Papaya AUSTRALIA

PAPAYA PRESS

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Papaya Australia visits Northern Territory & Western Australian growers

Papaya Australia Board Directors Gerard Kath and Joe Zappala, together with Secretary Sherri Soncin and Hort Innovation Industry Manager Sarah Strutt, recently travelled to the Northern Territory and Western Australia to meet with papaya growers and gain a firsthand understanding of the opportunities and challenges facing the industry in these regions.

The visit provided an invaluable opportunity for the Board to engage directly with growers, hear their concerns, and identify ways the industry can better support papaya production outside of Far North Queensland.

Joe Zappala, Sherri Soncin, Gerard Kath, Sarah Strutt with NT grower, Matt Pheeney .

IN THIS ISSUE

Visiting the N.T.

The group first travelled to the Northern Territory, visiting the Humpty Doo, Lake Bennett and Berry Springs regions, located approximately 40–80 kilometres south of Darwin.

These areas are the Territory's primary agricultural hubs, producing high-value tropical fruits, hydroponic vegetables and field crops. While mangoes dominate production, followed by bananas and pineapples, papaya remains a small but important industry.

> *"It was a great opportunity to meet growers face-to-face, see how they operate, and hear firsthand about the challenges they face."*

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Hort Innovation is the grower-owned, not-for-profit research and development corporation for Australian horticulture.

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See your levy at work!

Get an update on all new, current and recently completed levy funded activity on the Hort Innovation Papaya Fund page at ***www.horticulture.com.au/papaya***.

You can access easy-to-read project updates, a snapshot of the Papaya Fund, research reports and resources, key industry contacts and more. Don't miss the Hort Innovation 'Growers' section to keep informed on your levy investments, upcoming events, scholarship opportunities and other handy info!

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From the Chair

GERARD KATH

Welcome back to another edition of the Papaya Press.

At the end of May, the board and I went on a key trip to the Northern Territory and Kununurra, Western Australia. The aim was to view the industry's production, scope, size and understand some of their key issues and main concerns that may be fed into industry investment in R&D and marketing.

Both regions face more difficult growing conditions than what we have in Far North Queensland. In the Territory it's mealybug (that may get here eventually), but also, it's the distance and location, from transport through to cartons and everything else in between. The region just doesn't have the infrastructure base that the Tablelands and Far North Queensland have. Transport is one of their biggest issues and their environment is a step more extreme in terms of drier, hotter and wetter conditions, and that has its challenges.

For Kununurra, Western Australia, it's the land of opportunity. They can grow anything and do anything there, but its remoteness and distance to markets (and therefore freight) is a difficult one. It's a long haul, so in Kununurra for them to send to the Eastern sates is pointless.

So, for them it's really about Perth and the Western seaboard. It's quite small and those markets traditionally have a small customer base – so to expand and move up to a greater industry there will be a long haul, but it can be done. And I hope it is done. The papaya industry is very much in its infancy there, similar to how the industry was in Far North Queensland some 30 or 50 years ago.

Western Australia generally has more newer style growers that possibly don't have the long-term insights and experience that comes over time. I hope that we were able to help them to some degree and to look at things from a different angle, time will tell how that goes. There are some promising signs of real potential for them. Without the Western Australia growers, Perth wouldn't have any papaya at all because we can't ship it from the eastern side.

Looking ahead for the industry, I see some significant challenges ahead. I detect a fair increase in planting, both on the Far North Queensland coast and on the Tablelands, which will more than likely lead to a big production increase. That is challenging to market at a profitable rate, and I don't think the industry has suffered a broadscale price problem for several years.

I'm predicting that 2027, baring major weather events, could be quite challenging. That's my gut feeling. That's based on production increase coupled with market conditions and consumer sentiment at the moment. We're hearing constantly that consumers aren't spending as much on fruit and veg, so if there is tough economic times ahead next year, coupled with an increase in production, it could be super tough going. It's something the industry hasn't experience for some 15 years.

