is no one answer, but an improved outcome could result from collective input from all of those aspects.

Naomi So it's about ground truthing some of the theories. From Tony's work here in Australia and international work, we have indications that it could be a better system but it hasn't yet been proven. Is that correct?

Tony Yes. It still needs research to find out if these systems work. Previous ACIAR projects have developed the concept of suppression, how we can measure it, what do we measure and what do we look for. The system still needs to be validated. We need to understand if it's working and know which practices will have the biggest impact, so we are getting the biggest bang for our buck. There are still parts of the system we have to pull out and look at more closely in controlled conditions, like potted plant trials and controlled field experiments, to see if they are working.

Stewart So we are working with the Philippines R&D agencies on a range of things we are interested in, but that we can't do easily on TR4 here in Australia.

Tony This (project) takes the next steps forward. We know some of the concepts that are involved in suppression, so now we need to apply them to a commercial scale operation to get it to work. And I think that is what this project allows us to do.

Naomi Who are the other Australian staff members involved in the project?

Tony Tegan Kukulies and Wayne O'Neil are also involved. So Wayne is the Fusarium expert and will be doing the pathology work. He'll be training the Filipinos on how to identify Fusarium, how to grow cultures, how to inoculate trials and run them properly. And then Tegan will be involved from a soil health perspective on how to measure soil enzyme activity.

Stewart And Tegan will be training Philippines partners up and helping them set up their work and overseeing some of their trial work.

Tony So it really questions why Stewart and I are involved? (laughs)

Naomi Do either of you have any closing comments?

Tony I think the export banana industry world wide is very scared of Fusarium and it's not about putting your head in the sand and saying it's not coming, or about developing "blue sky" type research. It's about getting applied research and getting it to work, so we have a plan B if it (Tropical Race 4) should arrive in any of our major production regions.

Roadshow unites growers and researchers

The Australian banana industry has taken its biggest initiative to bring research findings directly to banana growers around the nation.

In an industry first, a National Banana Roadshow made a six-stop, three State tour of banana growing regions in July and August.

The roadshows brought together banana industry scientists and other industry researchers to tell how their work benefits growers and also answered growers' questions.

The first Banana Roadshow event was on July 15 at Murwillumbah, in the Tweed Valley on the far north coast of New South Wales, followed by a July 17 visit to Coffs Harbour on the mid-north coast.

At the time this edition of Australian Bananas magazine was being published, other events were scheduled for Carnarvon in Western Australia and, in north Queensland, at Tully and Innisfail on the coast and Walkamin on the Tablelands.

Tweed District growers, industry partners and banana scientists at the Duranbah trial block during the first Banana Roadshow event.

The Roadshow is an initiative of the National Banana Extension and Development Program led by banana scientist Naomi King. It is planned to be held every two years adding another outlet for research information in between the biennial Banana Industry Congress.

Naomi launched the first roadshow telling growers: "This is a new initiative of the banana industry. It's your levies which fund the projects so we're putting you in contact with the people who do the work."

Eleven growers attended the Murwillumbah event and were particularly interested in soil health and solutions for the soil disease Panama Race 1, found on many farms in the far north region.

The roadshow included a visit to the Duranbah trial block, also in the Tweed district, where 15 new banana plant varieties are being trialled for Panama resistance.

In Coffs Harbour, 20 growers attended and engaged in discussions on research and provided feedback on presentations. Twelve Coffs and district growers also attended a Best Management Practices (BMP) Guideline training course following the roadshow.

Growers were asked to focus on the information that could help their businesses and were asked to think about to consider what changes they could make on their farms as a result of roadshow information and the additional information they needed. Growers were also asked to provide feedback to presenters on the research.

Up to 15 presenters gave summaries of their research during the roadshows and there were also information videos on the Australian Bananas marketing campaign, carton design and from banana industry Nuffield scholar Paul Inderbitzin on his international study tour.

Banana scientists spoke on topics including the soil borne Panama Disease. Those speakers included Tony Pattison (Panama Race 1 and soil health), Mike Smith (disease-resistant varieties), Stewart Lindsay (Panama TR4 variety testing), Sharon Hamill (accessing new varieties) and Jay Anderson (addressing disease risks).

Other speakers on plant disease issues including National Banana Bunchy Top Program Manager David Peasley (Bunchy Top), Tony Pattison (soil health), Jay Anderson (chemical registrations and permits) and Suren Samuelian (leaf disease).

Continued opposite >

Growers road test the first stage

As the Banana Roadshow began its way around Australia – some initial thoughts from growers attending the first presentations at Murwillumbah and Coffs Harbour.

Tim Johnson - Murwillumbah

"It's good to see the banana industry taking the time out to inform growers, particularly the smaller growers in all regions - including the smaller growing regions. We're all part of the one industry. It was good to be updated on packaging - it's a very important issue that a lot of people have problems with. I know New South Wales growers sometimes have problems with packaging, such as instances of packaging collapsing at the markets."

Rob Johnson - Murwillumbah

"It's good to be kept up to date with all the new plant varieties and what's going on in that world - what may be coming up and the possibilities we've got. It was very interesting to see all the varieties at the trial block."

Stephen Edwards – Murwillumbah

"Some really interesting ideas were presented today. I think growers need to be willing to try some new ideas and give them a go, including finding ways to help with soil improvements which is critical if the industry is going to flourish in the long term. We have to find ways to look after our soil better."

Wally Gately – Coffs Harbour

"As far as the day and the presenters were concerned – you couldn't have done any better.

The 10-minute presentations with question time was an excellent format. Everyone listened very attentively and got a lot out of the day. It was a pity we didn't have a few more growers here."

Michael Hendrick – Murwillumbah

"We heard lots of good stuff today. I'm particularly interested in the BMP project for my farm. I'd like to see what improvements we can put into the hills in Northern NSW and what we can do to improve our farming practices."

Joshua Tate – Coffs Harbour

"There was a lot of information provided. Overall it was a valuable day. The packaging presentation video was good – it was interesting to see how supermarkets like to see the fruit packaged. I'd like to find out more on soil health – how to look after soils and the different things to look out for."

Duane Pierce - Murwillumbah

"I found the day to be very educational. I'm interested to learn more about the finer points of chemical usage and also about the new ground cover concepts that might benefit the farm."

There were also presentations on marketing and supply chain, including benchmarking information on farm profitability from Howard Hall of Pinnacle Research and information on new varieties from scientist Jeff Daniells.

The roadshows addressed both industry-wide and local issues and in New South Wales there was information about the appointment of a new Industry Development Officer who will assist growers in the far north and mid north coast regions.

Coffs wholesalers Paul Gibbins of Golden Dawn and David Norberry of D&D Ripeners took part in an "on the couch" discussion led by NSW DPI Leader, Northern Horticulture, Mark Hickey to talk about initiatives to market NSW bananas.

Soil erosion a dirty word at top farms

Three north Queensland banana farms and a cane farm have been showcased in an industry tour promoting working examples of the best soil and water management practices.

The Field Management Systems field tour was held in May by the Great Barrier Reef Marine Park Authority (GBRMPA) together with the Johnstone River Catchment Management Association (JRCMA), Terrain, the Queensland Department of Agriculture, Fisheries and Forestry, Canegrowers and the Australian Banana Growers' Council.

Four farms were visited to show farmers, industry representatives and the public how farms were protecting their soils.

The first stop of the day was Craig and Jade Buchanan's LMB Palmerston banana farm where Craig, with the assistance of soil conservation consultant Darryl Evans, told the tour group of his methodology for banana farming on slopes and minimising soil movement.

Craig has carried on the good work of his father Malcolm by contouring and using well placed and constructed roadways, grassed waterways and concrete crossings with spillways.

The contours are designed with a gradient of between one and four per cent. This gradient allows water to travel along the interspace.

This industry best practice, along with inter row grassing and leaving the cut heads and leaves around the base of the plants allows water to move at a rate that minimises soil movement from the blocks.

Roadways are constructed on ridgelines to eliminate bog holes and are well formed to control soil movement in times of heavy rainfall.

As water leaves the blocks it flows into grassed spoon drains with concrete crossings and spillways. The crossings align with picking rows to stop bog holes, with the spillways allowing runoff to travel down the side of the crossing without any erosion.

This system of the management of runoff works well as there is little sign of soil movement on some gradients of up to 20 per cent.

The next stop was at the cane farm of the Riera family. Lorens Riera told visitors about the transition they have made over the past 25 years from a fully-cultivated cane farming system to a green cane harvesting, minimum-tillage system.

On display were the implements for the minimum tillage system. They included a zonal rotary hoe driven by a GPS guided tractor, a stool splitting fertiliser applicator and a selective herbicide boom for spraying weeds and grasses in sugarcane.

From the Riera's, the group travelled to LMB's Stockton Farm where LMB's Gavin Eilers and JRCMA's Bob Stewart gave an overview of the design and construction of the farm's sediment trap.

Runoff from nearly 75 per cent of the farm area is caught in this structure. Gavin explained how the trap was maintained and Bob gave an example of the calculation used in designing a silt trap.

Gavin also explained how excavation and backfilling with heavy clay and rocks is overcoming runoff reaching the bordering South Johnston River.

The last stop of the day was at Marc Darveniza's farm. Marc and QDAFF's Carla Wegschiedl gave an overview of the rationale for the construction of wetlands on the farm. Like Craig, Marc has carried on the work started by his father in replanting creek and river banks with appropriate vegetation and the construction of the wetland.

Marcus Bulstrode, from James Cook University, and Marc spoke on weed and grass management in riparian areas. Marcus also spoke on the options of the different herbicides to use to control competing weeds and grasses.

The day gave the tour group the chance to see how the systems put in place by the farmers have achieved very good water quality outcomes.

