

Vol 6, No. 11 November 2023 National Poultry Newspaper PO Box 162 Wynnum 4178 Phone (07) 3286 1833 Email ben@collins.media

It was great to see

you all and I thank

you for making this

year's event a roaring

The conference be-

gan with an update

from me and the

launch of a series of

new training courses

from our wonder-

ful education officer

This was followed up

by industry, with talks

from the chicken meat,

egg and duck sectors -

we also had an update

on the current state of

Following a short

break, we kicked off

the panel session that

was focused on sus-

tainability through a

troduce the topic and their perspectives, followed by a questionand-answer session with the audience.

It was an eye-open-

circular economy. The panel consisted of four speakers - Gal Winter, Chris Freney, Richard Eckard and Bede Burke - with diverse backgrounds, who were able to in-

avian influenza.

Carissa Anderson.

success.



Hens enjoyed a meal consisting of black soldier fly larvae. Photo: Anthony Cullen

New insect industry plans

WITH the global insect market expected to be worth more than \$A10.72 billion by 2032, AgriFutures Australia has released a new five-year plan to accelerate the growth of the emerging Australian industry.

The Australian Insect Industry RD&E Plan 2023-2028 will help Australia position itself to capitalise on this incredible commercial opportunity for a sustainable long-term future.

Insects such as black soldier fly larvae, mealworms and crickets are a highly efficient and sustainable alternative to traditional protein sources for human food and animal feed and are also an excellent organic fertiliser.

Increased investment

in the Australian insect included stakeholders industry over the past decade has been underpinned by its potential to address several global challenges, including food waste, climate volatility and the growing population's increasing

demand for protein. Building on an initial research, development and extension plan published in 2020, the Australian Insect Industry RD&E Plan 2023-2028 identifies five focus themes to address key barriers to scale and improve the Australian industry's competitive

advantage. The plan – produced as part of AgriFutures' Emerging Industries Program – was developed in close consultation with the Insect Protein Association of Australia and

such as insect producers, manufacturers, downstream customers, waste management companies, fertiliser businesses and researchers. IPAA chair Duncan

Rowland said one of the key priorities of the plan was to establish best practice guidelines and standards to shore up the credibility and quality of the industry. "We've also got to

be able to enhance, strengthen and grow the industry's capacity and capabilities," Mr Rowland said.

"Australia is about 10 years behind what is happening in the European Union and North American insect industries but by addressing the priorities identified continued P2



Director

forward to hearing and discussing more opportunities in this space.

The conference dinner was a great opportunity to relax a little more and catch up with colleagues, as well as to also meet some new people. The room was abuzz

smiles.

I certainly enjoyed the dinner, with great discussions had over a beautiful meal and a good South Australian beverage. Day two was filled

with conversations and

with research reports and lightning presentations from students. And it was fantastic

to hear the science updates from our opencall research projects. The researchers

highlighted the importance and impact that science can have in our industry.

It was also evident that the inclusion of an industry partner at the inception of every project is certainly ensuring that they stay on track and have relevance in the industry. The 2023 event saw some quick-fire presentations from the post grad students.

This was an opportunity to highlight their projects and introduce them to the wider continued P2

Sustainability through a circular economy panel discussion. Tamsyn Crowley, Bede Burke, Richard Eckard, Gal Winter, Chris Freney and participants from the conference.



Participants at this year's Ideas Exchange.



The global insect market is expected to be worth more than \$A10.72

by TAMSYN CROWLEY The conference was held in Adelaide on October 17 and 18 on the edge of the central

ing session and I look business district, near the glorious parklands that surround the city.



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This is an open forum where you can cover any topic, whether for or against an issue.

Please send your letters to: editorial@collins.media or PO Box 162, Wynnum Qld 4178





Poultry Industry Calendar of Events

2023

NOV 6-8 - Poultry Tech Summit 2023, Georgia USA, www.wattglobalmedia.com/ poultrytechsummit/

6-8 – Avicola and Porcinos NOV 2023. Buenos Aires Argentina, www.avicola.com.ar/en/

NOV 23-25 - Poultry India 2023, Hyderabad India, www.poultryindia.com.in

2024

JAN 31 - FEB 4 - International Production and Processing Expo (IPPE) 2024, Georgia USA, www.ippexpo.org

FEB 6-8 - Australian Poultry Science Symposium, Sydney Australia, www. apss2024.com.au

MAR 12-14 - World Agri-Tech Innovation Summit, San Francisco USA, www. worldagritechusa.com/

MAR 12-14 - Meat Pro Asia, Bangkok Thailand, www.meatpro-asia.com

JUN 24-28 - XVIth European Poultry Conference, Valencia Spain, epc2024.com

OCT 28-29 - International Conference on Poultry Science, Lisbon Portugal, waset. org/poultry-science-conference-in-october-2024-in-lisbon

Baiada Poultry cracks on to automation

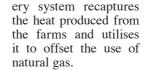
LEADING egg and poultry meat producer Baiada Poultry is going automated as it increases its presence in the Riverina region of NSW.

The company, which includes the well-known Lilydale Free Range and Steggles brands, is set to grow with the construction of two fully automated new breeding farms in the region, to be commissioned in early 2024.

Baiada took to social media and said the development of the farms was a strategic move that aligns with its vision for growth and sus-

tainability. "The new farms will not only contribute to the region's economy but also meet the increasing demands for high-quality produce," the post stated. "These farms are de-

signed with a view to focus on continuous improvement when it comes to automation and animal welfare by utilising state of the art ventilation technology whereby the heat recov-



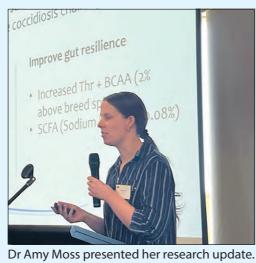
"Furthermore, the heat recovery system significantly improves litter condition and air quality within the sheds, improving the conditions for our livestock."

The company operates breeder farms including in the Riverina and Tamworth regions of NSW, the Barossa region in South Australia, southeast Queensland, and northeast and south of Perth.

To ensure overall welfare and the performance of the breeders, feeding, temperature. body weight control, ventilation, lighting and health are monitored closely from one day to 22 weeks of age.

Once the hens reach 22 weeks, the egg production phase begins, with eggs laid continually and collected either by hand or an automated collection system.

A focus on technology is possible across the Baiada business, which



2023 Ideas Exchange

from P1 industry – enabling them to broaden their networks and collaborations.

Finally, the conference finished with our 'Brains' Trust' session - a question-answer session where all participants were able to answer anonymously a set of pertinent questions for our industry.

was the top response. Some great conversations and ideations were able to take place at this year's conference and I was thankful for all the feedback on Poultry Hub Australia to date. These observations will be invaluable as we develop our new strategic plan for the next five years.

We have been run-If you didn't get a chance to provide ning the Brains' Irust session for a few years feedback, don't hesinow and it's very intate to contact us. I look forward to teresting to see how welcoming you to the responses have some new events as a either changed or reresult of these producmained the same over tive interactions. this time. For more informa-While in 2019, gettion, if you have anting people to work in the poultry industry other great idea for an was voted as the bigevent or simply want to have a chicken gest problem that our chat, contact poultry industry faces, this year sustainability hub@une.edu.au 🦻

is vertically integrated from start to finish including breeding and hatching chickens, producing feed, processing and supplying fresh poultry and value-added manufactured products.

According to the Baiada website, "Continuous improvement is at the forefront of our business, so we're always looking for new ways to ensure we're working in an ethical and responsible manner."

"By assessing all segments of the business harnessing the latest

technologies and equipment, we are able to maintain hygiene and quality assurance levels. "The work we do comprises microbiology, quality assurance, serology, virology, molecular biology, allergen testing and pathology."

Central to this approach is the company's Birling Avian Laboratory, which performs more than 250,000 tests annually across the value chain.

The lab's recent innovations include creating an autogenous

vaccine for salmonella, developing tests to detect viruses and methodologies to differentiate between viruses in poultry, developing tests for genetically-modified organisms and creating methods to screen out pathogens within 24 hours.

It also works with public sector researchers including the University of Sydney, the University of NSW, the University of Melbourne and the Elizabeth Macarthur Agricultural Institute. 📎



Baiada Poultry set to grow with the construction of two fully automated new breeding farms in the Riverina region underway to be commissioned in early 2024.

New plan guides insect industry

from P1

in the plan, we will be able to significantly close that gap.'

Other priority themes include efficiencies and optimisation for current systems, opening up new markets, products and use cases, market development, consumer education and social license to operate.

Mr Rowland said one of the greatest opportunities for the industry was in the replacement of protein meals in stockfeed.

"Australia imports about 55,000 tonnes of soybean meal every fortnight and we have a huge opportunity there to substitute that out for Australian-grown protein meal," Mr Rowland said.