Every industry goes through this from time to time, maybe it's papaya's turn now. With that said, just to close down, do nothing or grow less is not the right approach because so many things can change in a short space of time with things like weather or consumer confidence. I'm still an optimist, but I'm a realist in feeling that it could be a little bit tough around the corner.

Best regards,
Gerard Kath
Chairman, Papaya Australia

Brian Thistleton, Sachinthi Kithulgoda and Thilini Ekanayake from Northern Territory DAF.

Kununurra Growers – Chris Robinson with Gerard Kath.

(Continued from Page 1)

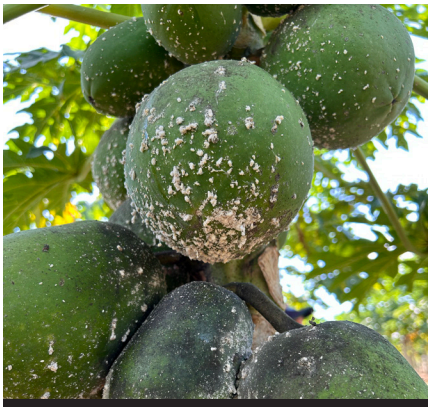
Papaya Australia visits Northern Territory and Western Australian growers

Although the climate is very similar to Far North Queensland, growers rely on bore water for irrigation. Collectively, Northern Territory papaya growers supply around 10-15 pallets of fruit to market each week. Main markets to transport would be Melbourne and Adelaide.

The group met with local grower Matt Pheeney, who farms at Lake Bennett and is the Northern Territory's largest commercial papaya producer, supplying approximately half of the Territory's papaya production. Around five smaller growers make up the remainder of the industry, primarily servicing the Darwin local market.

Matt grows the Red Lady variety and markets it as green papaya. He believes there is significant potential to increase demand by educating consumers about its versatility and nutritional benefits. Promoting recipes and demonstrating how green papaya can be used in everyday cooking would help build consumer awareness. During the visit, Matt's sister, Christine, showcased this perfectly by preparing delicious papaya fritters. Matt explained that Red Lady is an excellent eating variety when harvested green and can be used in salads, soups, stews, pies and fritters.

Like many growers, Matt has experienced challenges with Papaya Mealybug in recent years. Although infestations on his property have been relatively low, affected trees clearly demonstrated the potential production losses this pest can cause. The mealybug appears to be most active during the drier months. Matt currently manages it using a combination of chemical controls and beneficial insects. Fortunately, Northern Territory growers experience relatively few problems with spider mites, fruit spotting bug and Phytophthora.



Papaya Mealybug.

Joe Zappala, Gerard Kath with Kununurra Growers – Andrew McIntyre & Kylie Pretlove.

While in Darwin, the group also met with Entomologist Brian Thistleton, Sachinthi Kithulgoda and Thilini Ekanayake from the Northern Territory Department of Agriculture and Fisheries. The team presented their latest research into Papaya Mealybug and Fruit Fly.

Their work on Papaya Mealybug has provided valuable insights into the use of parasitic wasps as an effective biological control option. In addition, their extensive research into fruit fly management has the potential to significantly influence future biosecurity protocols, quarantine arrangements and market access opportunities for growers across northern Australia.

Kununurra, W.A.

The group then travelled to Kununurra in the Kimberley region of Western Australia. Having lived in Kununurra for more than 20 years, Sarah Strutt's local knowledge proved invaluable throughout the visit.

Home to approximately 5,500 people, Kununurra enjoys a climate similar to Far North Queensland and benefits from an abundant water supply through Lake Argyle and the Ord River irrigation system. The region is renowned for producing cotton, mangoes, sandalwood, rockmelons, watermelons and papaya, with an average annual wet season rainfall of around three metres.

Sarah arranged visits with three local papaya growers: Andrew and Kylie Pretlove, the region's largest producers; long-time growers Chris and Diana Robinson; and newer grower Warren McIntyre.

Western Australian growers exclusively produce the Red Lady variety. The state's strict biosecurity regulations prevent papaya plant material and produce from entering from other states, limiting access to alternative varieties. While Western Australian growers are able to supply eastern markets, high freight costs often make this commercially challenging.

