

## HPAI risk increases as does cost of complacency

AUSTRALIAN produce has long had a reputation for quality, reliability and careful stewardship.

Yet, as history and current times remind us, our hard-earned reputation could disappear overnight if we grow complacent about on-farm biosecurity.

The true cost of significant events never truly compensates for the total losses.

In 2001, the United Kingdom was struck by hand, foot and mouth disease.

A suspected cause being a farmer feeding pigs untreated catering waste.

Overnight, the UK's cattle, pig and sheep industries scrambled to manage culling up to 100,000 animals a day.

Despite best efforts, the disease spread further to Ireland, the Netherlands and France.

A single incursion is never about one person, their stock and livelihood being impacted.

The total cost of this outbreak was over eight billion pounds – which is about \$A16.4 billion today – and more than two-thirds were private sector losses.

To put this cost into perspective, the Australian Government's total biosecurity budget provides



by **CANDICE STOWER**  
Executive Officer



\$1.03 billion over four years.

I was fortunate enough to attend Mintrac's free poultry biosecurity training in Ipswich last month, where I was reminded of the wise words of Benjamin Franklin, "An ounce of prevention is worth a pound of cure."

As I reflect on HFMD in the UK and the mounting toll of avian influenza strain H5N1 globally, these words remain prophetic.

Australia's geographic isolation provides some protection from H5N1, but it is no guarantee.

Recent studies have shown grey teal ducks in the Australo-Papuan region can fly 2300km in 13 days.

Another study shows that wild ducks can shed the disease over 17 days.

Australia remains the only HPAI-free continent.

However, as these studies show, there is a huge amount of risk sitting above

us and this makes it even more important to bolster biosecurity efforts now.

One breach here could lead to mass depopulation, supply disruptions, soaring prices and lasting damage to consumer confidence.

The question is why should every egg producer – whether large commercial producers or small holders – care?

Because biosecurity is not only a regulation, but the cornerstone of our survival.

Governments alone will never be able to truly compensate the total damage of significant events such as these – it simply isn't possible.

That's why we need to increase our vigilance.

The National Farm Biosecurity Technical Manual for Egg Production offers a robust framework, yet adherence must go beyond compliance.

It requires a culture of accountability and

continued P2



While the snow brought regular campus operations to a halt, PHA's work continued remotely.

## Recent pilot trial significant for Australia's poultry production

NOT since 1984 had Armidale experienced such a remarkable snowfall.

Over the course of the event, parts of the region were covered by up to 50cm of snow.

The sheer weight of the accumulation caused significant damage – bending and breaking trees and scattering branches across the city.

At the University of New England, the impact was substantial.

Trees and large branches fell across roads and walkways, creating safety hazards and rendering sections of the campus inaccessible.



by **TAMSYN CROWLEY**  
Director



As a result, UNE remained closed for more than a week, while crews worked to clear debris and restore safe access.

While the snow brought regular campus operations to a halt, Poultry Hub Australia adapted quickly, with our team continuing to work remotely.

This allowed us to focus on sharing the results of a recently

completed pilot trial that could have significant implications for poultry production in Australia.

The trial examined whether reducing the depth of poultry litter from the industry norm of 5cm to 2.5cm would influence the welfare, health and performance of broiler chickens, as well as litter quality.

Litter serves an es-

sential role in poultry production, supporting bird comfort, reducing disease risk and maintaining hygiene.

While current practice is largely based on convention, the key requirement is that litter remains 'dry and friable'.

The motivation for this research extended beyond animal welfare.

Every bird grown in Australia produces several kilograms of litter, and with hundreds of millions of chickens raised each year, this translates into millions of tonnes of material requiring disposal annually.

While much of this

continued P2



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## Poultry Industry Calendar of Events

**2025**

**SEP 9-11** – Shell Egg Academy, West Lafayette, Indiana. <http://shelleggacademy.org>

**SEP 10-12** – XXVII Congreso Centroamericano y del Caribe de Avicultura, Panama City, Panama. <https://centroamericanoavicultura.com>

**SEP 14-17** – European Symposium on the Quality of Eggs and Egg Products and the 26th European Symposium on the Quality of Poultry Meat, Zadar, Croatia. <https://eggmeat2025.com>

**SEP 16-18** – Space 2025, Rennes, France. <https://uk.space.fr/>

**SEP 23-25** – AgXchange Australia 2025, Gold Coast, Queensland. <https://agxchange.com.au>

**OCT 6-10** – XXIII World Veterinary Poultry Association Congress, Kuching, Malaysia. <https://www.wvpac2025.com/>

**OCT 7-9** – International Congress on Aviculture and Animal Nutrition, Miami, Florida. <https://ipncongress.com/en/>

**OCT 8-10** – Poultry Asia, Kuala Lumpur, Malaysia. <http://www.poultryasiaexpo.com/>

**OCT 8-10** – 13th European Symposium on Poultry Genetics, Gdansk, Poland. <https://espg2025.org/>

**OCT 15-16** – Dutch Pork & Poultry Expo, s-Hertogenbosch, The Netherlands. <https://www.dutchporkexpo.nl/en/>

**NOV 26-28** – Poultry India, Hitec City, Hyderabad, India. <https://www.poultryindia.co.in/>

**2026**

**FEB 9-11** – APSS 2026, Sydney, Australia. <https://www.apss2026.com.au>

**APR 22-24** – International Conference on Poultry Intestinal Health, Istanbul, Türkiye. <https://icpih.com>

**How to supply event details:**  
Send all details to National Poultry Newspaper, PO Box 162, Wynnum Qld 4178, call 0450 672 553 or email [design@collins.media](mailto:design@collins.media)

**poultrynews.com.au**  
**0450 672 553**

## HPAI risk increases as does cost of complacency

from P1  
continuous improvement.

Effective biosecurity means strict controls on visitors, diligent cleaning of equipment, sourcing chicks and feed from trusted suppliers and vigilant monitoring of wild birds and pests.

A culture of accountability and continuous improvement looks like a regular review of on-farm processes to determine the likelihood and consequences of all risks and taking action to mitigate those risks.

These may seem small routine steps, however collectively they help create a barrier against devastating outbreaks.

When you have a risk of illness or

disease, it is prudent to increase the frequency of medical check-ups, beyond what usual standards and guidelines for the general population might suggest – usually based on what medical evidence is and the ability of our enviable health care system to pay for it.

There is no difference here – the risk is here, the stakes are high and the government has only finite resources to go round.

Do the extra checks now and consider how you might bolster your compliance with the existing minimum standard set out in the manuals.

Protect your flock, protect your livelihood and protect the future of Australian eggs. 🐣



An ounce of prevention is worth a pound of cure. Photo: Jason Leung

## Recent pilot trial significant for Australia's poultry production

from P1  
is applied to farmland, space and community acceptance are limited.

Reducing litter output by nearly half could substantially decrease the environmental and logistical burden, while also reducing transport needs, cutting greenhouse gas emissions and lowering costs for producers.

The trial results were highly encouraging.

Birds raised on both the standard and re-

duced litter depths exceeded performance benchmarks for growth, feed intake and feed conversion efficiency.