EIT Hub is a partnership between AgriFutures, the Australian Centre for International Agricultural Research and International Centre of Insect Physiology and Ecology - an international scientific research institute based in Nairobi in Kenya - which will centralise knowledge and engagement around insect farming in Aus-

tralia and Africa. "The Australian Insect Industry RD&E Plan together with the African equivalent plan will play a vital role in guiding the direction of the EIT- Dr Revnolds said. "One of the initial

goals of the EIT-Hub is the creation of a gold standard manual for the production and processing of black soldier flies, which directly aligns with the first priority in the plan."

AgriFutures Australia has also recently announced it will invest \$2 million into the insect industry program of research over the next five vears.

Other insect projects recently funded by AgriFutures Australia include nutritional quality of edible insects and development of pet foods, small-scale drying methods for black soldier fly larvae and the soon-tobe completed nutritional qualities of black soldier fly larvae. 💱



NOV 12-15 - EuroTier 2024, Hanover Germany, www.eurotier.com

How to supply event details: Send all details to National Poultry Newspaper, PO Box 162, Wynnum Qld 4178, call 07 3286 1833 or email ads@collins.media

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The Australian Insect Industry RD&E Plan 2023-2028 identifies five focus themes to address key barriers to scale and improve the Australian industry's competitive advantage.

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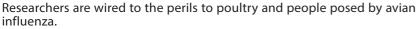
At SBA, quality is just part of our DNA.

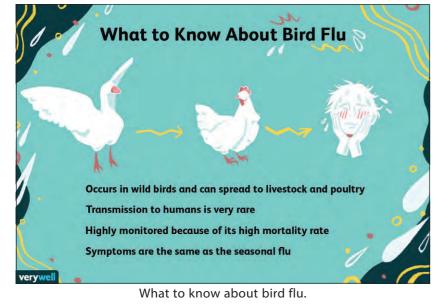


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Researchers will need all their ducks in a row to successfully combat bird flu.

Gene editing may correct bird flu

IN a recently published proof-of-concept study paper in Nature Communications, international researchers showed they could help stop chickens from being infected by bird flu using gene editing techniques.

These techniques allow the researchers to change the genetic code of certain genes that would normally allow the influenza A virus to infect the chickens.

Bird flu is a deadly respiratory disease that comes from the same family of viruses as influenza A and can infect chickens and sometimes humans.

influenza Avian is widely dispersed across Asia, Europe, Africa and the Americas, representing a threat to wild bird species, economic costs to farmers and risk to human health.

Poultry vaccination against avian influenza has not yet been reliable due to the rapid antigenic drift of field viruses and is controversial owing to political and economic implications.

In chickens, avian influenza relies on a host protein - ANP32A for its life cycle, which represents a potential target for creating virus-resistant birds.

team was able to edit the ANP32A gene in the chickens' germ cells - cells that are precursors of reproductive cells. By changing this gene, they found that the fully grown chickens were resistant to a low dose of the flu from other infected birds but not to a significantly higher dose. They also found that after two years, the gene-edited chickens did not show any adverse health or egglaying effects. Head of the Biosecurity Program at the

Kirby Institute at the University of NSW, Professor Raina Mac-Intyre - an expert in influenza and emerging infectious diseases – told an Australian Science Media Centre 'Expert Reaction' that by editing chicken's genes to be resistant to avian influenza viruses, it may be possible to reduce the chance of a bird flu pandemic occurring in humans. However, because the virus is also spread by wild waterfowl such as ducks and geese, it may not solve the issue

Cant

altogether. "These birds can spread avian influenza as they migrate across flyways between countries and continents, independent of farmed poultry", Prof MacIntyre said.

"So, engineering farmed chickens alone is not enough."

According to Prof MacIntyre, there are other benefits to producing chickens resistant to bird flu.

The virus slows Specifically, the down vaccine production for other viruses because it can infect the eggs, which are used in the production of vaccines. "During a newly emerged pandemic, having engineered eggs that are resistant to highly pathogenic avian influenza can be of great benefit for vaccine manufacturing," she said. Though this technique has shown promising results and has important implications for the future of human health and vaccine production, there



needs to be appropri-

ate oversight and reg-

ulation to control its

According to Associ-

ate Professor Karinne

Ludlow from Monash

University, Australia's

preparedness for de-

velopments in gene

editing in animals is

"Australian regula-

tory regimes have

been reviewed in re-

sponse to gene edit-

ing, but these focused

on plants and not ani-

Assoc Prof Ludlow

believes that while the

food safety and envi-

ronmental risks raised

by new genetic tech-

niques - such as gene

editing - are regulated

in Australia, responses

to other unique chal-

lenges raised by genet-

ically edited animals

have not yet been thor-

oughly addressed here.

Dimitri Perrin from

the Queensland Uni-

versity of Technol-

ogy outlined several

aspects of gene edit-

Associate Professor

mals," she said.

uncertain.

use.

ing that can make it a challenging process.

"For any edit, it is crucial to ensure there is no unintended modification elsewhere in the genome," Assoc Prof Perrin said.

"Methods exist to minimise this risk and to check whether any 'off-target' modifications occurred.

"This is an important part of this study."

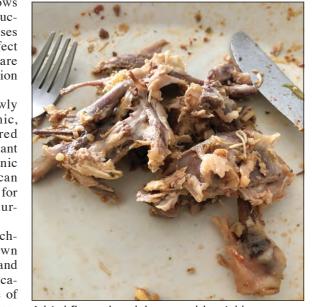
Assoc Prof Perrin added that the current study also considered the risk that editing the ANP32A gene could have other consequences for the chickens.

"Genes are typically involved in more than one biological function."

"One edit could produce the desired effect on one specific function but also a detrimental effect for another one," he said.

"In this study, it is encouraging that no differences in growth, external appearance, behaviour or vaccination response were found, even though further assessments are needed."

Note, I acknowledge Steven Mew of the Australian Science Media Centre for enlightening me about this potential bird flu breakthrough thanks to gene editing techniques. 📎



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A bird flu outbreak here could quickly serve up death to our chickens.

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Ipswich's Sunny Queen releases its first sustainability plan

AUSTRALIA'S favourite smiley-faced eggs and Ipswich business Sunny Queen Australia has launched its first sustainability strategic plan for a sunnier tomorrow.

The plan aligns with the United Nations Sustainable Development Goals and focuses on addressing the five goals of zero hunger, good health and wellbeing, decent work and economic growth, responsible consumption and production, and climate action offering a unifying vision for creating a more sustainable world.

Sunny Queen's commitment to addressing food insecurity has always been a priority for the business through its fiveyear partnership with hunger relief charity

Foodbank Queensland. By pledging to support Zero Hunger through its sustainability plan, Sunny Queen will continue tackling food poverty in Australia gifting 7200 eggs per week and providing yearly in-cash contributions to the charity. Since the inception of the partnership, Sunny Queen has donated more than 815,000 eggs and raised enough money to provide more than 334,000 meals to families in need.

Under the new plan, Sunny Queen aims to have 100 percent of all plastic reusable, recyclable or compostable by 2030, increase solar generation across all its sites and boost transport efficiency by maximising load capacity and route effectiveness to reduce fuel consumption and impact on the planet.

The plan also considers Sunny Queen's commitment to a range of internal and external people-led initiatives, including efforts to promote healthy eating, support of multiple community programs, developing its people and promoting a diverse and inclusive workplace.

Another major objective of the plan is reducing carbon dioxide emissions across Sunny Queen's major sites through increased use of renewable solar generation. Sunny Queen has installed 626 solar pan-

els at its Carole Park Head office, which has allowed the business to offset over 126.6 tonnes of CO2 annually. Additionally, to date,

88 percent of all packaging used at its Carole Park factory is ei-

Sunny Queen has partnered with Foodbank Queensland for five years.

ther reusable, recyclable or compostable.

Sunny Queen chief executive officer and managing director Julie Proctor said as a leader in the Australian egg industry, they are committed to working towards a brighter future with their 2023-2030 strategy.

"We are integrating sustainability initiatives into our day-today activities to reduce our impact on the planet, while continuing to provide healthy and nutritious food to millions of people every day," Ms Proctor said.



Sunny Queen has installed 626 solar panels at its Carole Park Head office to reduce carbon dioxide emissions.



Sunny Queen's strategic plan aligns with the United Nations Sustainable Development Goals, focusing on addressing five of the 17 goals.

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National Agriculture Day is Friday November 17.

How to celebrate Ag Day Australia

THE annual shout Register Ag Day out to farmers - National Agriculture Day – is almost here. National Farmers' Federation chief executive Tony Mahar

said this year's theme 'Grow You Good Thing', celebrating the incredible food and fibre farmers grow, could not come at a better time.

"We have an El Niño on our hands and some farmers are facing a very poor outlook for the season ahead," Mr Mahar said.

"That being said, Aussie farmers work hard to make sure the impact of dry times is barely felt at dinner tables.