Gavin Eilers of LMB (left) with Robert Mayers at LMB's Stockton farm where a sediment trap catches farm run off.

Phil Laycock, from GBRMPA, said it showed how forward-thinking landholders were improving their farm's long-term efficiency and viability and achieving positive environmental outcomes.

"Managing water flows on farms can improve farm productivity and profitability by reducing the loss of good quality soils containing important organic matter, nutrients and microorganisms," he said.

"Reducing farm run-off also helps to ensure the quality of water flowing through the catchment out to the Great Barrier Reef Marine Park."

Marc, who is part of GBRMPA's Reef Guardian program, is a leader in promoting sustainable farm practices that are good for business and the environment.

"We did a lot of things that weren't standard practice at the time. But lots of the ideas worked – that was a bit of a surprise to us and probably to other farmers in the district," he said.

"These days it's called 'ecological farming' — it's all about managing soil health, like using minimal pesticides. We found with chemicals you might solve one problem but you create another."

Story by Robert Mayers, Australian Banana Growers' Council Reef Rescue Officer

Banana farms showcased soil and water management practices during a Great Barrier Reef Marine Park Authority tour.

Don't cop a spray over pesticide use

With different obligations for spraying in banana growing regions some growers have asked what are the obligations. Stephanie Dale reports.

Managing spray drift is a significant challenge for banana growers when applying pesticides to crops.

Careless pesticide management puts at risk the health of growers and their workers, nearby communities, livestock and the environment.

Financial implications are heavy fines, of up to $72,000 in one region, and loss of trade as well as the fallout from damaged community relationships.

For these reasons, laws are in place in all Australian banana growing regions to ensure pesticide users take all reasonable and practical steps to avoid harming human and animal health, the environment or domestic and export agricultural trade.

In the Northern Territory, the Department of Primary Industry and Fisheries (DPIF) has outlined how good pesticide management protects growers. A departmental spokesperson said it would prevent:

- off-target crop damage
- loss of access to the right to use specific chemicals
- resistant pest development
- wasting time and money on poor applications
- legal action.

What is spray drift?

Firstly, a look at what constitutes spray drift. According to the Australian Pesticides and Veterinary Medicines Authority (APVMA), spray drift is the "physical movement of spray droplets (and their dried remnants) through the air from the nozzle to any non-target site at the time of application or soon thereafter".

It doesn't apply to secondary movement of agricultural chemicals to non-target sites by things such as volatility, erosion, surface or groundwater transportation or windblown soil particles after application.

A vast range of factors can influence spray drift, including wind speed and direction, spray droplet size, temperature and humidity, crop height, farm geography – and the skill of the person applying the pesticide.

There are three primary factors to consider when managing pesticide spray drift and these are:

Different rules

While pesticide registration and labeling are regulated by the APVMA, State and Territory laws come into effect after the point of sale. Each jurisdiction makes its own laws regarding pesticide use and consequent penalties for misuse.

It is the grower's responsibility to ensure they spray in accordance with the prevailing laws.

For example, some products licensed for use in Queensland may be illegal for use in NSW – one is Starbunch (active constituent Bifenthrin). It can only be used on banana crops in north Queensland. Inappropriate use of Starbunch may cause the crop to be listed as unfit for sale, consumption or export.

In Western Australia, once a pesticide has been purchased, several State laws come into play across various government authorities. The WA Department of Health's 'Guide to the use of pesticides' offers an overview of WA pesticide controls and is available at the following link:

www.health.wa.gov.au/publications/documents/11627_Pesticides.pdf

However, rules change.

To determine whether or not a pesticide is legal, check the label. The APVMA also issues permits for 'off-label' use. It can also review the approval of chemical products at any time and currently has a range of pesticide and veterinary chemicals under review. It is the grower's responsibility to keep pace with these changes.

In NSW, when pesticides are to be applied near a sensitive location such as a school, kindergarten or multi-occupancy residential complex, prior notification of use must be given.

In Queensland, agricultural chemicals must be used in accordance with label instructions. Notification is only required when label instructions specify.

In the NT, under a Code of Practice pesticide sprayers are "encouraged to notify and consult with neighbours about spraying times, to prevent potential disputes". A DPIF spokesperson said they should also inform neighbours of the chemical to be used.

"A field to be sprayed has an 'awareness zone,'" he said. "This zone includes sensitive crops, rivers, neighbours, nearby schools and homes."

In WA, according to a Department of Agriculture and Food (DAFWA) spokesperson, pesticide users have a duty of care to ensure label directions are followed to avoid spray drift, "especially when urban and horticultural areas merge".

She said that under the Health (Pesticides) Regulations 2011, "pesticide users must not keep, use, handle or transport a product in a manner that might reasonably be expected to be dangerous or pose a threat to the health or safety of any individual or the public".

Industry Quality Assurance programs encourage consultation and communication with neighbours and stakeholders to develop cooperative spray management strategies. In the case of the banana industry, the Best Management Practice Guideline contains information on ground and aerial spray drift.

Training

Some banana growing States require growers using pesticides to undergo training, while others only "encourage" training.

In NSW, people who apply pesticides for agricultural purposes are required to be trained to a minimum Australian Qualification Framework (AQF) level 2. The NSW Environmental Protection Authority (EPA) encourages farmers and operators who undertake spray applications unsupervised to be trained to an AQF level 3 standard.

In Queensland, to spray agricultural chemicals classified as Restricted Chemical Products (RCPs), the user must have a prescribed qualification issued by a registered training organisation stating that the individual has successfully completed each of the following:

- RTC3704—Prepare and apply chemicals
- RTC3705—Transport, handle and store chemicals.

A Queensland Department of Agriculture, Fisheries and Forestry (QDAFF) spokesperson said "many RCPs have training requirements specifically set for the individual chemical type".

In the Northern Territory, growers who use pesticide are encouraged to undertake training. However, a DPIF spokesperson said any person who "possessed or used a restricted chemical product or an S7 chemical product in the NT must be authorised to do so and must have undertaken and hold a current national chemical accreditation certificate to AQF level 3 standard".

In WA, a DAFWA spokesperson said "most growers are trained to Australian Qualifications Framework Level 3 under quality assurance requirements". However, she said, growers using restricted chemical products "must have completed training requirements before accessing these chemicals".

Records

In all banana growing regions, the onus is on the person spraying to demonstrate that pesticides have been used responsibly as per the instructions on the product label. Records must be kept by the user and they must be kept in English. However, another person may record the pesticide use on behalf of – and under instructions from – the user.

"These records provide vital information if problems occur," said a spokesperson for the NSW Environmental Protection Authority (EPA).

In NSW, she said, appropriate pesticide records included such details as the full pesticide product name, the crop or situation being treated, the operator's full contact details, details of the paddock or property address, the application rate, weather conditions at the time of the application and any changes to those weather conditions throughout the spray operation, and the start and finish times of the spraying.

She said a full list of pesticide record keeping requirements in NSW was available at www.epa.nsw.gov.au/pesticides/pestmmngngNSW.htm

In Queensland, landholders "must keep records of chemical use in instances where approved product label instructions or APVMA permit conditions specify".

A QDAFF spokesperson said records also need to be kept for the use of prescribed herbicides used in reef catchment areas – and that industry Quality Assurance (QA)programs may also specify requirements for keeping records of chemical use. Banana industry QA requires the keeping of records.

In the NT, pesticide users are required to keep records "if required by the label or Permit, as required by the label or Permit" and for a period of two years.

In WA, pesticide users are also required to keep records only as required by the label. These records are "usually required to be kept for three years".

Information about regulation and use in various States and Territories can be found on all legal pesticide containers.

Spray-drift concerns

In NSW spray drift is not a specific offence, according to a NSW EPA spokesperson. However, it is an offence to use a pesticide in a manner that harms non-target animals or non-target plants.

"When spray drift occurs it can cause injury or harm to non-target plants or animals," she said. "For example, if rain washes pesticide residues into waterways then this may be a breach of the Protection of the Environment Operations Act."

If spray drift occurs in NSW, growers are advised to call 131 555.

In Queensland, DAFF advises growers to "try to resolve it locally before taking

continued next page >

further action", as "sometimes the problem is not as extensive as first feared".

DAFF recommends the following steps before reporting spray drift:

- Discuss any health concerns with your doctor
- Confirm the problem is chemically related
- Determine the extent of the damage
- Contact the industry association
- Notify a government agency.

For further information visit www.business.qld.gov.au/industry/agriculture/land-management/chemical-controls/spray-drift-issues/what-spray-drift-occurs

In the NT, if a grower believes spray drift has occurred they are encouraged to call the Pollution Response hotline 1800 064 567 and contact worksafe.nt.gov.au

In WA, if a grower is concerned spray drift from a neighbouring farm is affecting their crop, DAFWA advises calling the biosecurity hotline 1800 084 881.

Hefty penalties

Maximum penalties for misuse of pesticides by an individual range from $22,000 in NSW to $72,000 in the NT.

It is worth noting that growers in all States and Territories who mismanage spray drift can be liable to civil prosecution by neighbours and local communities. It is also worth noting that if a pesticide does not carry APVMA approval on the label, it is not legal to use it anywhere in Australia.

Managing spray drift

Before you spray:

- identify your pests and weeds correctly
- speak to a specialist about the best pesticide for the job (weed control conditions, particularly in summer, can change rapidly!)
- check your training credentials and ensure they are up to date
- assess the risks – including susceptible crops, organic farms, beehives, livestock, aquaculture, conservation areas, schools, wetlands
- check the weather
- avoid chemical trespass – notify your neighbours
- prepare your rig correctly – ensure you have the correct nozzle size, the finer the droplets the higher the risk they will drift.