While the reduced-litter group consumed slightly less feed and gained slightly less weight, these differences were minimal and did not impact overall performance.

Mortality rates were low and comparable between the groups and there was no increase in leg health issues.

Litter quality was another key finding.

Reduced-depth litter dried more quickly and weighed less by the end of the production cycle, making it easier to handle and potentially improving shed conditions.

In welfare terms, foot pad lesions were slightly more common in the reduced-litter group, while hock burns were less frequent than in the standard litter depth group.

Overall welfare re-

mained high for both treatments.

In summary, the trial demonstrated that reducing litter depth is feasible without compromising bird health or performance, while offering considerable environmental and economic advantages.

The logical next step is to conduct large-scale trials under commercial conditions, where a range of management styles and climates can further test the approach.

While the snow in Armidale has since melted, the event will be remembered as one of the most significant in decades, both for its beauty and the disruption it caused.

I believe the outcomes of our litter depth research have the potential to leave an equally lasting mark on the poultry industry, fostering more sustainable, efficient and resilient production practices for the future.



The litter depth research has the potential to change the landscape for the poultry industry.



Recent snowfall at Armidale was both beautiful and disruptive.



# Unified path forward for layer industry

THOUGH some states are still grappling with the implementation of the Australian Animal Welfare Standards and Guidelines for Poultry, one truth remains clear – biosecurity, animal welfare and food safety are not standalone concepts, they are fundamentally interconnected.

Strength in one supports the integrity of the others and as an industry we cannot afford to treat them in isolation.

That is why Egg Farmers of Australia, with strong backing from our members, is continuing to focus on animal welfare research and improvements.

Other industries have developed their own standards that have been taken to government.

Moving forward, I believe this is the way that harmonised industry standards reflecting best practice, science and the real-world needs of producers across the country can be augmented, to ensure we don't have the long legacy timeframes of regular development.



We must learn from the past.

The current standards and guidelines process at a national level took over a decade from its first meeting to the point of returning to the states.

Such delays are not only inefficient, they also risk undermining public trust, farmer certainty and the consistency of regulation.

We must ensure our sector never again experiences such a protracted approach.

Layer farming is a truly national industry.

Many of Australia's major egg businesses operate across state lines.

Yet under the current model, one bird may be subject to entirely different welfare and operational requirements depend-

ing on the state it is in.

This patchwork of rules is not only impractical but also ludicrous.

National consistency is essential, and this must be our aim going forward where possible.

That's why, as we look to the future, Egg Farmers of Australia continues to embed biosecurity, food safety and animal welfare as core pillars in our new strategic plan, which commences in 2026.

These are not buzzwords – they are the foundation of consumer trust, market access and the ongoing sustainability of egg production in Australia.

We are committed to working with producers, retailers and those who use eggs in manufacturing, government and the community to

ensure that Australian eggs continue to be safe, ethical and high-quality.

A nationally harmonised framework developed by industry for industry will help us achieve this, while giving all stakeholders the confidence that our standards are not only robust but achievable.

The next chapter of our industry's success depends on unity, leadership and the courage to evolve.

Egg Farmers of Australia will be at the forefront of that journey.



Egg Farmers of Australia continues to embed biosecurity, food safety and animal welfare as core pillars in its new strategic plan.



A recent meeting with State Government agriculture ministerial staff, Matt Jensen, Lachlan Fairfield, Belinda Pennell, Candice Stower and the author.

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# Energy reductions key to unlocking feed cost savings



Dr Mehdi Toghyani



As part of the project 'Optimising energy and amino acid levels in meat chickens' diet, researchers aimed to understand if the energy and amino acid contents in diets could be adjusted for maximum production efficiency and economic return.



The dataset allows nutritionists to have some level of prediction over what's going to happen to the performance if they make whatever adjustment.

RESEARCH has revealed that metabolisable energy levels in the diets of young meat chickens can be lowered without affecting bird performance.

The finding offers important flexibility for industry nutritionists within an environment of fluctuating ingredient costs.

Metabolisable energy levels in the diets of young meat chickens can be lowered without impacting bird performance, according to comprehensive new research published by a University of Sydney team.

The finding – contained in the results of a multi-year study led by Dr Mehdi Toghyani – could save the Australian chicken meat industry millions of dollars on feed ingredients annually amid an environment of fluctuating input costs and global market dynamics.

As part of the project 'Optimising energy and amino acid levels in meat chickens' diet, Dr Toghyani and colleagues undertook four feeding studies investigating the impact of dietary nutrient density on performance.

Their aim was to understand whether the energy and amino acid contents in diets could be adjusted for maximum production efficiency and economic return.

Performance metrics measured included body weight gain (BWG), feed intake (FI) and feed conversion ratio (FCR), but also breast meat yield and quality, nutrient excretion to the environment, white striping and woody breast conditions.

"Energy is probably the most expensive component of the feed," Dr Toghyani said.

"When AgriFutures was running the Open Call in 2021, prices for canola oil and animal tallow were at historic highs.

"Both fat sources are commonly used to supplement the feed and balance the energy."

The start of this latest research coincided with Australia's two major meat chicken breeding companies Aviagen and Cobb-Vantress publishing new nutrition specifications for their breeds.

These specifications lowered the energy component of diets by close to 100kcal/kg particularly for older birds.

"So we had to move our baseline 50-100kcal lower, but even with the updated reduced energy requirements published in 2022, we saw that we can go further down in terms of energy density, especially for younger birds, without impacting performance," Dr Toghyani said.

The results differed across growth stages – starter, grower, finisher and withdrawal – but were most pronounced for birds aged less than 24 days.

Given the potential savings on feed costs, especially with fluctuating oil prices, such reductions could provide the industry annual savings.

With regards to amino acid density, the research found levels 3 percent higher increased BWG by 90g per bird, while an additional 3 percent resulted in a further 50g gain per bird.

At the time of the study however, the economics to realise the performance benefits – measured by feed cost per kilogram of bodyweight – did not stack up, though Dr Toghyani noted soybean meal and amino acid prices have since fallen.

"At least what we have been able to quantify is, if you increase amino acid density by this much, you see an improvement in terms of bodyweight gain and feed conversion ratio," he said.

"So when the prices change and you've got a source of protein, it's very easy doing a bit of simple maths to see if the extra investment pays off.

"What we've done is establish a baseline, so when you are investing, you know how much you're going to harvest.

"Therefore, when it's economically viable to have higher-amino-acid-density diets, you can choose to increase the cost by \$10 or \$15 per tonne and have more certainty that, because of the better feed conversion ratio and higher gross margin, you are increasing your profit by this much."

In a similar vein, increasing the digestible lysine-to-metabolisable energy (dLys:ME) ratio in feed beyond the breeder's recommendation for each growth phase was found to improve performance.

The dLys:ME ratio is used by nutritionists to ensure changes to amino acid and energy densities are proportional.