"Our farmers are the best in the business.

"A huge amount of planning and careful management goes into making sure food and fibre still gets grown despite difficult times.'



New look merchandise for this year's theme 'Grow you good thing' available now.

events now

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People are encouraged to hold an event in their community or workplace to receive complimentary event kit – no event is

too big or too small. All you need to do is register your event, whether choosing you want to make it public or private, at agday.org.au - and make sure you tag us on social media on the day by using #Ag

DayAU. "It's always wonderful to see communities coming together on Ag Day to celebrate Aussie farming," Mr Mahar said. 'It doesn't matter where you live, that

tity as Australians."

Download the stake-

holder kit at farmer.

org.au so you can

access social media

connection to farming is such an imporcompetition tant part of our iden-

Syngenta.

that celebrates Aus-Entries close at 5pm

day November 17. 😓

Challenges coming for poultry industry

IN the October issue. I touched on the three key challenges identified as people, collaboration and communication, and elaborated on the number one challenge, that is people.

Here, I discuss the second challenge collaboration.

It is easy to label something 'collaboration' but the collaboration discussed at our Think Tank meeting was the type that is genuine and mature, focusing on 'give to get' and 'share to succeed' – the type where one plus one equals more than two.

The extra bits resulting from the collaboration benefit the entire network and they cannot be obtained without collaboration - it can be know-how that solves the issues of the day, it can be new ideas that lead to the next major scientific breakthrough or industry transformation.

Regrettably, we are seeing more barriers to collaboration than ever before.

First, people mistake information exchanges as collaboration.

If you ask anyone in the street about collaboration, they will say, "Yeah, the internet has made collaboration a lot easier."

Indeed, we are living in a most connected world, but many people are leading a lonely life.

Our lives are full of information, though not necessarily knowledge, as we spend more and more time on things that are outside

our work mandate.

We are so busy today that we do not even have time to ring a colleague because it is much easier to send a text, which controls the time we spend on it.

So, in-depth conversation over the phone is almost a thing of the past.

Then we send email messages to colleagues that often fall on deaf ears because most people do not have the attention span to read long-winded emails, which these days are only for information.

Second, the overobsession with intellectual property driven by risk-averse organisations and the 'my billion-dollar idea' mentality engraved in the brains of some mean that open and transparent dialogues among colleagues have become rare, let alone a spontaneous sharing of thoughts among colleagues.

Considering only a very small percentage of research outcomes (1-3 percent) in public sector organisations leads to commercialisation, it is astounding how much opportunity for collaboration is lost in the name of IP protection!

Third, in a post-COVID world, virtual meetings have become commonplace, and many bosses now think that these achieve the same thing as faceto-face meetings, and save time and money.

This, of course, is not entirely accurate virtual meetings miss many of the dimensions of human interaction.

Again, it is not easy to have spontaneous thought sharing, which leads to fruitful collaboration.

There are many other barriers such as costs of living pressure, physical isolation and infrastructure deficiencies.

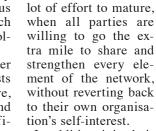
For the poultry industry, the sector and researchers need to talk in one voice to increase its visibility and to share ideas, facilities and expertise.

This is because due to our dwindling research workforce, no single institution has the full complement of expertise, facilities, financial prowess and advocacy capability to raise the profile of the industry and communicate the needs for research, development and education.

This is easier said than done as it requires skilful leaders who are open, inclusive, fair, honest, magnanimous

and humble. They should also be dedicated and wellrespected.

Genuine collabora-



tion takes time and a

In addition, it is obvious that the workforce required to run future agricultural operations will be very different to what it is today.

Training the future workforce to understand and prepare for what is coming, such as the impact and deployment proper of AI, will require a much broader collaboration network, spanning across different industries and fields.

Such a collaborative network will be able to leverage skills, expertise, people and funding not foreseeable in the poultry industry alone.

The effort required for such collaboration will be harder than a single industry-based collaboration. 🦻 **Mingan Choct**

University of Sydney



In the current work environment, it is not easy to have spontaneous thought sharing, which leads to fruitful collaboration. Photo: John Schnobrich



tiles, suggested posts and more. New look 'I Love Farmers' merchandise released

The NFF has given the iconic 'I Love Farmers' merchandise

a fresh new look. There's also plenty of merch in the store featuring this year's theme 'Grow you good thing'. For the first time, cat-

tle tags and bucket hats have been introduced to the range, which also includes t-shirts, trucker caps, stickers and tote bags.

Shop the range at agday.org.au and make sure you tag your selfies with #AgDayAU we can't wait to see everyone in their gear! Photo and video

Entries are now open

for the coveted photo and video competition, with a prize pool of \$5000 up for grabs thanks to sponsors

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An Australian egg production facility in NSW.



Every effort must be made to ensure biosecurity is strong within every section of the egg farm.

Why maintaining biosecurity measures on egg production farms is so vital

IN Australia's agricultural sector, we have all heard of the term 'biosecurity', though how many of us actually stop to think that we are all responsible for it?

According to the Commonwealth Scientific and Industrial Research Organisation, biosecurity protects our unique biodiversity, promotes food security and minimises the risk of transmission of infectious diseases.

The CSIRO stated, "Biosecurity is the way we stop the introduction and spread of harmful organisms such as viruses, bacteria, animals, plants, pathogens and in-



sects and how we manage the impacts."

In Australia, commercial egg production is no exception.

The underlying aim of biosecurity is to safeguard hen health, egg safety, farm sustainability, productivity and profitability.

Egg farmers do this



through on-farm risk assessment practices that allow them to identify and implement biosecurity control measures.

It is the responsibility of every person who enters or leaves an egg farm to uphold these biosecurity safeguards.

Such measures include: • Signing in when entering a farm, either electronically or by paper record, to advise that you have not been near other poultry, birds or pigs within 48 hours of arriving at the farm

• Declaring when signing in at the visitors' book that you have not been overseas for five days

• If suffering flu or gastro symptoms, you should not enter the premises

• If entering hen sheds, ensuring that personal protective equipment is worn and that your clothing is cleanly laundered, and also ensure your footwear has not been worn on another farm

• People entering a farm must use hand sanitiser and disinfect their shoes in footbaths to ensure that no organic matter is taken into a shed.

Considerations for the transmission of disease and pathogens must be taken into account and include the poultry, the farm's shed environment, other animals such as wild birds, waterfowl, insects, rodents, feral and domestic animals.

People, equipment, vehicles and air transmission must also be considered as avenues for possible transmission as well as external water supply, feed inputs, litter and waste.

Every effort must made to ensure biosecurity is strong within every section of the farm, so that inadvertent transmission between sections - housing, production, storage, grading and packaging - does not result in the quarantining of the farm. Egg farmers are ever vigilant that suppliers and contractors - including those who undertake repairs and maintenance - meet entry conditions and be approved by managers before entering sheds or ranges on

farm.

Movements of machinery is also an issue.

Wash down facilities must be used and many truck drivers have shoe covers to ensure they are not moving any disease from one property to another.

Should a biosecurity issue arise, the Emergency Animal Disease hotline is 1800 675 888.

Aussie egg farmers must also familiarise themselves with the Emergency Animal Disease Response Agreement – the deed used by government and industry should a notifiable disease impact a farm.

The National Farm Biosecurity Technical Manual for Egg Production recommends the following check list in advance of any biosecurity emergency:

• Always have an emergency kit with appropriate safety gear on-farm and ensure staff are trained in how to use it, this should include the provision and training in the use of well-fitting face masks and breathing equipment (minimum specification P2), goggles, gloves, hairnets and full-length coveralls • Have supplies on

farm of disinfectants for different purposes, for example disinfectant for footbaths, hand sanitiser, vehicle cabins

• Assign a designated wash-down area and facilities to clean vehicles and equipment at the entry point to the production area

• Sheds must be lockable

• Consideration should be given to where showering would occur for people entering and leaving the property note that under an EAD incident a chief veterinary officer has full responsibility and authority for the subsequent on-farm operations in regard to personnel and facility movements, depopulation and washdown, organisational matters and employment of resources and expenditure.

For further information, refer to the National

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¹Data on file, Study report No. 04–16–7ADMI

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Farm Biosecurity Technical Manual for Egg Production – farmbios ecurity.com.au/wp-con tent/uploads/2020/09/ National-Farm-Biosecu rity-Technical-Manualfor-Egg-Production_ September-2020.pdf and the Food Standards Australia New Zealand's Primary Production and Processing Standard for Egg and Egg Products - legislation.gov.au/ Details/F2018C00937 noting that the FSANZ document is currently being reviewed and updated. 🦻

www.poultrynews.com.au

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Aldi's doing things differently

PART of know- this is important to ing the RSPCA Approved story is learning more about the forward-thinking brands that have committed to sourcing higher welfare products.