While you are spraying, check:

- weather changes such as wind speed and direction, temperature and humidity
- the rig – make sure it is regularly calibrated and nozzle outputs checked
- the operator is operating the equipment efficiently and safely. Monitor appropriate speeds for application and the increased risk of drift when turning
- it's the right time of day to spray. Don't presume night time is a better time for spraying.

In addition, consider using a predictive model such as Nufarm's 'Spraywise' to help assess localised risks, as well as a GPS to log and provide evidence of spray activity. Where to find out more:

Queensland
Department of Agriculture, Fisheries and Forestry
www.daff.qld.gov.au/plants/agvet-chemicals-and-residues

New South Wales
NSW Environmental Protection Authority (EPA)
www.epa.nsw.gov.au/pesticides/pestmmngngNSW.htm

Northern Territory
Department of Primary Industry and Fisheries
www.nt.gov.au/d/Primary_Industry/index.cfm?header=Chemical%20Services&newscat1=Chemical%20Services

Western Australia
Department of Agriculture and Food
www.health.wa.gov.au/publications/documents/11627_Pesticides.pdf

AUSTRALIAN Banana GROWERS' COUNCIL INC.

Bananas' National Peak Industry Body

OUR MISSION: We advance the interests of Australian banana growers through effective leadership and representation that ensures a strong industry future.

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Walk-up start for Michael

In our series on the new generation of banana farmers we talk with New South Wales grower Michael Singh. Married to Harinder, the father of three farms at Sandy Beach, near Woolgoolga, growing 60 per cent Lady Fingers (Rossi dwarf variety) and 40 per cent Cavendish.

Michael says farming bananas is hard, but enjoyable, work - although it's not getting any easier.

How long has your family been farming bananas?

I am the third generation to work on our farm.

When did you start working in bananas?

"When I could walk" was the first day I helped out on the farm! Right through my school years I helped out - first in the shed then handing bags for bagging. After finishing Year 12 at school, I began working fulltime.

What do you like about banana farming?

It is outdoors work, family orientated, and I start early and finish early.

What don't you like about banana farming?

Nothing really. It is not easy work, but I enjoy it.

What are your other interests and past times?

I go to gym four days a week to strengthen my body, which needs it after banana work. I used to enjoy lawn bowls as a hobby – I started as a junior and was the equal youngest to win the New South Wales State title in 2000 at age 22. I played in our State squad in national titles, but after getting married I didn't have the time for it anymore.

What do you see for your future in the industry?

It is hard to answer that question – it is not getting any easier though.

And what do you see for the future of the overall industry?

There is no incentive for our industry and us at current prices. I would like to expand as we only have half of our land under production, but it is not worth putting the other half into production.

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

There should be a minimum price for reasonable quality fruit so growers can remain viable. But, for us in this region, supply and quality all year round are major issues.

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

The only thing we might look at doing is planting more Lady Fingers and reducing our Cavendish planting.

Where do you see yourself in 10 years' time?

I still will be on the farm, growing bananas and hopefully getting a better price. My kids will help out, but I don't see a future for them in the industry.

Good soil beats rocky start for Johnstons

Paul Johnston at ATM Bananas, one of the family's two banana farms on Davidson Rd, Tully.

With the Mort Johnston Professional Development Scholarship now open for applications, one of Mort's sons, Paul, answers our next-gen questionnaire.

How long has your family been farming bananas?

In 1980 my father Mort started farming bananas in partnership with Aldo Gatti at Mort's first banana farm, Echo Creek at Davidson Road, Tully. Before that, Mort had been growing cane right in town. He said there were too many rocks there and he couldn't wait to get out into some good soil! Mort used to tell us "if you farm poor soil you'll stay poor". After Echo Creek, he purchased land across the other side of the creek in another partnership. He kept buying blocks on Davidson Road as they came up for sale. His father had always told him if a neighbour's block comes up for sale you should buy it. In 1997 he bought the remaining parcel of the cattle property Tully River Station – it was a neighbour too – just a very big neighbour! It was after the Tully River Station purchase that Mort really expanded into bananas. The ATM farm, also a partnership, became a part of that property.

In the 1980s, Mort also used to grow a lot of watermelons and pumpkins and we still grow a few pumpkins just to keep our hand in. He used to grow them on Tully River Station before he bought that property – they let him grow there as long as he fertilised and regrassed it.

When did you start working in bananas?

I worked in bananas all through school, on weekends and holidays, and then just holidays when I went to boarding school. I sort of grew up working in them. We also have other farming interests so when I first finished school I was working sugar cane, bananas, watermelons, bananas and cattle. As time went on, I progressed more into bananas. Mort gave each of us a role – I did bananas, my older brother Anthony went into sugar cane and when my younger brother Stephen finished school he began looking after the cattle, and he also helps with the bananas as well. When Mort passed away in 2006 I had to take over managing the bananas all together. I had to step it up a notch.

We have two banana farms – 500 acres each; about 2,500 acres of sugar cane and 600 head of cattle. My mother, Jill, also works in the business. My sister, Melanie, lives and works in Sydney.

What are some of the main jobs you do on the farm and what do you like about banana farming?

I oversee all the operations on the banana farms, but of course no one can do everything by themselves. I'm very fortunate to have good managers and employees and that makes my job a lot easier.

One of the rewarding things about banana farming is when you start from a bare paddock – prepare it, plant it, grow it and harvest it. With bananas you can put work in and see things happen – they respond quickly and you can actually see the difference from week to week and month to month. It's even more rewarding when the prices are okay! Another rewarding thing is all the relationships you make along the way with other growers and wholesalers. I wouldn't have met so many people if I wasn't a banana grower. Being a Director on the Australian Banana Growers' Council Board means I've also been able to meet a lot of growers from other States and towns.

What don't you like about banana farming?

I don't like the things that affect the business and are outside of my control, like extremes in the weather. You can do a lot of work but Mother Nature ultimately plays the biggest part in growing bananas. Another frustrating thing is the rising cost of production – it takes careful management to make sure farming businesses run sustainably. With everything that needs to be done on the farms and in the packing sheds there's a lot involved in managing our workforce and that can be challenging at times. There are also a lot of risks and liabilities employers have to carry to meet workplace requirements and that can also be challenging.

> "I hope I'll always be growing bananas – once you get hooked on them it's hard to imagine doing anything else."

What are your other interests and pastimes?

I used to do a lot of motorbike riding but I don't seem to find the time much any more. Not to mention that I don't bounce as good as I used to! Now that I've got a young family I tend to do things that are more family-oriented. I do like to get away for a fishing trip when I can with my mates. I also follow the NRL and like to get to Townsville to watch the Cowboys when I can.

What do you see for your future in the industry?

I hope I'll always be growing bananas – once you get hooked on them it's hard to imagine doing anything else. Of course, it's got to be sustainable. So far, we're well positioned for the future – all the infrastructure's here and we've got the right land for growing them, and I enjoy growing them.

And what do you see for the future of the overall industry?

Like everyone, I'd like to have a crystal ball! Bananas are susceptible to a lot of biosecurity threats and you never know what's around the corner. In this industry we have to be ready and have to have plans in place. Biosecurity is probably the biggest concern of mine. If we get diseases like TR4 and Moko in north Queensland then there won't be any bananas here. As an industry we have to understand that if we can't keep ourselves clean we can't keep going. Levels of production are always going to be an issue – oversupply is a concern for everyone.

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

If we could find some use for waste bananas to make a dollar out of that, that would be a great development. At the moment we're just spreading them back onto the paddocks so it would be good to find a way to add value. Exports would also be good but the industry can't currently compete with the cost of production overseas unless we're selling into a niche market. So far it seems to be a little bit out of our reach.

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

I've been using the new Banana Best Management Practices Environmental Guideline and will be commencing the Freshcare Environmental Code shortly. They're not things that you necessarily have to do but they're beneficial because they help improve farming practices. The BMP has made me think about the good things we're doing and the things we can change for the better. I'm looking at changes I can make to save energy and improve soil health. It's an excellent guideline, there's so much information in there about better ways to do things.

Where do you see yourself in 10 years' time?

I'd like to see myself on a cruise ship somewhere but realistically I know I'll still be farming and driving the kids around to sport! I hope I'll still be growing bananas and still working with my family in our primary production businesses. If there's any opportunities to diversify into other crops I'd like to have looked at those as well. By then the kids will be in school and starting to think about what careers they'd like to pursue. I'd like them to choose whatever career path they'd be happy with – even if it's not on the farm.

What our family is thankful for is that we have a lot of opportunities and we wouldn't be where we are today without the forward thinking and determination shown by Mort.

2013 scholar Liam Riedy is preparing a report on biological pest controls.

New $10,000 prize opens as scholar returns

Applications for the 2014 Mort Johnston Professional Development Scholarship have opened as current scholar Liam Riedy continues his research into biological controls for fungal diseases and soil pests.

The scholarship is the industry's major prize for those wanting to research ways to advance the banana industry.

Awarded annually by the Australian Banana Growers' Council (ABGC), it honours the memory of Tully grower Mort Johnston.

2013 scholar Liam, an agronomic consultant from Wongaling Beach in north Queensland, utilised the scholarship to study controls for leaf-diseases such as yellow Sigatoka and soil pests such as nematodes.

Liam conducted research in north Queensland and the United States, travelling to California in June for a farm tour conducted by crop protection company Bayer CropScience. The tour looked at biological farming – a method where living organisms are used to combat pests.

The tour looked at practices such as cover cropping and composting.

"The US tour was very worthwhile for my research into how biological controls used in large-scale fruit and vegetable cropping may be able to be utilised by the Australian banana industry," Liam said.

"It would appear that biological controls may work best for bananas if the controls are combined with good soil health practices and a fungicide program and are used as part of a broader biological farming system."