Due to time constraints, the group were not able to make it to Carnarvon, but hope to visit in the near future.

Unlike many other growing regions, Kununurra growers experience very few issues with Phytophthora, spider mites or leaf spot, reducing the need for fungicide applications. Growers are also able to replant into the same beds after just six months.

Collectively, Kununurra growers produce between 20 and 30 pallets of papaya each week, supplying both hermaphrodite and female fruit to market in Perth.

The main challenges identified by Western Australian growers were market limitations and biosecurity restrictions. The Perth market can comfortably absorb around 20–30 pallets per week, with additional supply placing downward pressure on prices. Growers also expressed a desire to trial new papaya varieties, but as mentioned earlier, biosecurity prevents this from being possible.

Stronger Industry Connections

Board Directors Gerard Kath and Joe Zappala agreed the visit was extremely worthwhile.

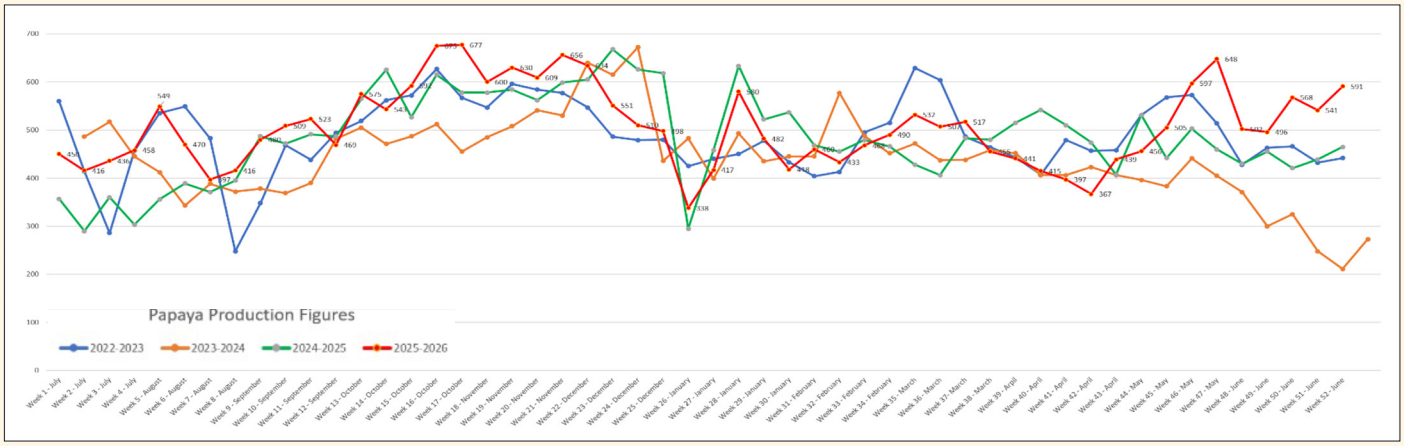
"It was a great opportunity to meet growers face-to-face, see how they operate, and hear firsthand about the challenges they face," they said.

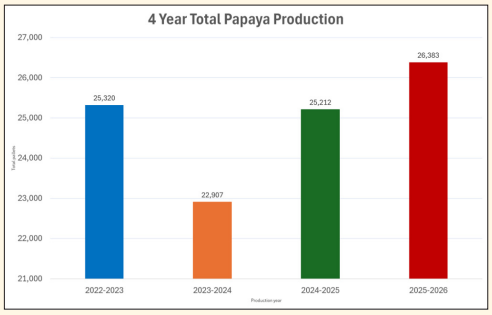
The tour highlighted both the similarities and differences between papaya production across northern Australia and identified several opportunities for Papaya Australia to further support growers in both the Northern Territory and Western Australia.

The growers greatly appreciated the visit and welcomed the opportunity to discuss their concerns directly with industry representatives. Papaya Australia has returned with a stronger understanding of regional challenges and a number of important actions to pursue in support of these growing regions.