When businesses make RSPCA Approducts proved available to consumers, this helps drive more demand for higher welfare options, which importantly results in more animals being raised where their behavioural and physical needs are met.

ALDI has been offering Australians a unique shopping experience for more than 20 years.

But did you know that ALDI Australia sees prioritising animal welfare as an important part of being a responsible business?

2020, ALDI In put RSPCA Approved chicken on its shelves, knowing that the RSPCA Approved logo is well recognised as an indicator that animals have been raised to better welfare standards and that

their customers. Research shows

that 73 percent of Australians believe animal welfare is an important consideration when purchasing food products at

the supermarket. As Australia's leading independent certification focused on animal welfare, RSP-CA's standards exceed Australia's legal requirements, which means when customers see the RSPCA Approved logo, they can be assured the product comes from animals that have been raised with welfare in mind.

ALDI has now transitioned 100 percent of their own brand fresh barn-raised chicken products to have RSPCA Approved certification, meaning Australians can look for the RSPCA Approved logo in ALDI stores across the country to buy certified higher welfare chicken.

This is important because research shows that the vast majority of Australians care about farm animal welfare and

this sentiment is evenly spread throughout regional and metro-

politan areas. Barn-raised meat chickens on farms with RSPCA Approved certification live in enriched barns, have more space to move about, lighting periods to encourage activity and dark periods for rest, can perch to rest and keep their bones and muscles strong, and enjoy dry litter floor covering to scratch, forage and dust bathe.

ALDI is also working toward a commitment for eggs sold in cartons to be from cage-free hens by 2025, supporting the ongoing consumer demand to free Australia's hens from barren battery cages. 🤤 **RSPCA**



ALDI know that seeing the RSPCA Approved logo is important to their customers.

THERE is the adage that practice makes perfect.

In the case of Dr Mehdi Toghyani, it is the combination of commercial nutrition and nutrition science that is perfect.

Mehdi's practical knowledge of nutrition is of great value to the Poultry Research Foundation, as we strive for producing effective solutions for the real-life problems of the poultry industry. Dr Mehdi Toghyani is a PhD graduate from the University of New England.

Mehdi joined PRF in 2019, following completion of his PhD and a three-year tenure as a postdoctoral researcher at UNE.

Mehdi has been educated as an animal scientist, demonstrated by his tertiary qualifications with a BSc in animal science, and his MSc and PhD being specifically poultry science-oriented. Mehdi's research at PRF involves obtaining in-depth knowledge on the interactions between nutrition and physiology, which serve as links to profit maximisation, optimising feed formulation and improving sustainability outcome of poultry farming.

Over the years, Mehdi has been heavily engaged in poultry research related to nutrition, gut health, dietary net and metabolisable energy assessment, digestive physiology, alternative feed ingredients and assessing requirements of key nutrients for both meat chickens and layer hens.

Being a dedicated poultry scientist, Mehdi has developed a good understanding of the practical limitations and implications of experiments involving poultry and how such factors may have direct consequences to the accuracy, validity and scientific merit of the obtained data.

This has helped him to disseminate his research output in a scientific manner for every research project by authoring and co-authoring over 70 peer-reviewed papers, published in high profile journals, and many national and international conference presentations over the years.

His latest research at PRF has been centred around meat chickens' response to diets nutrient density, particularly key nutrients such as energy and amino acids, in an attempt to

maximise the protein accretion potential of the diet and feed efficiency, and to minimise nutrient runoff to the environment. As a poultry nutri-

tionist, Mehdi also consults to some of the biggest fully integrated layer and broiler chicken operations in Australia, giving him the opportunity to become familiar with the principles of poultry research both within the realm of academia and in commercial set-

tings. Being at the forefront of the poultry industry,

he is directly exposed to the ongoing challenges the industry is facing, and how to utilise research output and scientific solutions to address and mitigate such challenges.

Having the privilege of working closely to the sector has helped him to remain very sensitive to the knowledge gap and highly demanded topics in the field that are also shaping the backbone of his research activities at PRF. 💱 **Poultry Research** Foundation

University of Sydney



Dr Mehdi Toghyani of the Poultry Research Foundation at the University of Sydney.



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Lenard's first-ever factory outlet

LENARD'S, the iconic Australian brand renowned for its classic handmade chicken-based meals, is stepping up to help families save hundreds on their grocery bills by opening its first-ever factory outlet in Brisbane.

For close to four decades, Lenard's has been a staple in Australian households, providing delicious and nutritious meals that have become a nightly feature on

outlet in Brisbane.

However, as retail trends have rapidly evolved over the years, so too has Lenard's approach to serving its loyal cus-

dinner tables across

the country.

tomers. Founder of Lenard's Len Poulter said, "We had to change."

"The way retail has changed so rapidly over the years necessitated a shift in our

strategy." The Capalaba factory outlet marks a significant milestone

offer exclusive products and deals not available elsewhere. "These types of shops are built to

history.

For the first time,

customers will have

access to discounted

prices on Lenard's

The outlet will also

full range of meals.

provide value," Mr Poulter said. "We're giving customers an opportunity to buy in bulk

and take advantage of good pricing." From whole chickens to frozen readymade meals, the outlet will offer more than 50 products at prices up to \$10 cheaper than those found in supermarkets. With households grappling with rising

costs and shrinking budgets, factory outlets such as this are becoming an increasingly popular choice for families looking to save on their dinner

in Lenard's 36-year tables, without compromising on quality. One of the stand-out deals at the new outlet is chicken breasts selling for only \$5.

"This outlet is designed for mums and dads, and anyone else, looking to save money," Mr Poulter said. Looking ahead, Lenard's hopes to open more factory outlets across southeast Queensland and Australia.

Lenard's marketing manager Kelly Beach said: "We potentially could open outlets on the north side of Brisbane, Toowoomba, Ipswich, Sunshine Coast, Gold Coast and all across Australia."

The Capalaba outlet will be open Monday to Friday between 12.30pm and 4.30pm and Saturday 9am to 1pm.

For more information about Lenard's and their new factory outlet, visit lenards. com.au 🦻

Australia's Animal Sector AMR Action Plan 2023 to 2028

ANTIMICROBIAL ment the 2020 strategy. resistance is a significant global health threat driven by the use of antimicrobials in humans, animals and agriculture.

AMR occurs when microorganisms, including bacteria, viruses, fungi or parasites that cause infections, develop the ability to resist the medicines used to treat them. In March 2020, the former Australian Government Departments of Health and Agriculture, Water and the Environment released 'Australia's National Antimicrobial Resistance Strategy - 2020 and Beyond' the 2020 strategy.

The 2020 strategy focused on a 'one health' approach across five key sectors - humans, animals, food, agriculture and the environment.

The 2020 strategy includes a longer term -20 year - vision that provides flexibility to adapt to changing priorities over time and has an expanded focus beyond antibiotics to include antimicrobials such as antifungals, antivirals and antiparasitics.

The 2020 strategy represents Australia's continued commitment to "minimise the development and spread of antimicrobial resistance and ensure the continued availability of effective antimicrobials" - Department of Health 2021. In February 2021, a coordinated 'One Health Master Action Plan for Australia's National Antimicrobial Resistance

Strategy to 2020 and Beyond' was published. The aim of the OHM-AP was to provide guidance on the implementation of the 2020 strate-

gy's seven key objectives – which are:

• Clear governance for antimicrobial resistance initiatives

• Prevention and control of infections and the spread of resistance

• Greater engagement in the combat against resistance

• Appropriate usage and stewardship practices

• Integrated surveillance and response to

The plan was developed following consultation with government and non-government animal health stakeholders. It contains agreed AMR priority activities, including those mentioned in other published national animal sector related plans such as: • Animalplan 2022 to

2027: Australia's National Action Plan for Production Animal Health • Aquaplan 2022 -2027: Australia's National Strategic Plan for Aquatic Animal Health • Australia's National

Action Plan for Health Security 2019 to 2023 • National Animal Health Surveillance

Business Plan 2016 to 2020 National Animal Health Diagnostics Busi-

ness Plan 2021 to 2026. As per the 2020 strategy and OHMAP, the plan broadens its scope to include other classes of antimicrobials such as antifungals, antiprotozoals and antivirals.

The activities identified are intended to be completed over the fiveyear time frame of this action plan.

After this period, monitoring and evaluation will be conducted to determine the effectiveness of the activities and will assist in the development of the next five-year action plan.

The full plan can be viewed at agricul ture.gov.au/sites/de fault/files/documents/ australias-animalsector-amr-actionplan-2023-2028.pdf 🦙

Australia's Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028



The Australian Government Department of Agriculture, Fisheries and Forestry Australia's Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028 aligns with the seven objectives of the 2020 strategy and the priority activities of the OHMAP.