Based on the results of the feeding studies, the optimal densities for each growth phase are:

- Starter – 2875kcal – digestible Lys 1.32 percent (dLys:ME ratio of 460)
- Grower – 2975kcal – digestible Lys 1.18 percent (dLys:ME ratio of 397)
- Finisher – 3100kcal – digestible Lys 1.08 percent (dLys:ME ratio of 348)
- Withdrawal – 3150kcal – digestible Lys 1.027 percent (dLys:ME ratio of 326).

Dr Toghyani said nutritionists could use the dataset generated to make informed decisions when balancing nutrition requirements with feed costs.

"If a nutritionist wants to cut back on the energy, depending on the age of the birds, they know what it's going to do," he said.

"Older birds, 50kcal less will reduce feed efficiency by two points, but how much is it saving?"

"The dataset allows them to have some level of prediction of what's going to happen to the performance if they make whatever adjustment, either upwards or downwards, in response to the ingredient prices."

Dr Toghyani's passion for poultry nutrition was sparked during his teenage years

in Isfahan, in central Iran.

His older brother was completing his master's thesis and Dr Toghyani was helping place day-old chicks. "I thought it was very interesting how quickly they grow," Dr Toghyani said.

He completed his PhD at the University of New England, graduating in 2016, and worked there for a further three years.

In 2019, he shifted to the University of Sydney, where he is a lecturer in poultry production.

He is also a nutrition consultant and formulates diets for the 'Sustainable precision feeding in broiler chickens in Australia' consortium project.

Dr Toghyani said his energy and amino acid research was a first in the Australian context.

"Existing research was done quite a few years ago with the old recommendations of the breeders, and the energy levels were already high," he said.

"Many people are doing this kind of research overseas, but this is the first project that has utilised Australian-like diets, which are quite unique in their own way.

"We have wheat-based diets, with canola seed and sometimes canola meal.

"Our supplemental fat is either canola oil or animal tallow, particularly poultry tallow.

"If you go to South America or North America, or parts of Europe, the diets are all corn-based with soybean oil.

"The dynamics of the formulations are completely different, meaning that sometimes, similar research from overseas cannot be translated for the Australian context."

AgriFutures Australia



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# Delivering poultry right

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TRANSPORTING live poultry is one of the most sensitive tasks in the supply chain.

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For hatcheries, farms and transport providers, reliability matters.

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tion stands apart.

The TRS Smithway system combines patented horizontal airflow, precise temperature control and smart ventilation to maintain stable internal conditions throughout the journey.

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Every trailer is locally built right here in Australia.

TRS general manag-

er Daniel Wilton said, “We supply the complete package, starting with an Australian built trailer, then fitting it with Smithway’s world leading system and tailoring it to the customer’s specific needs.”

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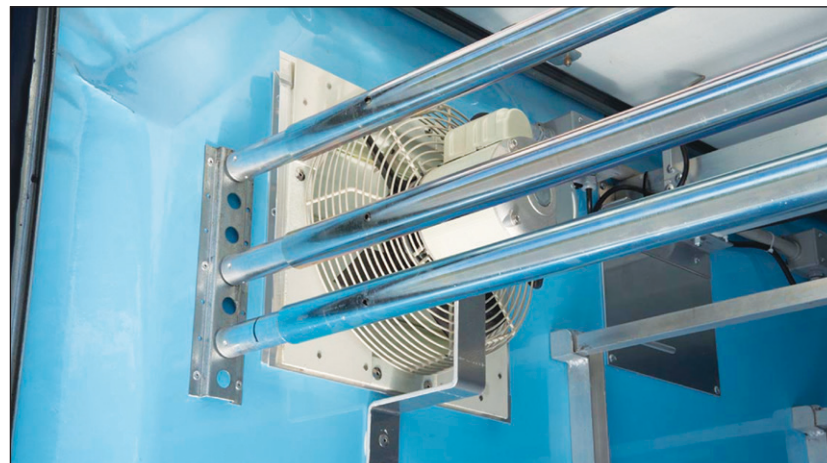
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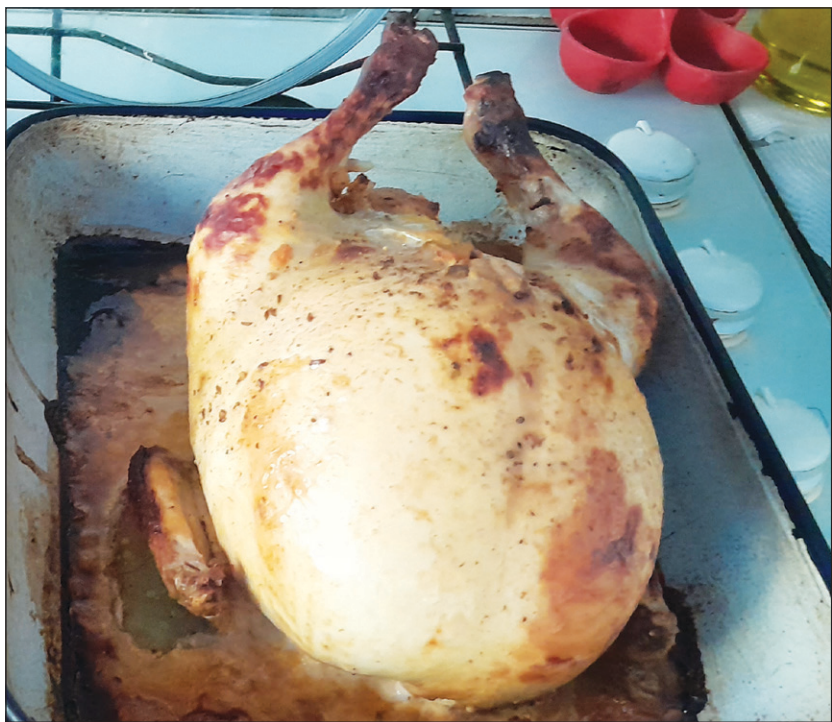
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Fast-growing meat chicken breeds currently dominating the Australian chicken meat industry can suffer lameness as they struggle to stay on their feet due to excessively quick weight gain.



Fast-growing meat chicken breeds go big and go big quickly. Slower-growing breeds need to be more widely adopted to give meat chickens higher welfare lives.

# Meat chickens deserve better lives

**BETTER** Chicken Australia is all about making life better for Australian chickens.

On its website, it states:

*A staggering 700 million chickens are raised and slaughtered in Australia every year for their meat.*

*Yet current industry and certification standards lag well behind the rest of the world.*

*That's why we've come together to campaign for change.*

*Australians expect animals to be farmed*

## Cant Comment

by BRENDON CANT



to high animal welfare standards.

*It's time for the chicken industry to step up and meet those standards.*

Effectively BCA is the Down Under operation of the Better Chicken Commitment, which is a commitment for businesses to introduce higher welfare standards for all chickens in their supply chain.

It sets targets for the most important welfare issues for chickens raised for meat.

BCC calls for:

- Higher welfare slower growing chicken breeds
  - Comfortable healthy living conditions where each chicken has enough space, light and clean air
  - Slaughter methods that are more humane, with effective stunning and no live shackling.
- BCC provides a way for food businesses to demonstrate their

commitment to higher welfare standards for chickens raised for meat.