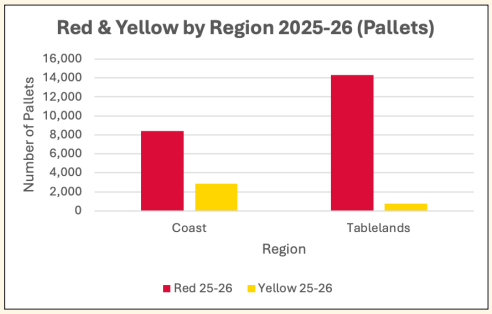
Papaya Production Figures

Papaya production over the four-year period has remained broadly steady, with total pallet volumes ranging from 22,907 pallets in 2023–2024 to 26,383 pallets in 2025–2026. Production dipped in 2023–2024 after reaching 25,350 pallets in 2022–2023, but then recovered in 2024–2025.





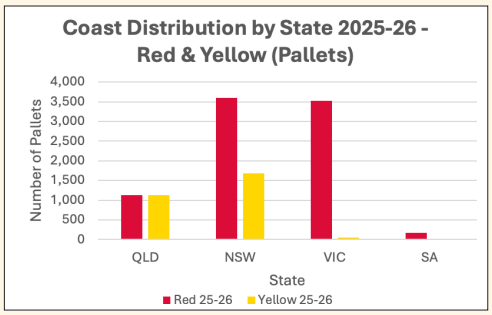
2022-2023	25350 pallets
2023-2024	22907 pallets
2024-2025	25212 pallets
2025-2026	26383 pallets



Region	Red Papaya Coast 25-26	Yellow Paw Paw Coast 25-26
Coast	8,427	2,863
Tablelands	14,332	761

Red & Yellow Papaya Production by Region for 2025-2026.

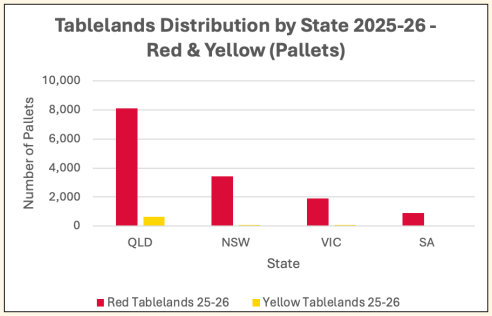
For the 2025–2026 season, **red papaya made up the majority of production**, particularly from the Tablelands, which recorded **14,332 pallets** compared with **8,427 pallets** from the Coast. Yellow paw paw production was much smaller overall, with the Coast producing **2,863 pallets** and the Tablelands producing **761 pallets**. This shows the Tablelands is the dominant region for red papaya, while yellow paw paw production is more concentrated on the Coast.



State	Red Papaya Coast 25-26	Yellow Paw Paw Coast 25-26
QLD	1,135	1,132
NSW	3,598	1,686
VIC	3,530	45
SA	164	0

Coast Distribution by State for 2025-2026.

Across states, **Queensland received the largest share of Tablelands production**, particularly red papaya at **8,118 pallets**, while New South Wales and Victoria were also significant destinations. For Coast production, New South Wales and Victoria received the highest red papaya volumes, while yellow Coast production was mainly distributed to New South Wales and Queensland. South Australia received smaller volumes overall, with no yellow papaya recorded from either region.



State	Red Papaya Tablelands 25-26	Yellow Paw Paw Tablelands 25-26
QLD	8,118	655
NSW	3,428	98
VIC	1,887	8
SA	899	0

Tablelands Distribution by State for 2025-2026.

PCR TO PAPAYA
A WORKSHOP ON SEX DETERMINATION

BY DAVID BIN

Gambling isn't for everyone, but papaya growers are professionals at it, planting multiple plants each crop and hoping for hermaphrodites. This is a significant production issue because papaya are sex indeterminate. When the cards of chance deal out females, production is lost.

Quad plantings can limit nutrient and resource availability for the selected plants due to competition from the other three. They may also increase the risk of root diseases, as removed roots decompose within the production plant's root zone after de-sexing. Because selection is based on sex-type, the most vigorous plant is not always retained.