Liam's research also included collecting data on the effectiveness of fungicide treatments on north Queensland banana farms.

His research will be presented later this year. The 2014 scholarship opened on July 1 with applications due to close on September 22. See www.abgc.org.au.

Scholar farms the globe for ideas

As the banana industry's 2013 Nuffield Scholar, Lakeland banana grower Paul Inderbitzin travelled to more than 11 countries to find out more about banana farming practices that could help Australian production. Since his return he's been telling growers about some interesting findings. Paul answered some questions about his travels to Asia, the UK and Central America.

Paul trying the Chinese method of picking. Bunches are carried two at a time to an in-field, mobile packing shed.

You saw banana plantations affected by Panama disease in Taiwan and China – how did that affect your thinking on how serious the disease is for banana production?

With these things, it's really a case of 'seeing is believing'. Now I have seen it, I know firsthand that biosecurity is critical. TR4 moves fast and does not discriminate. We all need to do more on the ground – for me it's thinking about what check points do I need to have in place to make sure I'm doing my bit – from wash bays at farm gate to staff awareness.

Banana importers Fyffes in the UK had a great range of prepacks and cartons in use. Were there any innovations that could be of particular interest to the Australian market?

Nothing that we're not already doing well here in Australia. Prepacks are a great way of value adding a product by simply putting the produce in a bag and cleverly labelling it for our desired consumer. It's important to recognise that in the UK market, bananas are devalued, so prepacks work well for supermarkets to put a margin on their own custom prepack in comparison to the loose bananas they sell at a fixed price year round.

You said Martinique, as a small island in the Caribbean Sea, had a focus on sustainability issues. Were there any practices that could work well here?

Yes there were a few. I was very interested in their beetle borer program. Using lure and kill methods with in-ground traps seemed quite effective. Also the collection of used post-harvest chemicals from evaporation tanks for suitable disposal was interesting.

Costa Rica and Columbia use some different picking and packing systems for maintaining fruit quality. What impressed you the most?

The attention to detail and the amount of time that was spent on fruit protection impressed me the most. Also, the amount of bunch visits to ensure the fruit was growing close enough to 'perfect' in appearance for their market. We can do it here in Australia too … it's only a matter of finding someone who will want to pay for it.

Of the banana growing nations you saw, who do you think Australian growers could learn the most from? Was there one major opportunity that interested you the most?

We can most likely learn the most from Martinique. Their high labour costs and sustainability pressures force them to do things a little differently to the Central and South American producers. Perhaps we can investigate further the Martinique harvesting system using different picking trailers instead of our roll-on roll-off or gantry systems.

If you could bring back to your farm just one piece of equipment or a practice that you saw, what would it be?

Different harvesting trailers from Martinique and foam inserts in bunches. The foam to protect the fruit during growth, and different trailers to protect the bunch better at harvest.

Paul with Dr Chih-Ping Chao from the Taiwan Banana Research Institute where trials are being conducted on Australian banana row configurations.

Is there anything that you're already working on introducing to your farm?

Increasing the focus on discipline when it comes to timing and fruit quality. Improving our bunch protection system through the use of better plastic slips between hands and increasing the use of biology in our fertiliser and pest management programs.

You visited some countries that were major banana exporters. Do you think there's scope for Australia to export bananas and, if so, what do you think the target market could be?

I think there is scope for Australia to export bananas but it will always be at high-end markets using the 'clean and green' image as the point of sale. The question is how to deliver the 'clean and green' Australian banana in a way to attract and convince a consumer to pay more for it – this I don't know yet.

What advice would you give to anyone thinking of applying for a Nuffield Scholarship and what would you recommend as the biggest "must see"?

For those interested in applying, I highly recommend it. There will never be the perfect time so you just have to bite the bullet. You won't regret it at all in the long run. Yes it's a huge commitment but it's worth it. China in general I thought was a must see but for banana production you can't go past Central and South America.

You covered a lot of miles and visited a lot of countries. What's your best travel tip?

Plan only the outline of the trip but leave a lot of time flexibility. Often the little things on the way were the most interesting.

Farmers' friend Bos looks back on imports battle

Newly retired Senator Ron Boswell may have taken up many political fights on behalf of farmers during his 31-year career but he still rates a banana industry battle as one of the greatest of wins.

Senator Boswell, who retired at the end of June, championed battles for industries including beef, fisheries, pineapple and ginger.

But it was the banana industry's fight in the 2000s against the disease risks posed by Philippines banana imports that he believes remains as one of the most successful and best organised.

Senator Boswell worked with banana industry figures including former Australian Banana Growers' Council (ABGC) Chairmen Len Collins and Patrick Leahy and former ABGC CEO Tony Heidrich on the issue.

Pure science

"The banana industry didn't only say "we don't want imports" but they actually did the research on the diseases," Senator Boswell recalls.

"Every time the government department would put something up, the banana industry would either take it to the CSIRO or the university and shoot the arguments down with pure science.

"I always maintain that the banana industry's peak body ought to subcontract itself out to all the other industries because it was the best peak body we've ever had to deal with."

Senator Boswell and the banana industry successfully fought a decade-long battle against the disease threat posed by imports. Since that time he also kept watch, along with the industry's Imports Committee, on the prospects of any further disease risks posed should an import application arise. Fortunately, none have emerged.

Working together

Speaking at his Brisbane office prior to his retirement, Senator Boswell remembered the tough battle. And he contends it carries a message that remains relevant for agriculture and horticulture industries.

"It was a great win but it was only done because the banana industry gave us the information, gave us the questions, gave us the science to be able to stand up and defend the banana industry," he said.

For Senator Boswell, it's a great example of how politicians and industry can work together to achieve a good result.

"It was the industry and the Senate – we were working the system and exposing the risk of imported bananas. There were some of these guys who were biosecurity experts in the Department (Biosecurity Australia) talking about free trade. I said 'your expertise is on disease, not on the politics of imports, you just tell us about the disease and we'll make the decision.' "

"That's the whole system at work, that's the whole parliamentary system – to give people a voice in the Federal Parliament, and the banana industry used that voice very successfully."

Imports bullseye

He recalls one "bullseye" when a senior public servant overseeing the banana Import Risk Analysis admitted giving misleading evidence to a Senate committee. Another win was successfully identifying all the diseases that could "hitchhike" into Australia with banana imports.

"We threw it back to the Filipino importers and we've never heard from them since. Every time we have the Senate Estimates we put the question on record – 'are there any applications for imports?'.

"I've always been told there's none."

Senator Boswell, who was the Senate leader for the National Party, retires with the hope that primary producers continue to see the value in the Liberal National Party (LNP) rather than in the emerging "micro" parties.

"My parting message is that the banana industry and every other industry has got to stick with the people that stick with them," he says.

"Don't go and look for some mythical miracle worker in some other party. This party has stuck with primary industry for 100 years and when push comes to shove it's always there helping the banana industry, helping the sugar industry, helping the pineapple industry.

"Just go for the substance."

United industry

He also contends industries need to be unified.

"The banana industry is a very united industry and that's what makes them so successful. Everyone should get into the industry and be a part of it, be a part of the peak body."

Senator Boswell sees continuing issues for the broader agriculture sector as including farming's financial sustainability.

"The problem is with agriculture people aren't getting a return on their investment, and there's a million problems out there.

"As long as you've got agriculture, you'll have a threat. There's only so much efficiency you can squeeze out of a farm."

However, he does see some positives, with agriculture potentially stepping in to generate growth when there are down cycles in other sectors such as mining and manufacturing.

"I think Australia's future will go back to agriculture. Agriculture will be a major player in our economy."

Since his retirement was announced, Senator Boswell has had many approaches with thanks for his help. A valedictory dinner last year was attended by 650.

The banana industry also bestowed on Senator Boswell its highest accolade, an Award of Honour, presented to him at the 2013 Banana Industry Congress.

Rural courage

In his valedictory speech to the Senate in June it was clear he has a deep affection for the agricultural sector.

Talking about primary producers he said they "represent the very best in Australian character, physically courageous, battling the elements and the unforgiving environment and prepared to work hard in remote locations to create wealth for the country".

"These people reflect the true Australian spirit of taking a risk, having a go and persevering when times are tough. Working with my colleagues, we have had some great wins for regional and rural Australia."

After his long political career, Senator Boswell has now "passed the baton" to Queensland's new LNP representatives in the Upper House, Barry O'Sullivan and Matt Canavan – with some clear instructions. On the advice of Senator Boswell, the two have already visited north Queensland banana farms to discuss issues with growers.

"I've told Barry O'Sullivan and Matt Canavan that they've got to carry the banner for the banana industry – I've carried the banner for this industry, now it's over to you, you've got to look after it," Senator Boswell said.

The race ends

When it comes to retirement, it is clear it's a move he has made reluctantly.

"I don't want to retire, I would much rather be out there looking after the banana industry but every race has to have an end and I've reached the end of the race. After 31 years I know I have to hand the baton over but that doesn't necessarily make it more enjoyable.

"I'd much rather be out there on a banana farm or an avocado farm or a fishing trawler but everything's got to come to an end and, after 31 years, 118 days, my race is run."

There is satisfaction, however, in his many achievements, such as those won for the banana industry in its imports battle, and the help provided to many other agricultural industries.

"That's the way I'd like to go out," he says. "People thinking that for 31 years he's always been there to help."

"I don't want to retire, I would much rather be out there looking after the banana industry but every race has to have an end."

"The parliamentary system gives people a voice in the Federal Parliament. The banana industry used that voice very successfully."

Senator Boswell during the banana imports fight with (from left) growers Patrick Leahy, Mark Reppel and Len Collins and then-Senator Barnaby Joyce, now the Federal Agriculture Minister.