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Kelly Beach, Len Poulter and Joel Beach cel-

ebrated the opening of Lenard's first factory



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resistance and usage • A strong collaborative research agenda across all sectors • Strengthen global collaboration and partnerships. Australia's Animal Sector Antimicrobial Resistance Action Plan 2023 to 2028 aligns with the seven objectives of the 2020 strategy and the priority activities of the OHMAP, providing Australia's animal health and animal indus-Depth try sectors with agreed 820mm priority activities for the terrestrial and aquatic animal sectors to imple-

The animal sectors included in the plan comprise of terrestrial and aquatic food and fibreproducing animals, companion animals including performance animals, zoological collections, laboratory animals and wildlife treated with antimicrobials.



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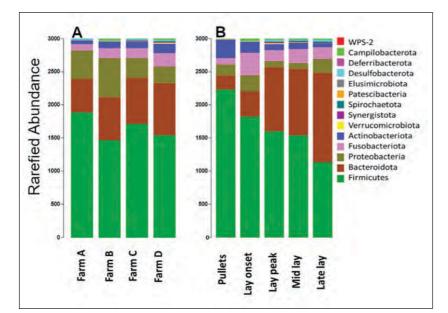
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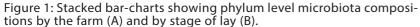
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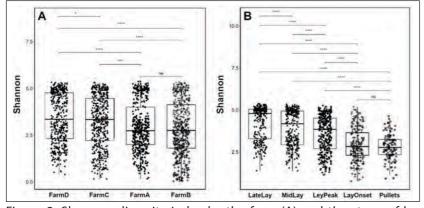


Figure 2: Shannon diversity index by the farm (A) and the stage of lay (B). The groups are sorted from highest to lowest diversity. Significance calculated via the Kruskal-Wallis test is shown via asterisk (*, P < 0.05; **, P < 0.01 = **; ***, P < 0.001; and ****, P < 0.0001).



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Temporal fluctuations and development of faecal microbiota in commercial layer flocks

THE microbiota of the gastrointestinal tract influences gut health, which in turn strongly impacts the general health and productivity of laying hens.

It is essential to characterise the composition and temporal development of the gut microbiota in healthy layers raised under different management systems, to understand the variations in typical healthy microbiota structure, so that deviations from this might be recognised and correlated with production and health issues when they arise.

The present investigation aimed to study the temporal development and phylogenetic composition of the gut microbiota of four commercially raised layer flocks from hatch to end of the production cycle.

By developing a more profound knowledge of normal microbiota development in layers, opportunities to harness the microbiota to aid

in the management of layer gut health and productivity may be more clearly seen and realised. The gut microbiota has been defined as the collection of all microbes

found in the gastrointestinal tract. The microbiota establishes a symbiotic association with the host and has been shown to influ-

ence host physiology. It plays a critical role in the development and training of the immune system, intestinal health and physiology, and nutrient release and absorption in the host.

Food animals are an important protein source for the growing human population, and efficient production is critical to minimising the ecological impact of the industries.

Thus, understanding the structure of the typical healthy gut microbiota and how it can be maintained and positively manipulated is likely to be an important way to enhance bird productivity and health and therefore maximise the efficiency of animal protein production. Egg and chicken meat

industries constitute a large and growing proportion of the food-producing animal industries because of their production efficiency and competitive pricing.

For poultry, most microbiota research has mainly been focused on broilers.

The meat-producing birds represent a large sector of the poultry industry, and broiler studies are less laborious due

to their short commercial life span.

Previous research has shown that birds from the same parent stock (that is similar genetics), from the same hatchery, raised in the same housing conditions and on the same feed had highly variable gut microbiota. The authors hypothesised that this variation in gut microbiota could

be attributed to random colonisation with environmental bacteria in the absence of maternally derived bacteria in the very clean hatcheries that are typical within the industry.

A comparative study conducted in slow-growing chickens of different breeds raised in a cage and free-range systems showed that the composition and diversity of the gut microbiota might be influenced by the different housing systems.

Other studies have also shown that housing systems can play a key role in the establishment of gut microbiota in birds.

However, it is important to note that these studies were conducted in the controlled environments of experimental and or research animal facilities, which are different from field conditions.

Laying hens are genetically different, have different feed and housing, and have a much longer production lifespan than broilers.

It was expected that the dynamics of gut microbiota establishment and development in layers are markedly different from broilers. In laying hens, the housing systems are substantially different (cage, free range, barn) than broilers, which are generally raised on deep litter systems.

In the past few decades, multiple studies have focused on the effect of housing systems on poultry welfare.

In 1999, the European Union issued a directive to phase out battery cages and shift layer production to alternate housing systems.

Other countries, such as New Zealand and Canada, have announced plans to phase out cage systems in the future.

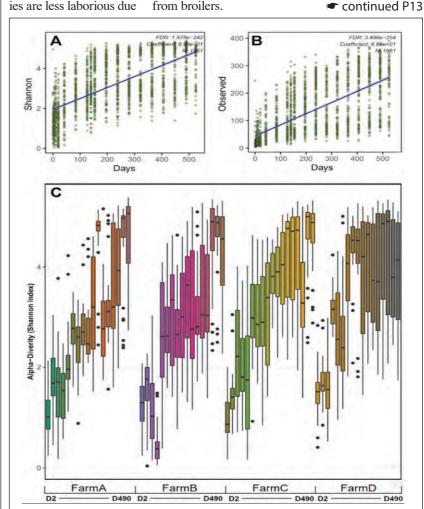
In Australia, the majority of eggs are produced in free-range (47 percent) and cage systems (40 percent), with a small percentage of barn production systems (11 percent), according to the Australian Eggs Annual Report 2019.

The pullet rearing practices in Australia are variable across the egg industry.

Generally, the flocks are raised on the floor until birds approach the point of lay and are then shifted to free range, barn or cage production systems.

Earlier studies in layer flocks focused on single flocks, but it is difficult to determine the general relevance of results from studies based on a single flock.

Some studies recently analysed the impact of the environment on the gut microbiota of layers. However, these studies were performed on hens



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Figure 3: Regression plots (A and B) showing Shannon and Observed amplicon sequence variant (ASV) index correlation with time, and Shannon index in each farm (C) presented per sampling time (d 2 to 490).

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Temporal fluctuations and development of faecal microbiota in commercial layer flocks

• from P12

during their early production.

In the previous studies, the effects of cage free versus caged housing systems, conventional cages versus enriched colony cages and indoor housing versus outdoor housing on gut microbiota were compared.

These controlled pen trials investigated how gut microbiota composition was influenced by a few variables, while attempting to reduce variability in other factors.

The controlled environments of research facilities do not entirely represent the field-relevant practices followed by commercial farms.

This study investigated faecal microbiota temporal development and structure from hatching to the end of the production cycle of four commercial layer flocks, reared in the barn, free range and cage housing systems.

Faecal microbiota was studied because it can be collected without sacrificing birds and is the type of sample that could be taken in the future for routine monitoring and assessment of some aspects of the gut microbiota.

Previous work has demonstrated that faecal samples give a good accounting of the microbial species present in the caecum but gives a less

accurately estimate of each cage was labelled their relative abundance in the caecum.

Four commercial layer flocks were selected for the study.

The selection of the farms was based on the willingness of the farmers to participate in the study and the distance from the research laboratory.

The flocks A and B were reared on dirt floors from one day old and transferred to free range and barn housing production systems, respectively.

In flock A, a spotty liver disease outbreak (caused by campylobacter hepaticus infection) was noted at the age of 34 weeks, which resulted in a drop in egg production (20 percent) and recovered in the next two weeks (see Figure 1).

The flock was treated with chlortetracycline (60 mg/kg) through water for one week.

Flock C was reared on a concrete floor from one day old and transferred to a multi-age cage production system - four flocks of different ages housed in the same shed, the birds in each flock were housed in different rows within the shed.

Flock D was in cage systems from rearing to the end of production.

For sampling birds in cages, each cage had a colony of six to 20 birds,

and the same cage was sampled at each time point.

All four flocks were transported to production houses at the age of 16 weeks.

The birds in all four flocks belonged to the same Hyline breed and originated from the same hatchery.

All four flocks were reared at different locations but in the same season (autumn to winter). Flock A was vaccinated for infectious bronchitis virus, coccidia, infectious laryngotracheitis virus, Newcastle disease virus, fowl pox, avian encephalomyeli-

tis virus, fowl cholera, egg drop syndrome and Marek's disease virus. Flock B and flock C were vaccinated against

all the above diseases except coccidia and fowl DOX. Flock D was vaccinated for infectious bronchitis, infectious laryn-

gotracheitis, Newcastle disease, avian encephalomyelitis, fowl cholera, egg drop syndrome and Marek's disease. All four flocks re-

ceived wheat and soyabased diet. All flocks met the ex-

pected egg laying performance as per the Hyline breed standard – see Figure 1 – and so it was concluded that all diets were of high quality and provided

adequate nutrition. Despite the farms being at different locations, and having differences in the feed and production systems, the same major phyla were noted in each flock.