In BCA's latest email to interested parties – and I happily reveal myself as one – they broke some fascinating news to me on the global animal welfare front.

It explained what the Welfare Footprint Institute (formerly the Welfare Footprint Project) was all about, and here it is... an international research organisation focused on measuring animal welfare, which brings together experts from multiple disciplines to do research that informs decision-making about animal welfare, whether it be for policy, investment or industry practice.

The WFI website elaborates as follows:

*Moral concern for the welfare of animals used in different industries, particularly the food sector, is rapidly growing.*

*However, information on the ethical 'footprint' of a product, policy or practice, defined by the cumulative load of negative and positive experiences typically endured in a scenario of interest, is not easily available to consumers, producers, policymakers, investors, advocates and funders.*

WFI's mission is to fulfill this gap, seeking to quantify welfare impacts in a way that enables comparison across living conditions, policies, practices and species, along with the assessment of the most effective courses of action to improve their well-being.

Ultimately WFI is committed to advancing the scientific quantification and assessment of animal welfare to drive improvements in policy, practice and ethical decision-making.

For those who enjoy crunching numbers, BCA suggests taking a look at a landmark research project by WFI which investigated the suffering experienced by different commercial breeds of chickens used in the meat industry, specifically comparing conventional fast-growing breeds to slower-growing Better Chicken Commitment

compliant breeds.

The project's key finding was that adopting the BCC prevents a huge amount of suffering.

Crucially, the most and second-most severe categories of pain were cut by 80 percent and 65 percent respectively.

However, this only happened when the breed of chicken was switched to a higher welfare breed.

Just improving living conditions without any breed change had little impact on suffering.

The study measured:

- Lameness
  - Cardiovascular problems (e.g. heart attacks and ascites)
  - Thermal stress (i.e. overheating)
  - Frustration (from sensory and behavioural deprivation)
  - Chronic hunger
  - Welfare harms during stunning and slaughter.
- The study did not include the following, which are known to have higher incidence in fast growing birds:
- Infectious diseases
  - Inflammatory conditions
  - Contact dermatitis
  - Muscle abnormalities.

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# Interview with Dr Juliet 'Julie' Roberts

DOCTOR Juliet 'Julie' Roberts is a distinguished figure in the Australian poultry industry, renowned for her extensive contributions to poultry science, particularly in egg production and factors affecting egg quality.

She has been instrumental in advancing practices related to poultry health, welfare and sustainable production.

## Academic background and career

Dr Roberts holds a Bachelor of Science (Honours) from James Cook University and a PhD in avian physiology from Flinders University.

She furthered her research through post-doctoral fellowships at the University of British Columbia in Canada and the University of Arizona in the US.

In 1986, she joined the University of New England in Armidale, where she served until her retirement in 2018.

During her tenure at UNE, she taught physiology and poultry science, supervised post-graduate students and coordinated courses in rural science, agriculture, animal science and agrifood systems.

## Research contributions

Dr Roberts is internationally recognised for her research on egg production, with a focus on eggshell quality and internal egg characteristics.

Her work has significantly advanced the understanding of factors affecting eggshell integrity, including nutrition, disease and management practices.

Notably, she led research investigating how minor defects in eggshell ultrastructure, such as translucency, can influence the penetration of bacteria that cause food-borne illnesses.

## Leadership and recognition

Beyond academia, Dr Roberts has played a pivotal role in industry organisations.

She has served as president of the Australian branch of the World's Poultry Science Association since 2009 and has been the editor of the Australian Poultry Science Symposium proceedings during multiple terms, including 2011-2013 and 2018-2023.

In recognition of her outstanding service, she received the Australian Poultry Award in 2006 and was honoured with a plaque in 2023, acknowledging her long-term contributions to poultry science and the industry.

Dr Roberts also served on the World's Poultry

Science Association international board for a total of 10 years.

Her commitment to education and training resulted in the development of specific units of study in poultry science at UNE and accepting a secondment to the first poultry cooperative research centre as education coordinator.

## Ongoing engagement

Even in retirement, Dr Roberts remains actively involved in the field.

She continued to co-supervise PhD students and mentor projects under the Australian Centre for International Agricultural Research in the initial stages of her retirement.

She also currently serves on the Industry Consultative Committee of Australian Eggs.

Her enduring commitment to education and research underscores her lasting impact on the poultry industry.

## History of Poultry Research Foundation

Dr Roberts involvement with the PRF – formerly the Poultry Husbandry Foundation – commenced shortly after her arrival at UNE.

The late Dr Jeff Fairbrother introduced her to the then director of the PHF, Professor Derek Balnave.

Following a seminar held in Sydney in 1988 on egg quality, Prof Balnave and Dr Roberts were invited to submit a grant application to investigate the mechanism of action of saline drinking water on shell quality.

Thus, it was Prof Balnave who introduced Dr Roberts to the study of eggshell quality, combining her expertise in renal function of avian species with his expertise in eggshell quality.

Later, both Dr Roberts and Prof Balnave collaborated with the late Professor Sally Solomon of the University of Glasgow Veterinary School in studying eggshell ultrastructure.

Dr Roberts' involvement with the PRF continued in her role as president of the Australian branch of WPSA, which included editing of proceedings and attendance at APSS meetings.

## Dr Roberts' advice

Dr Roberts' advice to young people who have recently entered or are about to enter the poultry industry is, "The poultry industry – whether it be as a researcher and teacher or an industry participant – is a great career for young people who are interested."

"Chicken meat and eggs are vital sources of affordable protein and their consumption

continues to grow.

"The poultry industry in Australia and internationally is like one big happy family," she said.

"When I attend either national or international meetings, I connect enthusiastically with people I have known for many years."

## Interesting changes faced by the industry

"The poultry industry continues to change and adapt based on a range of factors, such as technological developments and consumer demand," Dr Roberts said.

"The egg industry in Australia is undergoing significant change as the demand for free range and other cage-free production systems

replaces the demand for cage production.

"Advances in molecular biology are driving change in many areas, including disease management and prevention and genetic selection."

## Acknowledgements

"I would like to take this opportunity to acknowledge with gratitude people who have helped and encouraged me throughout my career in poultry science," Dr Roberts said.

"I have already mentioned the late Dr Fairbrother, Professor Balnave and the late Professor Sally Solomon – Dr Bob Pym and Professor Dave Farrell have been important mentors providing encouragement and guidance."

"I would also like to acknowledge the many people in the industry who have assisted the studies of myself and my research students."

"These include Bede and Narelle Burke who have tolerated many studies being conducted in their poultry facility."

"Other producers who have contributed include the late Ivy Inwood and her family, as well as the Moncrieff and Holland families, to name just a few."

"People in the industry have been generous in sharing their experience and providing education to researchers and research students."

**Christine Clark**  
Poultry Research Foundation



Dr Juliet 'Julie' Roberts

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A white crested black Polish cock.



A white crested black Polish bantam hen.



A white crested blue Polish bantam hen.



A white Polish bantam cock.

# Prestigious Polish

QUITE often, the name of a breed of fowls comes from either the country or area of its origin.

Thus, the Orpington is named after the town of Orpington in Kent, England.