Just like at a casino, the house always wins. Statistics tell us quad plantings should produce a hermaphrodite 93% of the time, but in reality this is closer to 80%. PCR technology can overcome the limitations of multiple plantings by determining the sex of papaya seedlings in the nursery before transplanting. This allows growers to plant a single seedling of the desired sex rather than multiple plants per site, delivering an automatic 20% productivity gain.

At the end of April, a papaya PCR workshop was held at Lecker Farming, Mareeba, as part of the Hort Innovation Papaya Levy-funded project, "Supporting innovation in the Australian papaya industry" (PP23003). The workshop examined PCR methods, production benefits and economic analysis.

Molecular biologist Dr Hazel Gaza from Queensland's Department of Primary Industries (QDPI) presented on "What is PCR (Polymerase Chain Reaction)? How it works and methods to determine papaya sex." Key points included how enzyme buffers and rapid heating and cooling of papaya leaf tissue in PCR machines denature DNA, providing sex markers for individual plants.

Extension officer David Bin from QDPI spoke about field trials in South Johnstone comparing quad and single plantings of 1B (yellow) papaya. Early results show trunk circumference is greater and height to first fruit is lower in single plantings than quads. Yield data is still being collected to determine total crop differences.

Balazs Bravics from Scientifixs introduced commercial PCR equipment available to establish an on-farm lab. He also shared his experience working with growers and the history of on-farm PCR adoption in the Australian papaya industry.

Extension officer Emily Pattison from QDPI presented the economics and sensitivity analysis of quad versus single plantings. Emily said one of the major drivers of profitability was PCR testing success. Assuming a 100% success rate, single plantings could generate an additional revenue of $44,600 per hectare over quads based on limited experimental data. These gains could increase if more quad plantings are lost, although many factors influence economic returns.

Workshop hosts Gerard Kath and Ying Boonshoo from Lecker Farming presented their actual on-farm costs of producing PCR sex-determined plants. A tour of their lab and nursery facilities was followed by a discussion of their PCR experience. Lecker Farming now plants approximately 90% of new crops as singles and continues improving the process.

Thank you to all growers and industry stakeholders who participated in the PCR workshop. Appreciations are extended to Gerard and the team at Lecker Farming for hosting. With PCR giving us the ability to count the cards of papaya sex determination, we will continue working to ensure the odds are on our side.

For more information contact Emily Pattison, DPI Mareeba, emily.pattison@dpi.qld.gov.au

Emily Pattison presenting on economics of quads verses singles.

Ying Boonshoo showing participants Lecker Farming PCR Lab.

Predatory wasp, now confirmed a Queenslander BY DAVID BIN

The papaya extension project is excited to share the news that the predatory papaya mealybug feeding wasp Acerophagus papayae has been DNA confirmed as a beneficial wasp species now living in Queensland.

This would not have been done without Bruno. Bruno Rocha Tamelini from Mareeba DPI, has worked tirelessly within the levy funded PP23003 project "Supporting Innovation in the Australian papaya industry" to collect perfect samples of Acerophagus papayae and tracked its population and movements across Townsville. His entomology skills have been unmatched. However, this has not been achieved alone. Brian Thistleton, Sachinthi Kithulgoda and the wider NTDAF entomology team provided a lot of advice and guidance along the way. When it came to getting the required DNA confirmation, Mark Schutze, Shannon Close and all the diagnostic team members at Biosecurity Queensland (DPI) contributed a lot of their work and time to provide these results for the Queensland papaya industry. Our thanks are extended to both these organisations for their assistance and working together as one team towards a shared goal.

This discovery will allow the papaya extension project to continue with our next phase of mealybug preparedness incorporating Acerophagus papayae into our farming systems. Although this is great news, we aren't out of the woods yet. Although the wasp Acerophagus papayae is the greatest control of papaya mealybug, most of our fruit spotting bug and mite chemistry will kill it. The goal now is to learn how to farm papaya with Acerophagus papayae while still controlling all our other pests and diseases.

For more information contact David Bin, DPI Mareeba, david.bin@dpi.qld.gov.au

Continued on page 6 (supporting graphic) ››

REGIONAL ROUND-UP

What's happening in the regions?