Thinking outside the box on fruit quality

A new study into whether the industry should introduce a standard banana carton has recommended "thinking outside the box" and looking at broader issues affecting fruity quality. Rhyll Cronin reports.

The industry study, called Scoping Study to Develop A Standardized Carton, noted an average of between $52 million and $83 million worth of bananas are wasted at retail level in Australia each year.

With carton design thought to contribute to fruit damage and waste there has been widespread dissatisfaction with the current range of cartons in use.

Tristan Kitchener, of Kitchener Partners, conducted the scoping study and said the search for a better carton had prompted a range of cardboard carton and plastic crate trials in recent years.

However, Mr Kitchener said the carton was only part of the problem.

"The study identified that whilst a standardized banana carton may improve product quality at store level, it is actually more important to focus upon the core issue, namely to improve the quality of fruit that arrives at retail stores, rather than trying to simply standardize the carton," he said.

"Early on in the project it became apparent that the task at hand was actually much broader and more complex than simply considering just the existing cartons and returnable plastic crates.

"The project scope needed to be extended to consider all the variables associated with packing bananas, including the supply chain touch-points that can influence carton performance and therefore the quality of fruit arriving at retail stores."

Mr Kitchener said the packing method and appropriate use of secondary packaging, such as bags, liners and slip sheets, as well as the tape used to stabilise pallets of cartons, were just as important as the carton itself.

He also said that adopting a standard crate for the industry was a complex issue.

"To date, it has not been possible to achieve alignment within the banana supply chain and the major Australian retailers; previous attempts have failed to gain agreement and highlight the complexity and potential risk in achieving this goal."

Mr Kitchener said the push for a standard carton was driven by the average annual retail waste of bananas, estimated at between $52 million and $83 million a year – or about 5-8 per cent of total volume sold.

"This is significantly higher than other international markets such as the UK and USA where waste is closer to 2 per cent of sales, and suggests there is a significant sales opportunity in the Australian market."

The study reviewed research into fruit damage, including damaged necks, bruising, rub marks and chilling injury, as well as the use of secondary packaging, fruit cooling and carton ventilation.

It also looked at current Australian practices including loading of pallets and use of strapping, use of glue between cartons, packing methods and forklift damage. Practices in the US and UK markets were also reviewed.

The report recommended improvements to the current range of carton alternatives, namely 1-piece and 2-piece cartons in 13kg and 15kg pack weights, and to packing processes and associated packaging used. It said this would have a greater impact in improving the overall quality of bananas on retail shelves.

It also considers the use of returnable plastic crates (RPCs) for bananas, noting that if there was sufficient uptake of 1-piece cardboard cartons it could set a good precedence for the development of an RPC.

The report said Australian retailers were currently trialing RPCs and that the crates are currently in use by one UK retailer.

The report also recommended the development of:

Minimum Specifications

Introduce a minimum packing and packaging specification for the 1-piece and 2-piece cartons to ensure all growers are aware of the need to utilise the appropriate type, quantity and combination of packaging and create awareness about the benefits of doing so. This will enable change to occur immediately and with minimal cost.

Best-Practice Guidelines

Secondly, to develop optimum best-practice packing guidelines for all the packing configurations currently in use, namely the 1-piece and 2-piece cartons, and 13kg and 15kg pack weights. Including all packaging combinations will allow growers to pack any pack configuration in line with requests from their retailer customers.

Mr Kitchener said the implementation of these recommendations should provide an immediate improvement in quality, which will ultimately lead to an increase in consumer demand for bananas.

He also proposed consideration be given to a follow-up project looking at the best aspects of all practices and packing, both in Australia and internationally, and conducting Australian trials.

The follow-up project, Carton Management in the Banana Industry (BA13019), was approved in May and is now underway. As recommended in the initial project, it is developing minimum packing and packaging specifications and best-practice packing guidelines.

Both projects have been funded through Horticulture Australia Ltd (HAL) with banana industry and matched Federal Government funding.

Some thoughts from the supply chain

Members of the banana industry's supply chain were involved in the scoping study. Here, three of those respond to some Australian Bananas questions on fruit quality and cartons.

Joe Stacey, General Manager, Orora-owned Joe's Cartons

Q1. What do you think is/are the main factor/s about banana cartons, packing and packaging that need/s to be addressed to help improve fruit quality for consumers?

At the 2011 Australian Banana Industry Congress a workshop looking at waste issues was conducted and five key waste issues, associated with packaging, were identified – carton rub, transit rub, compression bruising, neck damage and ventilation.

It's really important to understand there are many and varied ways bananas make their way from growers' paddocks to retail shelf (supply chain) and that the wants and needs through those many supply chains are different and require different solutions for best outcomes. Since the 2011 workshop, a lot of work has been done focusing on these issues throughout the supply chain. Most of the work measuring and understanding these issues has been done from packing shed to distribution but not as much from distribution centre to retail shelf. Further measured trial work needs to be done to understand the varied supply chains from distribution to retail shelf to find the optimum solution for the individual supply chains.

Q2. What other supply-chain issues do you think are important for maximising the quality of bananas?

Whatever the proposed packaging solution, it needs to be measured and quantified before assumptions are made. There has been a tendency for solutions to be put forward without the adequate measuring and monitoring required and not involving all the stakeholders in the supply chain.

Q3. What are your thoughts on whether the banana industry should introduce a standardised carton?

I think it is more important to concentrate on resolving the waste issues of the individual supply chains with the best and most cost effective packaging solution.

Q4. Do you think returnable plastic crates are a viable alternative to cardboard cartons?

Joe Stacey, General Manager, Orora-owned Joe's Cartons

I think the success of RPCs will be measured on the cost effectiveness of reducing the five key packaging waste issues as well as the cost and responsibility of maintaining the pool of RPCs.

Q5. Other comments?

I believe all stakeholders need to be involved in finding the most cost-effective packaging solution for each grower's supply chain. Individual stakeholders

continued next page >

Thinking outside the box: supply-chain comments

– whether a grower, marketing agent, retailer, transporter, packaging supplier and/or any other stakeholder – should have an understanding of the waste issues affecting them. It is extremely important that any changes or solutions that are put forward are followed through and measured thoroughly as trying to resolve one of the five issues can create greater problems for the other four issues.

Chaise Pensini, National Category Manager, Moraitis

Q1. What do you think is/are the main factor/s about banana cartons, packing and packaging that need/s to be addressed to help improve fruit quality for consumers?

Communication across all of these areas of the supply chain – all sections need to be aware of each other's challenges to align.

Q2. What other supply-chain issues do you think are important for maximising the quality of bananas?

Temperature control throughout the whole supply chain is important, however DC to retail shelf is extremely important and often overlooked.

Q3. What are your thoughts on whether the banana industry should introduce a standardised carton?

No comment

Q4. Do you think returnable plastic crates are a viable alternative to cardboard cartons?

It would be great to aspire to solutions like that however, in my opinion, our supply chain is not developed enough at this stage.

Q5. Other comments?

If we can identify the critical parts of the supply chain and concentrate on methods of improvement and how to measure, I believe we would get an extreme benefit across all areas of the industry.

Greg Bradshaw, Wholesaler, P W Chew

Q1. What do you think is/are the main factor/s about banana cartons, packing and packaging that need/s to be addressed to help improve fruit quality for consumers?

The overall quality of cardboard seems to vary overtime.

Q2. What other supply-chain issues do you think are important for maximising the quality of bananas?

Supply chain issues relate to on farm cool chain. Fruit left standing around sheds is at a disadvantage creating uneven colour down the track.

Q3. What are your thoughts on whether the banana industry should introduce a standardised carton?

A standard carton for the industry is a matter for farms and their scale of size and costs.

Q4. Do you think returnable plastic crates are a viable alternative to cardboard cartons?

Plastic crates have been used before and really would be for the major retailers as they would be able to control reruns of crates and lower any costs. In summary the industry is suffering rising cost pressures and low farm gate prices. Small acreage to large acreage farms which make up our industry equals one size does not fit all. At some point the industry can only move forward on this issue with full support of all growers and industry participants.

Q5. Other comments?

Banana wholesalers were pleased to contribute to this project. The central markets is the one place the whole range of packing products is on hand under variable conditions.

Left: Chaise Pensini, National Category Manager, Moraitis Below: Greg Bradshaw, Wholesaler, P W Chew

Banana Vs the rest – how we rate

The banana is a favourite for many, not least because of its high nutritional value. But how do bananas compare nutritionally with other fruits? Let's take a look at some key micronutrients found in bananas and how they stack up against some other fruits and foods.

By Glenn Cardwell
Accredited Practising Dietitian

Folate

The analyses that we had done back in 2010 showed that Australian bananas had a higher folate content than previously reported.

Both the Cavendish and Lady Finger are a good source of folate providing about 12 per cent of daily needs. This is a particularly important vitamin for young women because adequate folate just before, and in the early stages of, pregnancy helps avoid spinal defects in the growing baby.

Vitamin B6

Very few fruits have been analysed for their vitamin B6 content.

The banana provides five to ten times more B6 than just about any other fruit. One medium banana provides about 15 per cent of your needs of B6, which is impressive.

As B6 needs increase with age, that makes eating a banana for a snack especially ideal for older Australians.

Vitamin C

You can see from the table that the Cavendish provides 10 per cent of vitamin C, yet the Lady Finger has nearly five times as much vitamin C as the Cavendish. Previously the Cavendish was recorded as having 12 mg vitamin C, but that dropped when it was re-analysed using more sensitive equipment.

The Lady Finger has yet to be re-analysed. If it is, expect the more accurate analysis to show a lower figure. Nevertheless, we should acknowledge that a food that provides 10 per cent or more of a nutrient is still a pretty good source of that nutrient.