The Sussex is named after the English county of the same name.

The Rhode Island Red is named after the US state where it was developed.

And so on. It would therefore easily be assumed that a breed of fowl named the Polish would have had its origin in Poland.

However, such an assumption would almost certainly be wrong.

Over the course of history, several types of domestic poultry have been given English names based on where people thought they originated or after the port from which they were imported into England.

The former is the case with the domestic turkey, which certainly did not originate in the country that was known as Turkey.


While the latter is the case with the breed of fowl known as the Hamburgh, some varieties of which it is claimed were imported into England from the German port of Hamburg.

So, how did the Polish chicken come to get its name when it originated neither in Poland nor was imported into the English-speaking world from Poland?

Those who are familiar with the Polish breed will be aware that one of its most outstanding features is a large crest of feath-

## Rare Breeds

by GRANT ANDREWS



ers adorning the top of its head.

This crest grows from a rather large protuberance of the skull, which has the alternative name of a 'poll'.

Many writers in the past have hypothesised that this is where the breed's name originates.

Nevertheless, in the United Kingdom, the breed is still usually referred to as the 'Poland', which further adds to the confusion with the name.

The Polish is a very old breed and one that is purely ornamental in purpose.

Though the hens do lay a reasonable number of white eggs, their existence has never depended upon them having any utility purpose.

The breed has three sub-families that are recognised in the Australian standards.

The most popular varieties in Australia are white-crested – blacks, blues, cuckoos and splash.

This sub-family is thought to have possibly originated in the Netherlands and is known in German as the Holländer Haubenhuhn (Dutch Crested Fowl).

The white-crested varieties all sport a well-developed crest but lack the beard and

muffling that occur in the other sub-families.

Another sub-family consists of birds that have laced plumage – silver-laced, gold-laced and buff-laced (also known as cham- ois).

The standard requires that as well as the obligatory crest, these varieties must have a beard and muffling.

These aren't seen as frequently as the white-crested varieties and most still need considerable work to achieve anything close to perfection.

The third group consists of birds that are self-coloured – mainly seen in self-white but also standardised in black, cuckoo, splash, lavender and buff.

This group may be exhibited either with beard and muffling or without.

To add to the variety of this breed, all colours and types can be shown with frizzled feathers in addition to the normal straight feathered form.

Additional to large fowl, the Polish is also bred and exhibited in a miniature or bantam form.

Quite often the standard of the bantam version is much better than that of the large fowl, especially in the laced varieties.

One problem that be-

sets numerous fanciers of the Polish is that many of the large fowl are too small and a considerable quantity of the bantams are too big, which means that birds of an intermediate size are often encountered.

A relatively small number of fanciers specialise in this breed and make the necessary effort to breed birds of an appropriate size.

As a breed whose main attraction is a large crest, this presents fanciers with several problems.

Keeping the crest clean and undamaged is no easy task.

Waterers usually have to be modified in some way to stop the birds from getting their crest wet, while clean indoor housing also assists in preventing the crest becoming fouled with dirt and mud.

Some birds have crests that are so well developed that they have difficulty in seeing their feed, as well as having difficulty in seeing to mate.

Some breeders overcome this problem by tying the crest up or by clipping the crest feathers.

The latter, of course, renders the bird useless for exhibition purposes – at least until after it has moulted and grown a new crest.

Notwithstanding the above-mentioned problems, the Polish is still shown to a very high standard on occasions.

Though it is usually only the specialist breeder, who has put in the extra time and care that this breed demands, that is able to take top honours.

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# Aussie Pumps free safety training program

AUSSIE Pumps is well known for supplying a wide range of products to the poultry industry.

Aussie builds top-quality heavy-duty trash pumps, stainless-steel process pumps and the world's best range of high-pressure water blasters and jetters.

Every poultry farm needs a supply of clean water for the birds and adequate sanitation for a healthy environment.

Aussie Pumps chief engineer John Hales said, "Although our trash pumps are featured in doing everything from pumping liquid waste and the aeration of wastewater, one product that's really starring is our range of jetters."

The Aussie Jetter range consists of machines that are capable of clearing blocked drains fast, but also doubles as a very effective 5000PSI pressure cleaner.

Powered by our Honda GX630 23hp twin-cylinder electric-start petrol engine, the Aussie Jetter range is backed up by Aussie's free Safe Jetter training program.

Already embraced by leading piggeries, the Safe Operator Training program applies to operators of all brands of pressure cleaners.

## Aussie Pumps

It has been adopted not only in Australia for applications from earth-moving contractors to local government bodies, but it is also becoming popular in overseas markets as far afield as Mongolia and the US.

"The training program is based on the Australian Standards Association, standard AS/NZS 4233.1:1:2013," Mr Hales said.

It focuses on Class A machines, which are those with a maximum pressure flow combination of 5600 bar litres, that is 5000PSI 16LPM.

For machines with bigger pressure flow combos, the ASA requires that the operators have certification from a registered training organisation.

The requirements from the standards are extremely stringent.

It should also be noted for poultry farm operators that the requirements of the new pressure cleaner safety standards is a mandated rule and not optional.

"We are very pleased when we see piggeries

having all of their operational staff trained in the safety training program," Mr Hales said.

"Aussie gets a lot of satisfaction seeing those certificates going out, knowing we've done our bit to keep people safe."

Aussie Pumps is also famous for its Yanmar diesel powered and Honda petrol portable trash pumps.

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The 4" Honda petrol-engine drive with electric start will move up to 1800 litres of wastewater per minute.

"It's all part of the package we put together for the industry," Mr Hales said.

Aussie Pumps is pleased to see requests from major livestock producers for its operator manuals and training program links.

It shows poultry professionals understand the need to keep their workers safe.

Further information is available from [aussiepumps.com.au](http://aussiepumps.com.au)



Aussie Pumps chief engineer John Hales.



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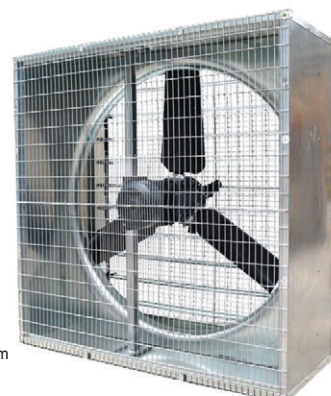
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South Australian finalist Eddie Lock from Naracoorte.



Victorian finalist Josh Hancock from Merbein.



NSW finalist Bryson Lee from Maclean.



Western Australian finalist Thomas Spencer from Muchea.

## Australia's top young poultry judges

THE best young poultry judges in Australia have been announced by Agricultural Shows Australia and will compete in the prestigious national finals this September.

Four young poultry judges will represent Western Australia, South Australia, NSW and Victoria.

The 2025 National Championships is being hosted by the SA Country Shows at the Royal Adelaide Show from September 1-6, 2025, and includes young judges (beef and dairy cattle, grain, Merino sheep and fleece, meat breeds sheep and poultry), paraders (beef and dairy cattle), Australian Young Farmers Challenge and the National Rural Ambassador Award.