The dominant bacterial phyla were firmicutes, bacteroidota, proteobacteria and fusobacteriota.

The relative abundance levels of these phyla changed over time between the major life stages of the production hens.

The change in phylum level composition across the different stages of lay for each farm is shown in Figure 2.

These major time dependent shifts were even more evident at the genus level.

The genus level compositions changed across the life stages of the birds across the whole dataset (see Figure 3), and the general trends were also replicated in each of the individual farms (see Figure 4).

More detailed analysis revealed that lactobacillus, dickeya and uncultured peptostrptococaceae and bacteroides genera were the most abundant genera across the four farms (Figure 4), however, the dominance was stage of lay dependent and changed over time (Figures 2 to

This longitudinal field study has investigated microbiota development stand disease risks and in commercial flocks that met the established performance breed standards.

The study has identified the stages of flock life that had the greatest influence on the richness of gut microbiota and the carriage of popathogenic tentially taxa.

Non-intrusive faecal sampling was undertaken as a proxy to represent the gut microbiota. Sequencing of 16S rR-NA gene amplicons was used to characterise the microbiota.

Beta diversity analysis indicated that each faecal microbiota was different across the four flocks and had subtly different temporal development patterns.

Despite these interflock differences, common patterns of microbiota development were identified.

Firmicutes and proteobacteria were dominant at an early age in all flocks.

The microbiota developed gradually during the rearing phase - richness and diversity increased after 42 days of age and then underwent significant changes in composition after the shift to the production farms, with bacteroidota becoming more dominant in older birds.

This information will help the industry under-

adopt mitigation strate-

gies. The data generated in this study, along with those from other layer microbiota studies, help define the development, structure and natural variability in normal healthy microbiota.

With a sound knowledge of healthy microbiota established, future studies could be focused on the analysis of the gut microbiota of the flocks with poor growth and production characteristics.

That will allow contrast to be drawn between fully functional and poorly functioning microbiota. By understanding such differences and the temporal development of the microbiota from hatch to full maturity, guidance will be provided for the design of bacterial consortia that can be applied to ensure healthy microbiota development.

This will allow the important step of moving beyond cataloguing and describing microbiota to practical ways to manipulate and harness the full potential of the gut microbiota.

The original research in its entirety can be viewed at sciencedirect. com 🦻

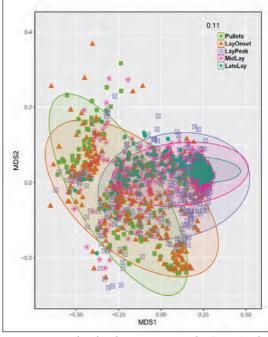


Figure 4: Multiple dimension scale (MDS) plot based on unweighed UniFrac.



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in

Producers oppose levy over poor policy NFF biosecurity protection levy submission

THE National Farmers' Federation has told the Federal Government it opposes a new biosecurity levy on farmers, saying the proposed levy may erode farmer confidence in the entire levy system.

In the submission to the Introduction of the Biosecurity Protection Levy: Consultation Paper, NFF chief executive Tony Mahar said while the peak farming body supports ongoing efforts to ensure Australia's biosecurity system is well resourced, it does not support this policy.

"This isn't about farmers not wanting to contribute to the biosecurity system - they already contribute significant amounts," Mr Mahar said.

"This is about an

ill-thought-out policy with a raft of potential risks."

Key reasons the NFF is opposed include:

• The policy's inconsistency with established levies and collection principles such as equability, transparency and accountabil-

ity

• The likelihood of a range of negative unintended consequences for agricultural and biosecurity systems, in particular our research and development network

• The lack of transparency about how the funds will deliver dedicated, additional and tangible biosecurity outcomes

NFF chief executive Tony Mahar said while the peak farming body

supports ongoing efforts to ensure Australia's biosecurity system is

well resourced, it does not support this policy.

Mr Mahar said the industry was "extremely concerned" this new levy would jeopardise producer confidence in job on behalf of pro-

the existing levies system as it did not align with underlying principles, such as proper establishment processes, industry support, equitability and account-

ability. "This new levy is going to erode producer confidence in the entire levies system as it's inconsistent with the principles that underpin other levies producers pay," he said.

"The proposal is not equitable between and within different commodities, and explicitly states that producers will have no say in how the money they contribute will be used. "We remain committed to working with government to improve resourcing the biosecurity system, but we would not be doing our

ducers if we didn't call out this policy.

"The government must – at the very least - pause its rushed implementation timeline, so adequate time is given to understand the impacts a policy of this size and complexity will have on Australia's 85,000 producers."

The NFF has also used its submission to again raise industry concerns about the Container Levy policy. "Australian agriculture has advocated for many years the need for a broad-based levy on inbound containers to help fund the biosecurity system," Mr Mahar said.

"This call has been supported by environmental and invasive species organisations. "Review after review

has recommended it. "The government has advised international trade implications represent a potential barrier to adopting the Container Levy.

"As a trade-exposed sector, it is not in our interests to run afoul of trading requirements or obligations.

"However, the sector has simply asked these considerations be made public, but disappointingly this has not occurred.

"This must be resolved immediately."

Positive benefits of Alltech's **Bioplex in layer production**

BACKED by more than 40 years of scientific research, Alltech is dedicated to providing solutions and products that contribute to the success of the global animal health industry. This commitment con-

tinues with the publication of a new study, 'The effect of organic trace mineral supplementation in the form of proteinates on performance and sustainability parameters in laying hens: a meta-analysis', recently published in the journal Animals.

Results show that the inclusion of Bioplex organic trace minerals in layer diets significantly benefits production performance and egg quality traits and contributes to a lower carbon footprint.

The findings also suggest that the most bioavailable form of essential minerals is crucial for optimising health and performance in laying hens. The meta-analysis - led by Dr Laurann Byrne research project manager at the Alltech European Bioscience Centre - considered the importance of mineral form on production performance, egg quality traits and carbon footprint.

It combined data from 32 global studies, involving 107 dietary assessments of 30,992 laying hens.

Dr Byrne looked at the impact of supplementing laying hen diets with organic trace minerals in the form of mineral proteinates, specifically Bioplex copper, iron, manganese and zinc.

The study detmonstrated that using Bioplex led to improvements in hen-day production, feed conversion ratio, egg mass, egg weight and egg loss.

Eggshell parameters such as thickness, strength, weight and

eggshell percentage also were improved.

A life-cycle assessment model - the Alltech E-CO2 Poultry EA - was used to evaluate the carbon footprint of egg production.

Results showed a reduction in feed and total emission intensities per kilogram of eggs when using organic trace mineral proteinates.

The inclusion of Bioplex in layer diets resulted in a 1.65 percent reduction of the carbon footprint for every dozen eggs produced (feed emission intensity per dozen eggs).

"With correct formulation, more cost-effective feeds can be produced, resulting in a greater return on investment and a lower carbon footprint," Dr Byrne said. "

As the results show, there is a proven track record of improvement in performance and sustainability with organic trace minerals."

New study results show that the inclusion of Alltech's Bioplex organic

trace minerals in layer diets significantly benefits production performance and egg quality traits and contributes to a lower carbon footprint.



Grill'd restaurant chain first to source RSPCA approved chicken

IF you're eating out, did you know that frequenting restaurants that serve higher welfare food is a great way to support farm animal welfare?

Over the coming months, we're helping conscientious consumers to better 'Know the Story' by delving behind the scenes of the RSPCA Approved of the first restaurants to proudly source 100 percent RSPCA Approved chicken.

Grill'd Healthy Burgers said, "It's not just about what we're eating, but where it has come from."

"With so much misinformation around ethical sourcing, the trust we have from our customers to source the forage, and much more. By sourcing RSPCA chicken. Approved Grill'd sets a valuable example and helps to support better farm animal welfare.

Farms that supply Grill'd must meet the RSPCA's strict standards and undergo regular on-farm assessments. but the work doesn't stop there.

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Farming Scheme.

Here we take a look at the great work of Grill'd Healthy Burgers, the first restaurant chain to source RSPCA Approved chicken, a forward-thinking brand and a long-term supporter of better animal welfare

Initially sourcing free range eggs, including in their sauces and lowcarb super bun, Grill'd knows the importance of supporting better hen welfare.

Fast-forward to 2016, and Grill'd became one

best quality produce is an important responsibility."

Meat chickens on farms with RSPCA Approved certification experience a better quality of life as a result of the more than 300 requirements in each of RSP-CA's animal-specific standards.