Magnesium

You get about 10 per cent of your magnesium needs by eating a banana. You can see from the table that the banana offers a lot more magnesium than any other common fruit.

Potassium

You have heard many times that the banana is great for potassium. All plant foods will naturally be low in sodium (salt) and high in potassium.

The banana has more potassium than most fruit, providing about 12 per cent of the daily needs of women and 9 per cent of those of men. Sometimes avocados remind you that they have more potassium than the banana, which is true based on a 100g serve, yet most people would eat only 50g of avocado at a sitting. So, per realistic serve, the banana is still one of the best sources of potassium.

Resistant starch

The banana is a pretty significant source of fibre, but the story goes beyond that.

Bananas are the only fruit with resistant starch, which is a type of starch that is resistant to digestion, which simply means that it acts like fibre in the gut to protect against bowel cancer. So, add the fibre to the resistant starch and you have a gut-healthy fruit without peer.

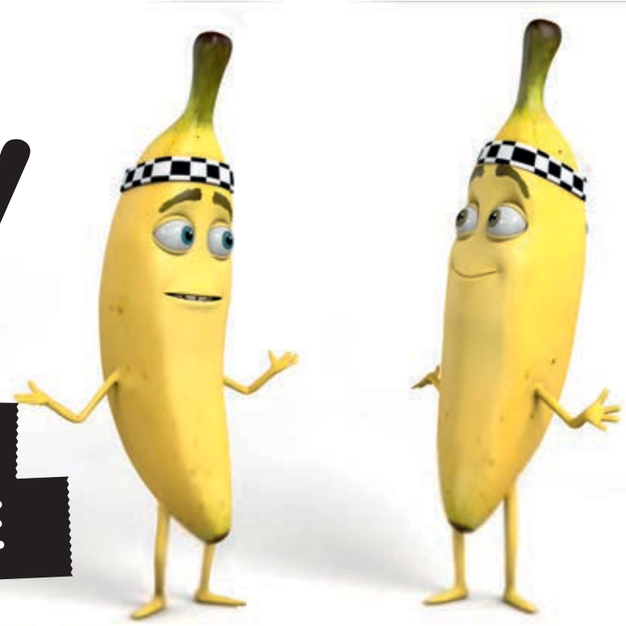
No one food can provide every nutrient, hence the reason we are encouraged to eat a variety of foods. All things considered, the banana packs quite a nutrition punch as a fruit choice.

Nutrient	Banana	Daily needs	Other fruits & foods
Folate mcg	48 Cavendish* 51 Lady Finger*	400	14 (Grapefruit); 26 (Kiwi fruit); 31 (Broccoli); 33 (Orange Valencia); 34 (Raspberry); 43 (Orange Navel); 74 (Strawberry)
Vitamin B6 mg	0.2 Cavendish 0.25 Lady Finger*	1.3	0.02 (Royal Gala apple, nectarine); 0.03 (rockmelon, pear); 0.05 (Kiwi fruit)
Vitamin C mg	4 Cavendish 19 Lady Finger	45	2 (Nashi); 9 (peach); 12 (nectarine); 44 (valencia orange); 70 (rambutan)
Magnesium mg	31 Cavendish 38 Lady Finger	320 women; 420 men	4 (Fuji apple); 8 (cherry); 9 (apricot); 9 (grapefruit); 14 (pawpaw); 22 (raspberry)
Potassium mg	346 Cavendish 322 Lady Finger	2800 women; 3800 men	115 (Granny Smith apple); 158 (strawberry); 160 (Fruit salad); 197 (mango); 305 (Kiwi fruit); 345 (broccoli); 520 (Hass avocado)
Fibre g	2.4 Cavendish 3.7 Lady Finger	25 women; 30 men	1.4 (Imperial mandarin); 2.1 (Royal gala apple); 2.4 (Navel orange); 3.5 (Red Globe grape); 3.6 (Pear)
Resistant starch g	1.84 g Cavendish	N/A	Nil

Daily needs for adults aged 31-50 years Sources: Australian Nutrition Tables 2010
* Banana industry-funded analysis

PUTTING ENERGY *into being* No. 1.

AUSSIE BANANAS MARKETING UPDATE



2013/14 WAS A HEALTHY YEAR FOR AUSTRALIAN BANANAS.

And now, two years into our "long-lasting energy" campaign, we're well on track to achieve our goal of becoming Australia's #1 snack food by 2015. Using a consistent multi-media strategy and strong retail support program, the campaign continues to achieve pleasing results. Over the last 12 months, we aimed to reach 27 million people – a target we exceeded by 26%! Just as pleasing was the fact that farm gate prices and retail ticket prices remained at relatively healthy levels despite a significant increase in volume (up over 8% versus last year) for one of the most mature fruit categories in Australia.

Billy Slater gets healthy in our Bananas Fitness video

"WE AIMED TO REACH 27 MILLION PEOPLE – A TARGET WE EXCEEDED BY 26%"

Marketing Program update provided by

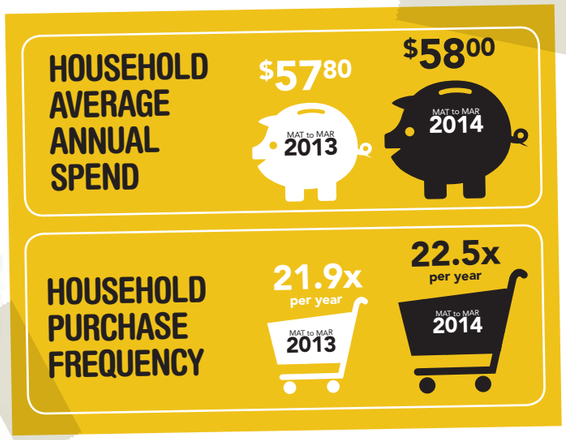
David Weisz
Marketing Manager
Horticulture Australia

A PRETTY BUNCH OF FIGURES

Compared to the previous year (2012/13), banana sales remained strong. While there was a slight decline in Households buying bananas (93.4% versus 93.8% a year ago), the average household spent more on bananas ($58 versus $57.80 a year ago) and bought them more often (22.5 times a year versus 21.9 times a year ago).

Amongst our key audience of 18-39 year olds with no kids, the number of annual shopping trips continued to grow (18 times per annum versus 17.5 times a year ago), a significant increase considering this group makes up almost one-third of Australian households! At the same time, the average volume of bananas they purchased also increased from 12.4kg per annum to 13kg per annum.

Consumer attitudes to bananas are also very healthy with 75% of people agreeing that bananas are their preferred energy snack and 85% agreeing bananas are a long lasting energy source.



A BIG YEAR AHEAD

It's been a great year and the coming 12 months will see us working hard to ensure our brand appeal is maintained and our sales goals are reached.

YEAR THREE OBJECTIVES

As we move in to the third and final year of our marketing program, our main objective is to deliver additional sales of $10.2m per annum.

Additional objectives include increasing Per Capita Consumption of bananas by +2% per annum and maintaining our #1 fruit status nationally, as well as building our key consumer attitude rankings.

Promotional Activities locked in with Woolworths, Coles, IGA & Aldi.

"OUR AUSTRALIAN BANANAS PROMOTION HAS BECOME AN INTEGRAL PART OF IGA'S FRESH PRODUCE MARKETING CALENDAR."
Luke Couch
IGA, National Buying & Merchandise Manager

YOU'LL SEE BANANAS EVERYWHERE

In 2014/15, media recommendations will remain consistent with the past two years, with the addition of an exciting café/coffee cup activation component. Five mediums have been prioritised:

Meanwhile, our other marketing activity will take the Australian Bananas brand directly to the people of Australia. The national Schools Sponsorship Program will continue in 2014/15 with ongoing investment in educational brochures, kids pencil case kits and sampling. Western Australia has been added to the program via a new partnership with Foodbank WA's Food Sensations Schools Program. There will be a 10% increase in funding support for Industry, Community, Sponsorship and Events, while NRL star Billy Slater will return as bananas ambassador - as will Nutritionist, Glenn Cardwell.

The goal of all this marketing activity is to push consumers into retailers to buy more bananas – which is where our retail support program comes into play.

MAKE THOSE CASH REGISTERS RING.

Already this coming year, activities are locked in with Woolworths, Coles, IGA and Aldi. As we go to print we're running a Lady Finger point of sale (POS) trial in Victoria in collaboration with Woolworths and Costas. If the trial is as successful as hoped, POS and educational materials will be rolled out nationally.

With all this activity, it's no wonder we're confident of a year of continued growth for Australian Bananas. Our goal of being Australia's #1 snack food by 2015 looks to be well within reach.

Fruit machines pay-out on snack food target

It's just over a year since Australia's largest banana-growing family launched their first banana vending machine in a bold innovation for fresh fruit retailing. So how is the venture progressing?

It was the arrival of a large green-and-yellow metal box in a busy food court that heralded the start of something new in Australian banana retailing.

Installed in one of Brisbane's busiest food courts in July last year, the "box" was Australia's first banana vending machine.

Its arrival at officer-worker lunch hot spot Post Office Square, a major thoroughfare linking two busy city streets in Brisbane, signalled that efforts to win bananas more market share had stepped up a notch.

Driving the change was Australia's largest banana-growing family, the MacKays, who have extended the vertical integration of their business from growing, distribution and marketing to the new retail offer. In their sights are the packaged snack foods that the banana industry has targeted as a growth opportunity.

Mike Evans, from marketing group Fresh Partners, is working with the MacKays on the venture. He said the opportunity for vending machines was to retail bananas in the places where consumers are looking for snack foods.

The use of vending machines was in line with the Australian banana industry marketing objective of making bananas Australia's number one energy snack.