The National Championships bring together the best of the best in rural talent, community spirit, and industry excellence with young judges and paraders aged from 15 to 25 gathering to compete in the annual competition.

Qualification is via success in competitive regional and state competitions and national championships held in a different location each year.

The prestigious competitions highlight the reach and rewards of agricultural shows,

from connecting communities to driving growth and celebrating success.

Meet the four finalists in the Poultry Young Judges final.

**Thomas Spencer, 23, Muchea WA**

Thomas has been hooked on the show ring for 16 years, showing poultry and stud cattle at the Perth Royal Show and elsewhere.

Running a Hereford stud and working with Nutrien Livestock in Goomalling, he loves the mix of competition, camaraderie and the chance to test his skills.

"My grandmother Maureen was born into a show family," Thomas said.

"She was showing horses over 80 years ago at the Perth Royal Show and other agricultural shows like the Moora Show, so I was lucky that this was a passion she shared with me.

"It helped make my passion for poultry and stud cattle a reality.

"I've attended the Moora Show every year since she encouraged me to attend 16 years ago."

**Eddie Lock, 17, Naracoorte SA**

Year 12 student Eddie Lock is no stranger to the show ring – he has stewarded at the Royal

Adelaide Show in the pigeon section, been a convenor at Naracoorte Show for poultry and pigeon competitions and is a long-time competitor at Naracoorte Show.

"I started competing in the judging competition three years ago because I loved showing chooks and was keen to practice and improve my judging skills," Eddie said.

"My proudest moment was winning Champion Junior Poultry at Royal Adelaide Show in 2022."

**Josh Hancock, 20, Merbein Victoria**

Josh Hancock's family has been involved in agricultural shows for four generations.

During the week, he works in shed construction but on the weekend, he shows under the name 'Ducknuts Waterfowl' and is a provisional judge on the Victorian Poultry Judges list.

Josh's show highlight is winning Champion Bird of Show at the Adelaide Royal in 2018, but said the Mildura Show holds a special place in his heart thanks to its significance for his family over so many generations.

"I started competing in the Young Judges in 2023, when I was asked by several highly respected people in the Victorian poultry world

to have a go because they said I would gain a lot from the experience," Josh said.

"Having showed birds for most of my life it was the next step.

"From this, I have now done my judging assessment for waterfowl and gained confidence in public speaking."

**Bryson Lee, 17, Maclean NSW**

Bryson is a Year 11 student from Maclean High School, with a love for agriculture shaped by life on his family's beef cattle property.

From a young age he has been involved in showing poultry, riding horses and competing in cattle events.

A junior member of the Maclean Show Society and part of his school's successful cattle show team, Bryson has made his mark across local shows, especially in poultry judging.

He won junior judging at the North Coast National for two years running and was recently crowned Champion Junior Poultry Judge at the Sydney Royal.

"I am the fourth generation involved in showing poultry in my family," Bryson said.

"My great grandfather, my grandfather and my father have all successfully shown

and judged poultry their whole lives.

"My grandfather Peter Lee and my father Ashley Lee have both mentored me with my breeding and judging, and there are also many other poultry breeders that have helped me along the way."

Chair of Agricultural Shows Australia – the peak body representing 572 agricultural shows that attract six million visitors annually and contribute nearly \$1 billion to the national economy – Jacqueline Wilson-Smith describes the competition as a celebration of emerging talent in livestock judging across the country.

"This is an incredibly prestigious event, and earning a spot in the nationals is highly sought after," Ms Wilson-Smith said.

"These young competitors represent the future of agricultural show competitions, which play a vital role in advancing Australia's food and fibre industries.

"The Nationals offer an exciting chance for participants to grow both personally and professionally while testing their skills against the very best."

The Poultry Young Judges final will be held at 2pm on Tuesday, September 2.



# Applications open for 2025 Safety Smart Broiler Chicken Farming Award

THE Australian chicken meat industry is once again celebrating excellence in workplace safety with the annual launch of the 2025 Safety Smart Broiler Chicken Farming Award.

This industry-specific award recognises outstanding safety initiatives across broiler farming businesses and their service providers.

Last year's inaugural award recipient, Tyson Cawood of TaskTrans, set a high standard for safety leadership within the broiler chicken industry.

His business was recognised for implementing innovative technologies to enhance pedestrian and loading safety during farm pick-ups.

They also adopted the Dashpivot digital platform to streamline on-farm safety reporting and documentation, showcasing to the wider sector how simple integrations can deliver meaningful improvements in workplace safety.

TaskTrans used the award's \$5000 prize money to up-skill their workplace health and safety advisor to support fu-

ture safety outcomes. This initiative highlights the long-term value of the award as both a recognition and catalyst for continuous investment and improvement in farm safety.

Sponsored by Pro-Ten and delivered in partnership with Australian Chicken Growers Council, the Safety Smart Award showcases our sector's strong commitment to health, wellbeing and workforce development.

It aligns directly with the chicken meat industry's Workforce Strategy's health and wellbeing stream, which is exploring new ways to build


balanced, resilient and safety-conscious workplaces across the broiler farming supply chain.

We are proud to be part of this initiative and encourage all eligible businesses to apply.

Whether you're a broiler farm operator or a service provider, this is your opportunity to showcase your safety leadership and contribute to a safer stronger industry.

Visit [www.chicken.org.au/awards](http://www.chicken.org.au/awards) for more details.

Applications close Monday September 22, 2025.

Scan the QR code to apply. 

Are you a broiler farming business with a dedication to safety?

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\$5,000 cash prize up for grabs!





A FlockSafe workshop held in Queensland recently.

## Free poultry biosecurity management planning training with FlockSafe workshops

THE FlockSafe Poultry Biosecurity Management Planning Training program, developed by Mintrac and co-delivered with Avian Management Services, is gaining strong momentum across the poultry industry.

Launched in Queensland on July 29, the workshop has already received praise for its high-quality content, practical insights and

the opportunity for participants to walk away with a fully developed biosecurity management plan.

This free in-person training program is designed for commercial egg and broiler producers, mid-tier farms, processors and smallholders.

It's part of a national initiative to strengthen on-farm biosecurity preparedness in response to increasing disease risks, including re-

cent avian influenza outbreaks.

Covered in the one-day workshop:

- Module 1 – Introduction to biosecurity
  - Module 2 – Pathways for entry and managing risk
  - Module 3 – Key phases of biosecurity management
  - Module 4 – Biosecurity management planning
  - Module 5 – Real-world case studies.
- Whether you're building a new bi-

osecurity plan or reviewing an existing one, this workshop provides the tools and guidance to ensure your biosecurity practices are current, thorough and effective.

Workshops are now rolling out across states.

If you are interested in participating, visit [mintrac.com.au](http://mintrac.com.au) or contact Mick Crouch at [mcrouch@mintrac.com.au](mailto:mcrouch@mintrac.com.au) for more information. 

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# Eggs and cholesterol

CHOLESTEROL is a waxy fat-like substance that is needed by the body to build cells and make hormones.

It comes from two sources.

First, it can be made in the body and second, it can come from the foods you eat.

Usually, when you eat foods containing dietary cholesterol, the body makes less to compensate.