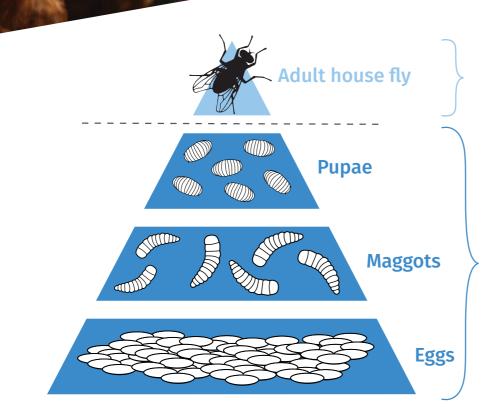
Importantly, the standards outline requirements that encourage animals to express their natural behaviours. For meat chickens, this means they have more space, are encouraged to perch, dust bathe and

For thinking restaurants it requires a rigorous traceability assessment each year to ensure every part of the supply chain that handles RSP-CA Approved product conforms to the chain of custody standard.

With continuous improvement in mind, we look forward to ongoing work with businesses supporting better animal welfare as well as their supply chains to improve handling, housing and health of farm animals. 🦻 RSPCA

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1. Reece, D. Create a "low-fly" zone. Pig & Poulty Marketing, 2014; Sping:18-19. Agita[™] 100 Plus Fly bait and Paint-On, Elector[™], Larvadex[™], Elanco and the diagonal bar logo are trademarks of Elanco or its affiliates. © 2023 Elanco or its affiliates. PM-AU-23-0031

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Australia's wheat production was forecast to come in at 26.9 million tonnes - down 26 percent on last season. Photo: Pixabay

Shed wash down made easy

AUSSIE Pumps is the country's leading manufacturer of high-pressure washdown equipment.

The range is huge, with small machines for tradies all the way through to big flow blasters suitable for fast shed wash down.

The company came up with the 'eco-clean' concept.

That means building machines that are designed to work long and hard but go the distance.

Aussie Pumps chief engineer John Hales said, "We build them to last decades and make them fully serviceable.'

Lots of reach

One of the most recent developments is Aussie's new stainless-steel high-pressure hose reel, which carries up to 30m of 5800PSI rated highpressure hose.

That extra hose means that the trolley mounted pressure cleaner can be parked in one location, however the operator has a range of 60m - 30meither side.

"That makes it more efficient and certainly easier for the operator," Mr Hales said.

"Our latest pressurewasher design includes a snug mount for the hose reel integrated into the stainless steel

'Scud' frame." Scud success Aussie Scuds were introduced ten years ago.

They are an Aussie Pumps original - in concept, design and production.

"We only use quality products in the machines," Mr Hales said.

"Everything we do is quality because we know that in the poultry business, reliability is absolutely fundamental."

High pressure available

At the heart of Aussie's Scud range are the heavy duty 'Big Berty' pumps powered by Honda petrol engines.

They are also available with electric motor drive units.

The Aussie Pumps pressure washers have capabilities up to 5000PSI and flows as high as 21 litres per minute.

The machines are all designed to be 'Class A', so operators are not obliged to become registered training organisation certified, in line with the Standards Association

Safety Rules. "We have our own free online safety training course for operators of Class A machines," Mr Hales said.

"It's available for

everyone, no matter what pressure cleaner they own or use. "We're on a major

crusade to keep operators safe. "That means our training programs are either online or held in person at our Castle Hill headquarters. "Our 'Get Home

Safe' program really works." Aussie Pumps has Australia's largest

range of self-priming centrifugal pumps as well. They are petrol en-

gine, diesel drive, hydraulic or electric motor driven. "Our big 125LPM flow Honda engine

drive shed wash down kit is also a winner for the poultry industry," Mr Hales said.

40 "With bar (580PSI), we can wash sheds fast and safely." The company's inspiration comes from

the people who use the products. "We don't breed or raise poultry, so we depend on the customers to guide us in what

works for them," Mr Hales said. Further information on performance of the full range of Aussie Pumps high-pressure

pumps and cleaning equipment for poultry applications is readily available online at aussiepumps.com.au

Australian Winter Crop Forecast

Production down but prices provide silver lining

AFTER three consecutive strong harvests, Australian grain and oilseed production is set to return to more modest totals for the current season as drier growing conditions 'hit home', Rabobank said in its recently released 2023-24 Australian Winter Crop Forecast.

The bank said Australia was on track to harvest a total winter crop of 48.72 million tonnes for the current season.

While down 24 percent on last season's recordbreaking 63.85 million tonne national crop, this is still close to the fiveyear average and above totals recorded in 2018-19 and 2020-21.

And report co-author RaboResearch associate analyst Edward McGeoch said prices were expected to provide some silver lining to the lower production totals for Australian farmers, with dry conditions in Australia pushing local prices above those globally, to a 'positive basis' for wheat and also barley.

While global export demand should also be supportive of canola prices.

Mr McGeoch said drier weather conditions that have spread across many cropping regions in the country and the prevailing El Niño climate outlook were playing a significant role in the tighter supply outlook for Australian grain and oilseeds.

"Production expectations are varied across regions, with some farmers expecting to see elevated production due to positive growing conditions they have experienced, while others will be facing tough decisions as to whether it will be worth harvesting their crop," he said.

The bank said all ce-

real and coarse grain production - including wheat, barley and oats - was expected to decrease this season, with wheat declining the furthest, down to 26.9 million tonnes.

Winter crop production was expected to decline across all states except Victoria, where the bank anticipates it rising by eight percent from last year.

However, Mr McGeoch said this was primarily due to the losses incurred during last year's harvest, with a significant proportion of crops in the northern parts of the state unable to be harvested because of flood damage.

"Parts of Victoria have seen further strong rainfall across cropping regions in early October, which will play a significant role in determining if these targets will be achieved or exceeded," he said.

Commodities

Australia's While wheat production was forecast to come in at 26.9 million tonnes - down 26 percent on last season - barley and canola will suffer less decline, Rabobank said. "Barley is expected to

see the slightest decline in all grains and oilseeds this year - down 18 percent on last year to 11.91 million tonnes," Mr McGeoch said.

"However, this is primarily due to an increased planted area for barley this season compared with 2022-23, while the remainder of the winter crop varieties saw reductions in planted area."

Canola production is forecast to fall 24 percent on last year to 5.77 million tonnes.

Mr McGeoch said this total however remains 20 percent higher than the five-year average, while pulse produc-

tion - though forecast to be down this season - also remains slightly higher than the five-year average, at 3.08 million tonnes. States

The biggest declines in total grain and oilseed production are expected in Queensland and Western Australia, at 36 percent and 35 percent respectively on last season.

For Queensland, 2023-24 total production was forecast to come in at 2.15 million tonnes, taking a significant hit due to dry weather conditions.

"Wheat is expected to see the largest fall in the state, down 41 percent year on year, which is compounded by a reduction in planted area this season, however it does remain above the five-year average," Mr McGeoch said.

Expectations are for production totals in WA to fall to 14.27 million tonnes.

This total has been influenced by several factors, including the late 'autumn break' leading to crops being planted in cooler conditions, which increased frost susceptibility.

"This has been coupled with lack of rainfall during the growing season leading to poorer soil moisture levels once high temperatures returned in early spring," Mr McGeoch said.

Total tonnage for NSW winter crop was forecast to decline 27 percent on last year - to 11.03 million tonnes.

The state's central and northwest regions have been worst hit by dry spring conditions and lack of rainfall totals during the growing season, with only 70 percent of total planted crop area expected to be harvested in some parts. For South Australia,

production totals are expected to fall to 9.3 million tonnes.

While this is down 26 percent from the extremely strong 2022 season, these volumes remain well above the five-year average, Mr McGeoch said. **Exports**

The report said Australia's export outlook for the year ahead would be significantly impacted by the fall in the production potential for the current season, "given we are coming off a string of consistently strong seasons."

"We are however still well positioned to support global wheat needs, while also seeing supportive factors for canola and barley exports," Mr McGeoch said.

Given the reduced production outlook, Australia's exportable surplus from the current 2023-24 wheat crop (excluding 2022/23 carryover) is forecast to total 18.6 million tonnes, with global export demand remaining strong, despite Russia increasing its share of the wheat export market.

Barley and canola export surpluses from the 2023-24 harvest (excluding carryover from last season) are expected to total 5.9 million tonnes and 4.6 million tonnes respectively.

"Again, reductions in global production of barley and canola are supporting export demand to key markets," Mr McGeoch said.

Commodity price outlook

Moving to the end of this year, the bank said the environment is becoming more supportive for global grain prices, with all major grain harvests – bar Australia – to be wrapped up by December.

Dry conditions in continued P17

Year-on-year Changes in total winter crop production

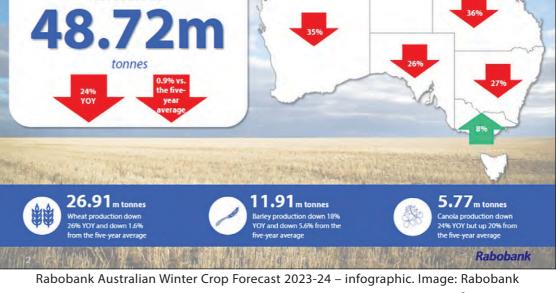
forecast at

2023/24 total Australian winter crop production



Adding a stainless-steel hose reel with 30m of high-pressure hose to an Aussie Scud pressure washer adds convenience and safety.