"Bananas are a snack but where do you eat snacks? Where are consumers able to get a hold of them? We did a walk around the Brisbane CBD and found only 67 bananas available for sale in the Adelaide, Queen and Wharf streets area and yet there's 15,000 people there. We had to look at how you get the product to these people."

In 2011 the venture was almost ready to go when Brisbane's worst floods in almost 40 years hit the CBD followed by Cyclone Yasi devastating the major North Queensland banana growing areas, including the MacKays' Tully farms.

The project was shelved until mid 2013 when the roll out began at Post Office square. Another installation followed at the Roma Street Transit Centre in Brisbane.

Support from Queensland Health has also seen the vending machines installed in two public hospitals. One of those, at the Royal Brisbane and Women's Hospital, is the best performer. The machines have also been installed at a school, Brisbane Boys Grammar, and another transit centre, in Fortitude Valley.

Setbacks have included opposition from traditional vending machine operators who have already secured many of the traditional snack food locations.

"We are not welcome in many locations because of existing vending contracts," Mike said.

Some refusals have been disappointing given the extensive research and public health programs focused on promoting healthy eating. Ironically some sites who have not accepted the machines are some of the educational institutions where healthy eating research is conducted.

"But we're not going to give up, we're just going to take things in a different direction," Mike said.

One new direction is the development of the Fruitbars - vending machines offering peak seasonal fruit as well as nuts in addition to bananas. Included are fruits such as strawberries, ready-to-eat avocado, grapes, mandarins, kiwi fruit, pears and apples.

Another innovation is a "mini banana bar" - a small fridge located within existing retail outlets.

"It's about presenting the product to people when they're thinking of buying a snack," Mike said.

Learnings have included that "foot traffic", the number of people walking past a vending machine, isn't the only indicator of potential success. As a result, the first machine was relocated from Post Office Square.

"We probably had 6000 or 7000 people walking past it twice a day but that's not necessarily what makes it successful. The sheer volume of people is not the answer to a successful vending machine, and it hasn't been in any of our locations.

"We needed to know who the consumer was. We needed to keep drilling down and finding out who was using the machines and who else is likely to."

They have found that most sales happen in the morning with people buying on their way to work and not buying as a lunch offer or meal replacement.

"We don't think people walk to a machine and eat the bananas immediately. It's not a coffee, you don't grab it and drink it straight away."

A major factor contributing to the machines' success is that they store the fruit at the optimum temperature and at peak freshness, with the bananas checked daily and older stock replaced.

"It's all about the taste, that is the one thing that people constantly say about the Banana Bar "where do these bananas come from, they taste great".

"The truth is it's about managing the banana for taste for the consumer. The bananas are in the machine perfectly ripe and ready to go."

The wastage factor is an issue with bananas being removed from the machine if they have not sold in one or two days.

There have also been some changes to pricing, using the cost of takeaway coffee as a comparison - around $4 - and keeping in mind that the vending machine prices can't fluctuate like other retail bananas.

Initial pricing of $2 for three bananas and $3 for five moved up $1 each to $3 and $4 respectively.

Single bananas are also to be introduced. The Fruitbar was introduced due to consumer demand for more choice.

"People did ask 'why do you just sell bananas?'. We said 'that's all that we grow that we can put in a vending machine'. That wasn't a good enough answer.

"People don't snack on one type of chocolate bar, one flavoured milk or bag of chips every day. What consumers were telling us is 'maybe have another couple of fruits in there'. "

Mike said the concept was to offer only healthy foods. And the Fruitbar has allowed the MacKays to investigate alliances with other grower families to introduce other packaged lines. The fruit is either prepared by the grower or packaged at Mackays Produce Solutions at Lara Pinta in Brisbane.

Mike said the plan was now for "steady growth" including upgrading the positions of existing machines at each venue as well as adding more new venues. At the moment the machines are in one Brisbane "zone" with consideration being given to trying the machines interstate.

"It probably needs about 15 to 20 machines in a zone and we're taking it slowly rather than immediately introducing 20 machines," Mike said.

"It's only a fledgling business. It still needs to be tested a lot. We will be taking our time to make this successful."

The new Fruitbars sell bananas, other fruits and nuts.

Sellars break through for Tully prize

Mission Beach's Sellars Bananas has made a 20-year breakthrough to take the Tully Show's coveted prize for Champion Bunch and be named the banana exhibit's Most Successful Exhibitor.

Naomi Brownrigg, from Sellars, said the winning bunch had initially been earmarked to be dehanded for a carton exhibit before showing potential for the major prize.

"We're absolutely rapt, it's a real honour to get Champion Bunch at the Tully Show," Naomi said after the bunch was awarded the prize ribbon and shield.

"We've been constantly bringing bunches in for 20 years, ever since I've been at the farm and, until this year, we've never won first place.

"You just keep trying and bring in the best bunch you can. All it takes is the bunch on the day of the weigh-in that looks the best, it's just a combination of things."

Naomi, who farms with her family, including husband Dave, sister Belinda Nissen and brother Robert Sellars, said the champion bunch had taken time to develop potential in the field.

"I was thinking of it for a carton exhibit but it had good colour and formation, it looked good and we decided to put it in for the champion bunch."

Sellars was also named Most Successful Exhibitor at the July show after winning five other sections – heaviest plant bunch, heaviest single, best three clusters, open heaviest plant bunch and champion bunch from the Tully district.

Above: Naomi Brownrigg and Belinda Nissen selecting their Show bunch exhibits at their Mission Beach farm. Right: Doug Phillips (left) with the ABGC's Rob Mayers, Costa's Michael Engeman and the ABGC's Louis Lardi. Below right: Jeff Dickinson at the weigh-in.

"Perfect" carton a stand-out at Tully

A carton of clustered Cavendish described as "perfection" was one of the stand-out exhibits at this year's Tully Show.

Exhibit co-judge Dennis Lindsay, of the North Queensland Banana Co-operative, said competition was close in many categories. However, the carton of large clustered Cavendish exhibited by Jason Campbell and Shirley Ryan of Narragon Beach Bananas was clearly an "outstanding exhibit".

"It's one of the best cartons I've seen for a long time," Dennis said.

The exhibit's other judge, wholesaler Greg Bradshaw of P W Chew, said "I think it's the best carton I've ever seen. It's perfection."

Fruit quality and packing are assessed in the carton sections and the judges do not know the identity of exhibitors until after prizes are awarded.

Dennis said fruit exhibited at this year's show was good quality, particularly considering the challenging wet and cool weather conditions in the weeks leading up to the event.

After Sellars Bananas, the other Most Successful Exhibitors were MacKay's Ranch Road farm in Tully and the Kennedy Valley's Jeff Dickinson. Jeff's show success was even more impressive given the serious damage suffered to bunched trees at his farm during April's Tropical Cyclone Ita.

Other successful exhibitors included MacKay's Mullins Road farm in Tully, Y & S Zecchinati from Nerada, Miriwinni's Di Carlo Bananas, DJ and EK McCarthy from East Palmerston, the Barnes family's Mission Beach We-Own-A, Shannon Paton's Patons Exotics from East Palmerston and Hampson Bros.

All fruit exhibits were to be marketed by P W Chew after the show with funds raised going to Tully schools and community groups.

Jason Campbell (top) with the "perfect" carton of large Cavs and (above) Cameron MacKay with the champion carton of extra large. Left: Greg Bradshaw (front) and Dennis Lindsay during the bunch judging.

Ladies and Demons triumph at Innisfail's 100th Show

Exotic variety grower Shannon Paton and champion banana packers Jacqueline Tilt and Jason Evans have won titles at one of the banana industry's major annual events.

The three were winners of major titles at the Innisfail Show in July which hosted both the banana exhibit and the Australian Banana Packing Championships.

It was the 100th Innisfail Show with growers and packing competitors making a special effort for the landmark event which was attended by Queensland Governor Penelope Wensley.

Shannon, who grows bananas at East Palmerston, took the Most Successful Exhibition title and the exhibit trophy with four wins for Lady Finger and Plantain exhibits. The Highly Commended Award went to Reidy's Bananas and Most Outstanding Exhibit was Sellars Bananas. Other successful exhibitors were Di Carlo Bananas, G & R Franco & Sons, Hampson Bros, Jangull Holdings and Grimas Bananas.

The Australian Banana Packing Championships was again a highlight of the Show with the South Davidson Demons – Jason Evans and Jacqueline Tilt, taking the top title for the third successive year. Grahame Celledoni won the title in the packing-in-hands section and the Walkabout Backpackers Hostel won the backpacker title. In the championship event, On Mission, brother-and-sister team Rob Sellars and Belinda Nissen, took second place behind the South Davidson Demons, with the Fresh Yellow team a close third.

Chief Steward of the banana section, Rob Zahra, said the event had been very well supported with the championships again showcasing the skills required to pack fruit for the market.

"It was a great event again this year and I think next year it will be well supported again, we've had a lot of people saying they'll definitely be competing again next year."

Rob thanked the exhibit and packing championship sponsors for again strongly supporting the event.

Top: Chief Banana Steward Rob Zahra with the then Queensland Governor Penelope Wensley and husband Stuart McCosker.

Middle: Jacqueline Tilt and her husband Jason Evans on the way to a hat trick.

Third row left: Most Successful Exhibitor Shannon Paton. Third row right: Packing Championship competitors hear the rules,

Right: Mission Beach sisters Naomi Brownrigg and Belinda Nissen with their champion cartons.

Left: Frank Cutuli from Cumic Steel with the winning backpackers from Walkabout Backpackers.

Middle left: The Franco's Open Heaviest Plant Bunch and the Di Carlo's Open Heaviest Ratoon Bunch. Middle centre: 13-year-old Daymon Franco in the hand-packing race.