It's this feedback mechanism that helps maintain a good balance of cholesterol in the body and the bloodstream.

Under certain conditions however, blood cholesterol levels can rise above normal levels.

If it's the 'bad' kind, it can build up in blood vessels and increase the risk of heart disease.

Eggs contain dietary cholesterol and this has led to confusion about their impact on heart health.

So, should you be worried about cholesterol when eating eggs?

The short answer is no.

In fact, the opposite could be true.

Recent Australian research has found the inclusion of two eggs a day as part of a healthy low-saturated fat diet significantly lowers levels of 'bad' LDL cholesterol in the body.

This type of eating pattern also lowers Apolipoprotein B levels, substances that are linked to an increased risk of cardiovascular disease.

Saturated fat on the other hand was found to have the opposite effect.

In addition to this research, the latest

Heart Foundation recommendations put no limit on how many eggs healthy people can eat each week.

The Heart Foundation states that eggs have a minimal effect on blood cholesterol levels and eggs are therefore encouraged as part of a heart-healthy eating pattern.

What is important is to be mindful of what you choose to eat with them.

As an example, eggs on wholegrain toast with spinach and tomato is a healthier choice compared to eggs on white bread served with bacon and sausages.

Commonwealth Scientific and Industrial Research Organisation research has also shown that eggs can be enjoyed on a daily basis.

The CSIRO conducted a range of research both in clinical trials and a survey of more than 84,000 Australians and found that those who ate more eggs had a better overall diet and better overall health.

While cholesterol is essential and performs important functions in

the body, when levels are too high this can lead to fatty deposits building up inside blood vessels, which eventually makes it difficult for blood to flow through and around the body.

These deposits can break off and form clots that may cause a heart attack or stroke.

There are many contributing factors to high cholesterol levels including genetics, being overweight and smoking, along with an unhealthy diet and a sedentary lifestyle.

When it comes to the foods you eat, the main culprits are eating too much saturated and trans fat and not enough fibre.

So, while you can't change your genetics, many people can lower their cholesterol levels by making healthier lifestyle choices, including eating a balanced diet and exercising regularly.

In the past, some dietary experts did recommend limiting dietary cholesterol and egg intake but this was based on studies with dietary cholesterol intakes well above

continued P13

The inclusion of two eggs a day as part of a healthy low saturated fat diet significantly lowers levels of 'bad' LDL cholesterol in the body. Photo: Laura Lauch

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Eggs contain approximately 398mg of cholesterol per serve (two 60g eggs), mostly in the egg yolk. While eggs are high in dietary cholesterol, they are relatively low in saturated fat – 3.4g per serve.



# Eggs and cholesterol

from P12

what is found in an egg.

As health and nutrition research has continued and our understanding of diet has improved, healthy eating guidelines now state that dietary cholesterol – and eggs – have a minimal impact on blood cholesterol levels in most people and that the main contributors are being overweight and eating too much saturated fat.

Eggs contain approximately 398mg of cholesterol per serve (two 60g eggs), mostly in the egg yolk.

While eggs are high in dietary cholesterol, they are relatively low in saturated fat – 3.4g per serve.

This is important as saturated fat has a significantly greater impact on blood cholesterol levels than dietary cholesterol intake.

Eggs also contain 17 different vitamins and nutrients including quality protein, antioxidants and healthy fats such as omega-3s, making them a valuable inclusion in a balanced diet.

While eggs do contain high levels of dietary cholesterol, multiple studies have shown they have little to no impact on blood cholesterol levels, especially when enjoyed as part of a healthy diet.

Current evidence indicates there is no link between the number of eggs eaten and the risk of coronary heart disease.

The Heart Foundation states eggs have a neutral relationship with heart health, meaning they neither increase nor decrease the risk of heart disease in the general population.

Given eggs have a minimal impact on blood cholesterol and are not linked to heart disease risk in the general population, eggs can be enjoyed freely as part of a healthy diet.

The Heart Foundation places no limit on egg intake for healthy adults.

For individuals with an increased risk of heart disease, such as those with diabetes or existing high cholesterol levels, the Heart Foundation suggests enjoying up to seven eggs per week while research continues to better understand this population group.

**The healthiest way to eat eggs**

Saturated fat has a greater impact on

blood cholesterol levels than dietary cholesterol and that means what you eat with your eggs is important.

The best way to enjoy eggs is as part of a varied diet and in combination with foods that are good for the heart such as fish, fruit, vegetables, whole grains, nuts and legumes.

Rather than worrying about how many eggs you are eating, focus on eating a diet that's centred around variety and balance.

It's also important to reduce the intake of processed foods that are typically high in salt, sugar and saturated fat and often low in fibre.

The healthiest way to cook eggs is to boil, poach or scramble them without using butter or adding salt.

Instead of bacon and lots of sauce, eat them with vegetables such as spinach, capsicum, mushrooms, tomatoes or with avocado.

Add extra flavour to your eggs by adding herbs and spices and enjoy them with wholegrain bread.

Eggs have a range of health benefits and, when combined with other healthy foods, they're easy to make delicious nutritious heart-healthy meals that the whole family will love.

**A heart-healthy diet**

Remember that cholesterol levels are only one aspect of heart health and no one nutrient or food is going to be the silver bullet to give you a healthy heart.

It's your eating habits over the long term that make the biggest difference.

With this in mind, the Heart Foundation recommends a dietary pattern that is similar to the Mediterranean diet, which includes:

- Plenty of vegetables, fruits and wholegrains
- A variety of healthy protein sources including fish and legumes, eggs and lean poultry
- Unflavoured milk, yoghurt and cheese
- Healthy fats such as nuts, seeds, avocados, olives and their oil for cooking
- Herbs and spices to flavour foods instead of adding salt.

When it comes to cholesterol levels, it is important to remember we are individuals.

Some adults are more sensitive than others to rises in blood cholesterol levels after consuming dietary cholesterol.

For individual advice

on diet, cholesterol and heart health speak to a general practitioner or an accredited practising dietitian.

There are many misconceptions around eggs and whether they should be eaten in certain situations.

To help cut through



Scan for a seven-day Mediterranean meal plan developed by an accredited practising dietitian.

the clutter, Australian Eggs provides information on all aspects of egg nutrition.

Find out about the vitamins and nutrients in eggs and why they're considered one of nature's powerhouse foods at [www.australianeggs.org.au](http://www.australianeggs.org.au)



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Saturated fat has a greater impact on blood cholesterol levels than dietary cholesterol and that means what you eat with your eggs is important.