GERARD KATH – TABLELANDS REGION, FAR NORTH QUEENSLAND

Last wet season was an above average wet in terms of rainfall, so established trees are showing the effects of root rots and tree losses as a result. We are now in above average temperatures for winter, which is good for tree growth generally, so it has a good balancing out affect particularly on younger trees. That should put the industry in pretty good production standing for the next 3-6 months ahead.

Looking at the production data, in the last 3-6 months the Tablelands region has been reasonably down on production. There are some specific reasons for individual growers, there's no generalisation here, but every grower's got their own battles or reasons why they're back a little bit.

What I have noticed in recent months is that there has been an increase in trees being planted, which is going to have a fair effect mainly for next year's production period.

I'm hearing from a lot of people that there's an increasing issue with mites and fruit spotting bugs, based on warmer, wetter weather. But also, more resistance to chemical through chemical usage. I think there must be a shift on how those problems are going to be solved down the track and we may have to swing away from traditional chemicals a little bit.

CHRIS AND DIANE ROBINSON – KUNUNARRA, WESTERN AUSTRALIA, REGION

It's our dry season so it's a little bit cool, but we haven't had any really cold weather. The highs are still in the low 30 degrees and the lows are from 15 up to 20 degrees. The mangoes are flowering really well, but it's slowed the paw paws down a lot. Volumes have gone down – unusual because normally in winter down south paw paws sell less, but our prices have gone up. While we're sending less fruit, we're not losing out on money. It's really good.

Because the fruit has been sitting in cold weather for a while not ripening, the size has gone up quite big. I think in about 3-4 weeks' time we'll have big quantities of quite large fruit. Which I don't mind ... our 7-8 counts sell really well. The quality is looking good. With cold weather we do get a little bit of spotting, but there's not that much there. We're getting a little bit of scale and that would be the only issue. We've got no insect or any other diseases that are not normal. Things are cruising along nicely.

We've got our local annual agricultural show on July 10-11 and it brings in around 7000 people. I'm a Veteran on the committee so there's been a lot of hours working on that. It's a big show – all our stall holders come from anywhere in the country, anywhere from Queensland, South Australia and Perth. We also have a massive fireworks show – we have the biggest fireworks show in the North of Australia.

MATT PHEENEY, COOLALINGA NORTHERN TERRITORY REGION

The farm has just about fully recovered from the end of the last wet and we should be back in full swing again in the next month. We had such a wet, wet season. We ended up with 3 metres of rain over about 6 months. The farm stood up a lot better than I thought it would considering, but this is probably the first time I've really looked forward to the end of the wet. You can't beat rainwater in moderation, but when you get too much of it, it's a hassle to deal with and work around. It's the wettest I remember in the 20 years or so that I've been up here ... and the longest as well.

It's been pretty good weather for us recently. It's been a bit hot and cold fruit wise due to the impacts of the wet season. But hopefully we'll get through that in the next 2-3 weeks. Papaya prices are a bit lower than it has been this time of year, for the last couple of years.

We're still fighting the mealy bugs which is still relatively new and uncontrollable by the look of it. We've found a few things that work, but whether that's for long-term use we'll find out.

We've also got mice problems, which is a dry season problem that we face every year. If we stay on top of our sprays it's not too bad, but it means we just have to be more diligent.

JOSH OLDANO – INNISFAIL REGION

The wet weather is testing us a bit, but the fruit is holding up alright which is the main thing. There was a week that was absolute magic – we got more work done in that period than we had in months in terms of ground prep. But these showers that are hanging around are giving us grief.

Given the ground we're in, it drains well, so the trees are looking really good. Fruit has filled out nicely and it's coming off at a steady pace, which is good.

It would be good to see the prices climb a bit more, a few agents are saying there's low quality fruit around dragging the price down. That's what we're getting told and what we've got to work with. For that price to come up a bit more, it would be welcome. There's plenty of fruit hanging and hopefully quality across the board picks up. That's probably the only negative from it all at the moment.