Below top: Gino Di Carlo with the champion ratoon pair. Below middle: winning cartons.

Bottom left: Jason and Jaqueline with their trophies. Bottom middle: Hazel Lees (right) judging Kylie Stonehouse's packing. Bottom right: hand-packing race winner Grahame Celledoni.

Brothers show up to win Coffs' centenary cup

The Coffs Harbour Show celebrated 100 years in May - and the Franco brothers thought 'why not'.

For the first time in many years, Sandro and Bruno entered their bananas in the show - and won the major trophy, the Banana Cup.

"It's was the centenary and we decided to enter on the spur of the moment," said Sandro. "It's been a good growing season and we got lucky!"

The Francos had the banana exhibit's champion bunch and also won for their Lady Finger exhibits.

The brothers' parents, George and Giuseppina, started growing bananas in Coffs Harbour back in 1963 and are still a part of the family enterprise, which now reaches into the third generation.

Another pair of brothers, Livio and Dennis Pilati, were the show's most successful exhibitors with wins for best Lady Finger carton and hand, Ducasse bunches, cartons and hands and "king" Ducasse banana.

Coffs Harbour BGA president Wally Gately said a good number of growers had turned out for the show centenary, making the BGA's investment worthwhile.

"We decided to put the dollars up and it paid off," he said. "Between the BGA and Fire Hail Fund we put up about $4500. Champion bunch was worth $250 and heaviest bunch across all classes received $150.

"The return for us is to keep growers interested, there's so few of us left down here. It was definitely worth the investment."

"It's been a good growing season and we got lucky!"

Above: Coffs brothers Sandro and Bruno Franco carry off the Grand Champion trophy. Left: Sandro and Bruno Franco and their Show Champion bunch. Below: Show exhibitor for more than 20 years, Red Hill grower Livio Pilati shows off a prize Ducasse hand, one of many prizes he won with his brother Dennis. The four cartons in front of Livio earned first prizes for the brothers as well.

Above: Livio Pilati and the champion Ducasse bunch, grown on Red Hill with brother Dennis. Below: Coffs and District Banana Growers' Association Chairman Wally Gately casts a knowledgeable eye over the bunches. Right: The Coffs Show display of bunches - including Cavendish, Lady Finger and Ducasse.

Steward and former Show Secretary Lorraine Tibbs in the banana display.

Long time Show Steward Louie Cauz with a furry friend in the banana display.

Korora banana grower Joshua Tate talks with Show visitor Martin Miller, of Eastern Dorrigo, about the finer points of banana growing.

Third generation growers Alex (15) and Gianni (12) Franco with their favourite fruit.

Banana farming goes indoors at Macksville

When Nambucca District Banana Growers' Association (BGA) president Vicki McCudden was a child, there were two stands that stood out at the Macksville Show: the giant pumpkins and, right next to them, the bananas.

Despite the impact of the banana display there was a 30-year absence of bananas from the event until three years ago. And if the public's response to the reintroduction of bananas is anything to go by, Vicki wasn't the only one who missed them.

These days, the BGA stand at the Macksville Show has a different look to the banana displays of years past.

Elsewhere in the show's pavilion there are the usual agricultural show displays of fruit, vegetables, fodder crops, dairy and other farm produce – including pumpkins. But instead of a banana exhibit featuring bunch and carton entries, the BGA stand is now a replica plantation - complete with snakes and frogs (also replica!).

Also on display is banana industry memorabilia, such as wooden case stencils, consumer information on bananas and information on industry issues.

The stand at the Macksville Show, held in May, was the combined efforts of four local growers and Vicki said the replica plantation was a hit with show-goers.

"People keep coming back to see it," she said.

"It's lovely listening to the laughter and squeals of delight among the children when they see the animals hanging off plants."

Vicki said the BGA stand was of particular interest to backyard growers, who wanted tips on growing bananas, and for curious consumers who want to know things like "what's that red thing on the bunch?" To help answer the latter question, the display included some banana bells for show-goers to see.

"It's a wonderful stand," Vicki said, "and it's great to see bananas back at the show".

Emilee Clarke, Ally Dowdle and Hannah Shields, all from Kempsey, spot a 'snake' in the young bananas at Macksville Show.

At nearly two years old little Isabel McCudden is already a banana fan.

Nambucca Heads girls Alice and Leonor Pell enjoyed walking through the 'banana farm' display at the Macksville show.

Treasurer of the Nambucca District Banana Growers Association, Joyce Ward, answered visitor questions at the Macksville show.

Lynn and Neville Crompton from nearby Nambucca Heads visit the Macksville show, loving the banana growers display.

Nambucca District Banana Growers' Association President Vicki McCudden and Treasurer Joyce Ward with banana samples and a display including historic wooden-case stencils supplied by the Spear family.

Macksville show visitor Pat Heaney about to sample a banana offered by Joyce Ward.

Five year old Isaac McCudden spots a red bellied black snake in the' banana farm' at the Macksville show.

Barry Duffus, ex-councillor from Nambucca Heads, grabbed some nutritious bananas.

The islands that farm for France

The French overseas regions of Martinique and Guadeloupe have similar high labour costs to Australia but compete in the global export market. How do they do it? Jeff Daniells and Christian Chabrier report.

Jeff Daniells, of Queensland DAFF, visited Guadeloupe for a banana workshop and also visited nearby Martinique to view their major export banana industry. He provided this report with counterpart Christian Chabrier of the French Research Centre, CIRAD. Another report on pests and pest controls in the French West Indies will appear in the next edition of Australian Bananas.

The small French West Indies islands of Martinique and Guadeloupe together produce about 265,000 tonnes of banana annually – about two-thirds of Australia's banana production.

Martinique and Guadeloupe are located in the Eastern Caribbean. Martinique is 14°N and Guadeloupe 15°N which is about equivalent in distance from the equator as is Cooktown to Princess Charlotte Bay in Queensland and are well within the hurricane belt which stretches from 9-20°N.

Each has a population of about 400,000. The average temperatures mostly range from about 29°C to 19°C (day/night) in February to about 32°C/23°C in August so there are not large seasonal effects and conditions are very favourable for banana growth throughout the year.

Average annual rainfall depends upon elevation and ranges from about 1,300 to 4,500 mm/year and is well distributed through the year.

Banana exports

The major banana production for export is located in Martinique with 200,000 tonnes in 2013 from an area of 6000 hectares. Guadeloupe's production was about 65,000 tonnes.

Most of the banana production area is located on undulating lands at less than 400 metres elevation.

Collectively there are about 750 growers with production valued at A$230 million.

Bananas are the major export earner and represent 50 per cent and 20 per cent of the total value of agricultural production in Martinique and Guadeloupe respectively. About 75 per cent of the exported fruit is consumed in metropolitan France with the remainder spread amongst the UK and other EU nations.

EU lifeline

Because Martinique and Guadeloupe are part of France they have high labour costs like Australia.

Metropolitan France was once a protected market for fruit from the islands but these days it must compete with fruit from the cheaper labour countries of Central America.

So the continued existence of their export industry relies heavily on the subvention policy of the EU. Essentially for every dollar the product receives at the port of introduction in Europe, the growers receive a one dollar subsidy.

This subvention policy is necessary because France is in an extremely difficult position since export bananas are so vital to the economies of the islands. But it is not just the huge revenue that bananas bring. Also of major significance is the back loading of the banana boats which means that the price of goods from Europe, so important in the lives of residents, is greatly subsidised.

Despite the subsidies, they still face major competition in the marketplace. Since 2000 their collective production has declined from about 400,000 tonnes. This has been mainly at the expense of intermediate sized growers.

This is because larger farms of more than 100 hectares are more mechanised and generally have economies of scale while small family farms are able to absorb labour costs and survive.

Product of France

The industry's marketing strategy in metropolitan France endeavours to firmly position the product as 'Product of France', similar to Camembert from Normandy and the wine from the Bordeaux region.

Their objective is to anchor Martinique and Guadeloupe bananas in France's gastronomic and agricultural heritage so as to define the bananas as far superior to those from elsewhere.

Because of French traditions such a strategy holds a great deal more sway than when we promote our bananas as Australian made.

The imagery used in the promotions includes:

- production from volcanic earth and sunshine (tropics)
- the global benchmark in sustainable agriculture
- good tasting product of French regions.

Fertile Volcanic Soils

The banana production areas are mostly confined to the northeast coastal region of Martinique and south and east coastal region of Basse-Terre in Guadeloupe on undulating lands at elevations less than 400 metres in Martinique and 600 metres in Guadeloupe.

These undulating lands are mostly unsuited to cable ways for bringing harvested bunches to the packing sheds. Instead there are special bunch hauling trailers which deliver the fruit with minimal mechanical damage. These trailers are sold for about A$59,000 in Martinique.

The main banana soils are andosols and nitisols which are both formed from the weathering of volcanic ashes. They have high organic carbon content, are extremely well drained and relatively fertile. Despite the significant rains drains/mounding are not mandatory on these soils.

Hurricanes Zone

The French West Indies receives its fair share of hurricanes and tropical storms (those less than 119 km/hr but still quite sufficient to cause major banana damage). Since records began in the 1870s the average number of years between direct hurricane hits has been 13 years in Martinique and 7 years in Guadeloupe. However, the subvention policy at the end of the day provides the necessary 'insurance'. The EU, which Martinique and Guadeloupe are part of, is obliged to support the growers to recover. Nevertheless the disruption of supply (and associated fruit quality) to the marketplace caused by the hurricanes has an adverse effect on the industry's overall competitiveness.

"Good taste of our regions", "proud of my origin" advertising.

Map of the region.

Unloading from rear of a trailer at the packing shed.

www.bayercropscience.com.au

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