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Luke.Chrzanowski@ajg.com.au  
D + 61 (0)3 9823 3768  
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Managing Director

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M +61 417 930 536  
E brendon@iinet.net.au

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Sales Manager - Monogastric & Milling  
Greg.Heeney@kemin.com  
Mobile: +61 456 294 643

**Dr. David Isaac**  
Technical Sales Manager (ANZ)  
David.Isaac@kemin.com  
Mobile: +61 455 039 478

**Trina Parker**  
Country President (ANZ)  
Trina.Parker@kemin.com  
Mobile: +64 274 872 524



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30 Bothistle Road,  
Gunnedah NSW 2380  
1300 764 700  
sales@hesilos.com.au

**Craig McCann**  
NATIONAL KEY RELATIONSHIP  
MANAGER

+61 488 025 555  
c.mccann@becfeed.com.au  
becfeed.com.au

CUSTOMER SERVICE  
1300 884 593



**Ashley McAllister**  
PRODUCT MANAGER - MONOGASTRIC

+61 439 605 339  
a.mcallister@becfeed.com.au  
becfeed.com.au

CUSTOMER SERVICE  
1300 884 593



**Ben Collins**  
Managing Editor  
BBus DipBusMan GradDipEd

Mobile: 0439 708 602  
Email: ben@collins.media

PO Box 162 Wynnum Q 4178 | Unit 14, 51 Industry Pl, Wynnum Q 4178

www.poultrynews.com.au

**Natalie Schwerin**  
M.ScAg AARNe  
AUSTRALIAN TECHNICAL  
& SALES MANAGER

+61 439 862 788  
+61 7 3723 9856  
n.schwerin@becfeed.com.au  
becfeed.com.au



**Tony Lawlis**  
SENIOR TRADER, SALES  
AND BUSINESS DEVELOPMENT

+61 487 442 003  
t.lawlis@becfeed.com.au  
becfeed.com.au







Boggabri's Carrigan family took part in last year's Carinata trial. They said it was a positive experience.



Carinata changing biofuels industry. Photos: Nufarm

# Aussie crop's potential future of fuel

PLANES departing from Australian soil could soon be powered by plants grown in the very same earth.

A relatively new plant to Australia called carinata is changing the biofuels industry, and trials are happening now west of the Great Dividing Range.

Cotton growers have been giving it a go as a rotation crop and the results are looking golden so far.

Carinata oil when refined is considered a 'drop-in' replacement for existing fossil fuels – the biofuel can be used without updating or retrofitting current machines, and blends with existing fossil fuels.

## Queensland Government's definition of biofuels

Biofuels – replacement fossil fuels, usually bioethanol, biodiesel, renewable diesel and sustainable aviation fuels, made out of sustainable biogenic resources.

Everything from

wood offcuts to agricultural by-products, used cooking oil or beef tallow and even algae can be turned into biofuels.

## Cream of the crop

Carinata looks similar to canola, with bright yellow flowers on towering green stems.

It is grown in winter and suits drier soil types.

It boasts lower water needs than canola due to a longer rootstock.

The crop is being pitched as an emerging option for broadacre farmers over winter.

Having a 'cover crop' is being adopted by many growers looking to reduce topsoil losses, in between their traditional cropping seasons.

The oil from the brassica family plant is classed as non-food – unlike canola, it can't be consumed by humans.

## Harvest and crushing

Currently, once matured and harvested,

carinata is shipped to Europe for processing.

There are no operational processing facilities in Australia as yet.

The grain is processed into two products – biofuel and high-protein plant feed for stock.

Biofuel use has already been written into the European Union's aviation fuel regulations and Asia has indicated it will follow.

In Australia, Qantas has committed to using 10 percent sustainable aviation fuel in its overall fuel mix by 2030.

BP's definition of sustainable aviation fuel – produced from sustainable feedstocks and is very similar in its chemistry to traditional fossil jet fuel.

The aviation industry has shown serious interest in carinata-derived biofuel.

## Plant power

The plant's pre-commercial trials in Australia are being overseen by Nufarm.

Nufarm global gen-

eral manager for seeds Rachel Palumbo is hopeful Australia could become a world leader.

"Australia has the land, resources and expertise to lead in renewable fuels, sustainable agriculture and homegrown manufacturing," Ms Palumbo said.

"In South America, farmers already produce low-carbon fuel at scale.

"With the right support Australian growers can do the same.

"Growers benefit from having a profitable break crop that improves soil health."

## Government support needed

Earlier this year, the Australian Government announced it would invest \$250 million into low-carbon liquid fuels.

"This funding will drive innovation and open new opportunities for farmers to supply feedstocks such as carinata," Ms Palumbo said.

The Queensland Government has also shown interest in the blooming industry, recently commissioning Deloitte to review global SAF markets.

The 2024 report found that Australia's SAF industry was still in its infancy, and this was unlikely to change on the scale needed to support decarbonisation without government intervention and a proactive industry.

Ms Palumbo also pointed to government-driven SAF mandates as a crucial step to fostering a local biofuels industry.

"We need a clear policy framework so Australian-grown biofuels can support local industries, just as Australian-grown canola already does for European biofuels," she said.

"This is a proven, sustainable and scalable option for securing our fuel future while supporting growers and cutting emissions."

**Australian Farmers**



Carinata seeds.



Carinata in flower.



Carinata is similar to canola but has lower water needs.

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0437 408 961

Unit 2, 84-92 Barnes St  
Tamworth NSW 2340

**Ben Collins**  
Managing Editor  
BBus DipBusMan GradDipEd

Mobile: 0439 708 602  
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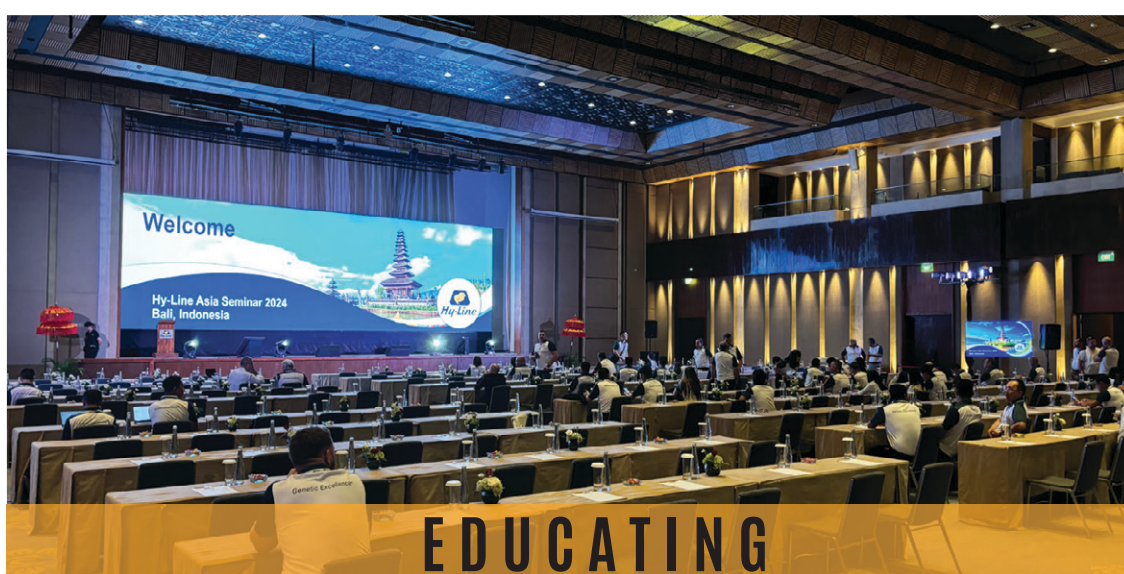
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