We're slightly behind (on planting), but it's on track as it can be given the circumstances. The seedlings that are coming through are looking good and healthy.

BRENT WILSON – TULLY REGION

Weather conditions during the April–June 2026 period were particularly challenging for papaya production in the Tully region. During June, the average temperature was 20.4 degrees, with an average minimum temperature of 16.9 degrees. Despite the relatively low rainfall total (43 mm), persistent overcast and misty conditions prevailed throughout much of the month.

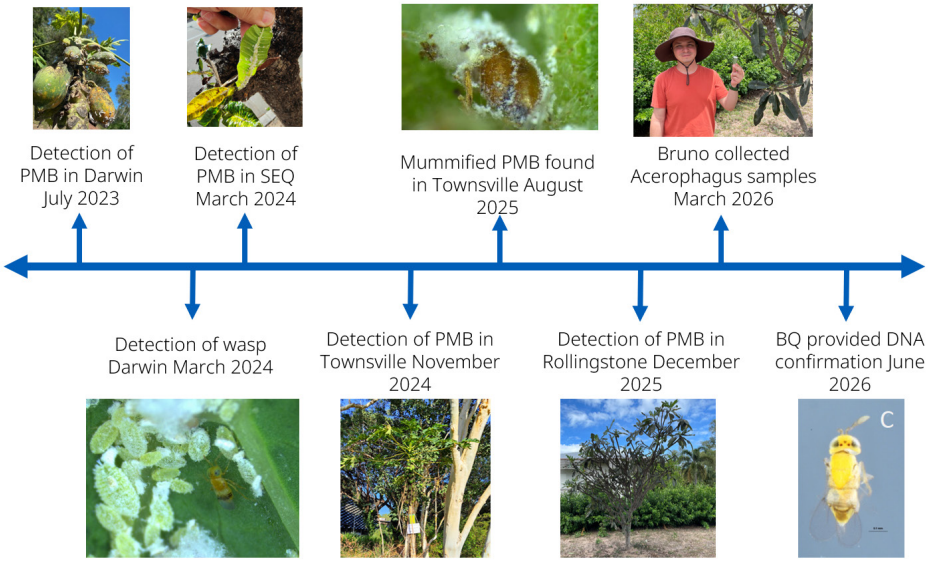
Despite the challenging environmental conditions, the papaya crop performed exceptionally well throughout the reporting period. Crop vigour remained strong, with plants maintaining healthy leaf colour and canopy development. Fruit quality was consistently satisfactory, and no significant gaps were observed within the fruit column.

Given that the prevailing weather conditions were conducive to the development of foliar fungal diseases, preventative fungicide applications were implemented according to the established spray program.

(Continued from Page 5)

Predatory wasp, now confirmed a Queenslander

Papaya Mealybug and *Acerophagus* Timeline so far



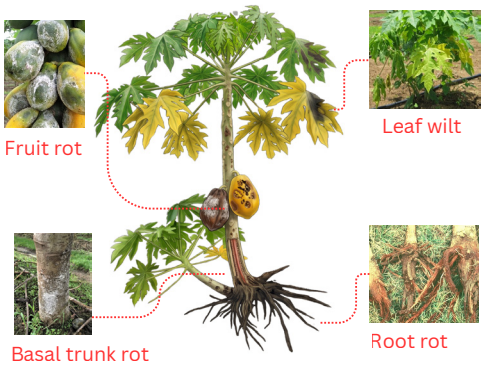
Stop Papaya Phytophthora Rot: Practical Tips for Growers

RMIT UNIVERSITY

Based on a Systematic Review conducted by RMIT University for **Project PP23001 – Better Understanding of Papaya *Phytophthora* Root Rot**

About papaya *Phytophthora* rot:

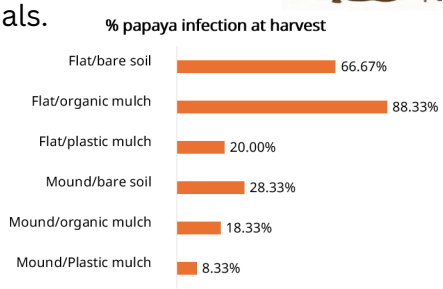
- A silent papaya killer that can wipe out **more than 80%** of plants in badly affected blocks.
- It is mainly caused by ***Phytophthora palmivora,*** with ***Phytophthora nicotianae*** also involved in some cases.
- It can survive for many years in soil and plant debris.
- The pathogen becomes active under wet and warm conditions, as its spores can swim through waterlogged soil, standing water, and splashing rain.