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Australian Winter Crop Forecast by Rabobank

rom P16

Canada and Argentina are also putting potential additional pressure on global supply.

Rabobank forecasts Chicago Board of Trade wheat - the bellwether for global wheat prices to trade around \$A0.91-\$A1.03 per bushel over the next 12 months, 7 percent below the fiveyear average.

CBOT corn prices, indicative of global feed grain prices, are expected to trade between \$A0.74-\$A0.83 per bushel, 35 percent below the five-year average.

Locally, the bank expects national track Free in Store APW1 wheat prices to trade on average between \$A360-\$A400 per tonne over the next 12 months.

Feed barley track FIS prices are expected to trade on average between \$A320-\$A370 per tonne over the next 12 months, just above the five-year average of \$A312 per tonne.

"The reduced supply outlook is supporting local prices, as we have domestic consumption and export competition," Mr McGeoch said.

For canola, the bank believes there will be support for higher global prices due to smaller Canadian and Australian crops compared with last year, while Canada

more internally in early 2024

Locally non-GM canola prices are forecast to trade on average between \$A650-\$A700 per tonne over the next 12 months.

Farm inputs Australian

farmers are expected to face a better year ahead when it comes to their farm input costs, the report said, with the exception of diesel.

Report co-author RaboResearch agricultural analyst Vitor Pistoia said there were two "driving forces" behind the improved outlook for input costs.

"These are lower global prices for many inputs due to a new balance of supply and demand, which is favouring supply," Mr Pistoia said.

"Also input prices in Australia tend to lag behind the rest of the world, with a long lead time before changes in global input prices are felt locally.

"This means that the prices farmers will have here when they procure their inputs by early 2024 will be the ones that are seen globally in quarter three and four of this year, which are tracking at much lower levels than the same period in 2022.'

The reports said that based on market factors

is also expected to crush at the moment, urea is expected to remain near current levels and phosphate to ease by 10 to 15 percent in early 2024. For potash, the forecast is for stable prices. Agro chemicals were

likely to have lower prices and better affordability in the 2024 season, Mr Pistoia said.

Diesel prices however look to remain at elevated levels due to capped petroleum production in many exporting nations, along with reduced global refinery capacity impacted by shutdowns and maintenance.

Brent oil prices should stay around the \$149.94 per barrel mark, with potential hikes up to \$157.83 per barrel possible.

"These factors, combined with expectations for a continuing weak Australian dollar, put the diesel terminal gate price slightly above \$2 per litre, in a range between \$2 to \$2.2 per litre," Mr Pistoia said.

"This is 6-17 percent above January 2023 prices."

For machinery and parts, despite substantial reductions in component costs in the past 12 months – including for steel, rubber and international freight - prices are not expected to decline considerably.

This is due to the weaker Australian dollar and local inflation in machinery producing nations. 📎 Rabobank



Report co-author RaboResearch associate analyst Edward McGeoch. Photo: Rabobank



Peter Groves

Recent poultry health studies

OVER the past three years, the University of Sydney Poultry Research Foundation team, led by Associate Professor Peter Groves, has worked on important disease and food safety risks for the poultry industry.

The team comprises of Professor Groves and PhD students Karen Gao and Christine Clark, with major contributions from Dr Wendy Muir and Dr Mini Singh.

Karen Gao's project is the first analytical epidemiological study of spotty liver disease (SLD - campylobacter hepaticus), which is a major disease problem in free range egg layers.

Three major surveys across the industry were conducted with important world-first outcomes.

The presence of a scratch area inside the free range layer house emerged as a major

risk factor for SLD. This makes biological sense as it increases the hens' direct contact with fresh faeces, allowing spread and multiplication of the causative agent.

Further investigation showed that mechanical ventilation systems, if used effectively, can decrease the prevalence and severity of the disease.

A further finding implicated higher nest stocking density as being able to enhance the occurrence of SLD.

These findings are assisting the industry to cope with this difficult disease and will decrease the heavy dependence on antibiotic therapy that is currently necessary.

Christine Clark's project looked at the novel strain of salmonella enterica serovar enteritidis that caused major disruption to the layer industry in NSW in 2018-2020, and spread also to Victoria

and Queensland. We have limited vaccines against salmonella for chickens in Australia, all of which target other serovars, notably typhimurium.

Christine's project evaluated the ability of the local registered live salmonella typhimurium vaccine to provide cross-protection against this strain of serovar enteritidis.

She found that, by injecting the live vaccine twice into rearing pullets, there was partial protection afforded against infection establishing with this troublesome strain.

This project has given the industry some confidence in their ability to protect the public against this dangerous zoonotic bacterium.

Both projects have provided valuable information for the Australian egg layer industry, as it is set to transition to cage-free production systems by 2032. 😓

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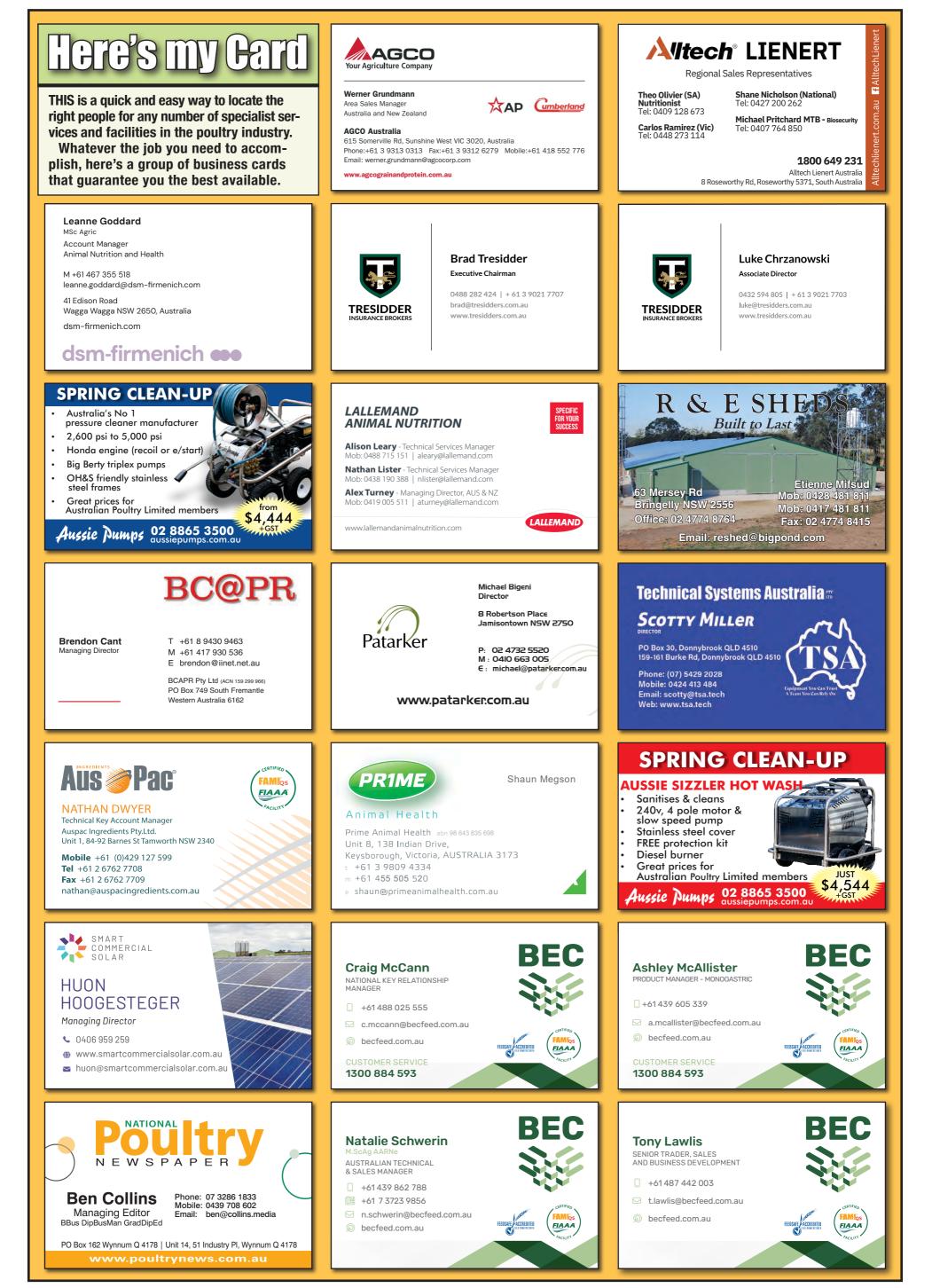
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