Soil moisture controls:

Raised beds and plastic mulch deliver major reduction in root rot.

- Raised planting beds, built **60 - 75 cm high** and covered with **plastic mulch**, cut *Phytophthora* root rot **58 - 88%** in trials.
- Avoid use of **heavy organic mulches**



Chemical Fungicides:

Spray program:

Copper hydroxide and **Chlorothalonil** sprays at 14-day intervals kept fruit rot below 1%.

Drench program:

Copper oxychloride and **metalaxyl** drench five times after flowering (20-day intervals) strongly reduced root rot and boosted yields.

Growers are being urged to:

- Use only registered or permitted products
- Rotate fungicide groups
- Treat fungicides as supporting tools
- **Fungicide cannot fix disese in waterlogged soil. Fix drainage first.**

Biological & Nutrition:

Use of beneficial bacteria and fungi:

- *Bacillus subtilis* drenches cut root and crown rot by around **83%** on tomato and pepper.
- *Trichoderma* species have reduced post-harvest papaya fruit rot by **52 - 89%** depending on species and spray timing.

Nutrient management:

- Balanced N:P:K:Zn:B:S (ratio of 100:100:100:10:5:30) reduced papaya root rot by **44%** in field trials.

Integrated Approach:

Calling for growers to adopt **Integrated *Phytophthora* Management (IPM):**

- Clean planting materials and strict hygiene
- Good drainage: raised beds and mulch
- Balanced fertiliser program
- Rotated and carefully timed fungicide use
- Use biological tools
- Emerging options: soil solarisation, and intercropping.

Full Best Practice Resource can be downloaded from:

- Shorter Version
- Detailed Version

Hort Innovation PAPAYA FUND

This project has been funded by Hort Innovation using the papaya research and development levy and funds from the Australian Government. For more information on the fund and strategic levy investment visit horticulture.com.au

Papaya AUSTRALIA

MARKETING UPDATE

PAPAYA CAMPAIGN DELIVERS STRONG RESULTS ACROSS SAMPLING AND SOCIAL

The latest phase of the papaya marketing program, has delivered strong results across in-store sampling and paid social media activity. The upcoming FY26-27 program is focused on increasing awareness, encouraging trial and inspiring more Australians to include papaya in their everyday diets.

IN-STORE SAMPLING DRIVES TRIAL AND SALES

Between April and June 2026, papaya sampling was activated across 59 Woolworths, Coles and independent stores in NSW, QLD, VIC, WA, SA and the ACT.

Across the 10-week campaign, more than 5,162 samplexs were handed out, reaching an estimated 6,427 shoppers. Of those who engaged with the sampling team, 80% tried a sample, reinforcing the value of trial in introducing shoppers to papaya.

An estimated 1,334 whole papayas sold during sampling sessions, averaging around 23 papayas per session.

Consumer feedback was highly positive, with shoppers highlighting papaya's refreshing flavour, natural sweetness and versatility with many shoppers indicated they intended to purchase after sampling.

SOCIAL MEDIA EXCEEDS OBJECTIVES

The social media campaign reached more than 4.6 million Australians and generated more than 2.5 million impressions.

The campaign also drove more than 15,600 clicks to the Papaya Australia website, demonstrating strong consumer interest in papaya, its health benefits and usage ideas.

LOOKING AHEAD

Future campaigns will continue to build awareness, encourage trial and support repeat purchase. Foodservice research is also underway to identify growth opportunities and better understand papaya usage in the sector.

The results highlight the important role sampling and digital marketing continue to play in introducing new consumers to papaya and supporting long-term category growth.