

Poultry Bulletin

OFFICIAL MAGAZINE OF THE SOUTH AFRICAN POULTRY ASSOCIATION



ISSUE 20

JUNE / JULY 2024

R60

THE MILESTONES ISSUE

BIRD-FLU WATCH - KEEPING TABS ON AN ONGOING THREAT

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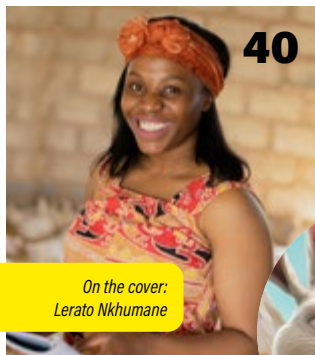
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Winter has settled in, bringing with it the first-ever SAPA Golf Day, which we will report on in the next issue. This milestone event on 7 June replaces the networking opportunity for members for the years in between AVI Africa conferences.

Winter also brings renewed concerns about avian influenza, especially since there has not been any decisive action from the government regarding vaccination against this poultry killer. HPAI cost the industry over 10 million birds last year and has effectively wiped out the livelihood of many smaller producers. On page 11 we introduce our Bird-Flu Watch where we'll review the latest developments here and globally in each issue. SA's producers have to stand together and lobby government to implement the supportive measures that are essential to our industry's continued survival.

Despite many challenges, poultry people never fail to impress us as they achieve milestone after milestone. In this issue we tell stories of courage, innovation and problem-solving; from the indomitable spirit that saw a hatchery literally rise from the ashes (p32) to a family business that embraces conservation (p18) and our cover star – a self-taught producer who sells eggs and chicken while also mentoring other women farmers (p40).

The message with this issue is to celebrate milestones, as there is no better way to honour our achievements, express gratitude and inspire others to pursue their own goals and dreams.

Enjoy this issue!
Melinda
@melshaw001
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A MILESTONE CONVERSATION

IN MARCH, SAPA had the privilege of engaging in a meaningful dialogue with Minister Ebrahim Patel from the Department of Trade, Industry and Competition. The meeting, held in Cape Town, and attended by Broiler Organisation GM Izaak Breitenbach, Astral's Gary Arnold, Rainbow's Marthinus Stander and myself along with representatives of the International Trade Administration Commission of Southern Africa (ITAC), provided a platform for candid discussions on pressing matters affecting our industry.

Two key agenda items dominated our conversation: the tariff rebates on poultry imports and the Competition Commission inquiry into our market and its value chain. These issues, pivotal to our industry's trajectory, demanded careful consideration and strategic collaboration.


Regarding the tariff rebates, Minister Patel outlined the rationale behind this measure as a precaution against potential chicken meat shortages caused by last year's devastating HPAI outbreaks. While SAPA acknowledges the government's intentions, our analysis suggests that no actual shortage exists. This is in part due to the industry's prompt response to the crisis which saw 160 million fertilised broiler eggs being imported to replace the production lost when around 25% of the broiler breeder flock was destroyed. Minister Patel, receptive to our data-driven perspective, supported our undertaking to present updated information to ITAC and DALRRD. This concerted effort aims to ensure that policy decisions align with market realities, safeguarding industry stability and fairness.

Similarly, our discussion on the Competition Commission inquiry raised concerns regarding its timing and objectives. Minister Patel clarified the inquiry's focus on promoting inclusivity within the poultry value chain, emphasising the need for transformation in the industry to increase representation. In response, SAPA reaffirmed its commitment to the industry masterplan's objectives, pledging to articulate the integrated

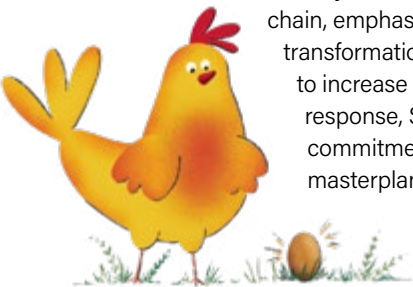


nature of our sector and its role in fostering opportunities for all stakeholders.

The meeting was marked by a spirit of collaboration and mutual understanding, underscoring our shared commitment to industry resilience and growth. Minister Patel's receptiveness to industry insights reflects a positive step towards policy alignment with industry dynamics. As members of SAPA, it is incumbent upon us to continue advocating for policies that promote a vibrant and sustainable poultry sector.

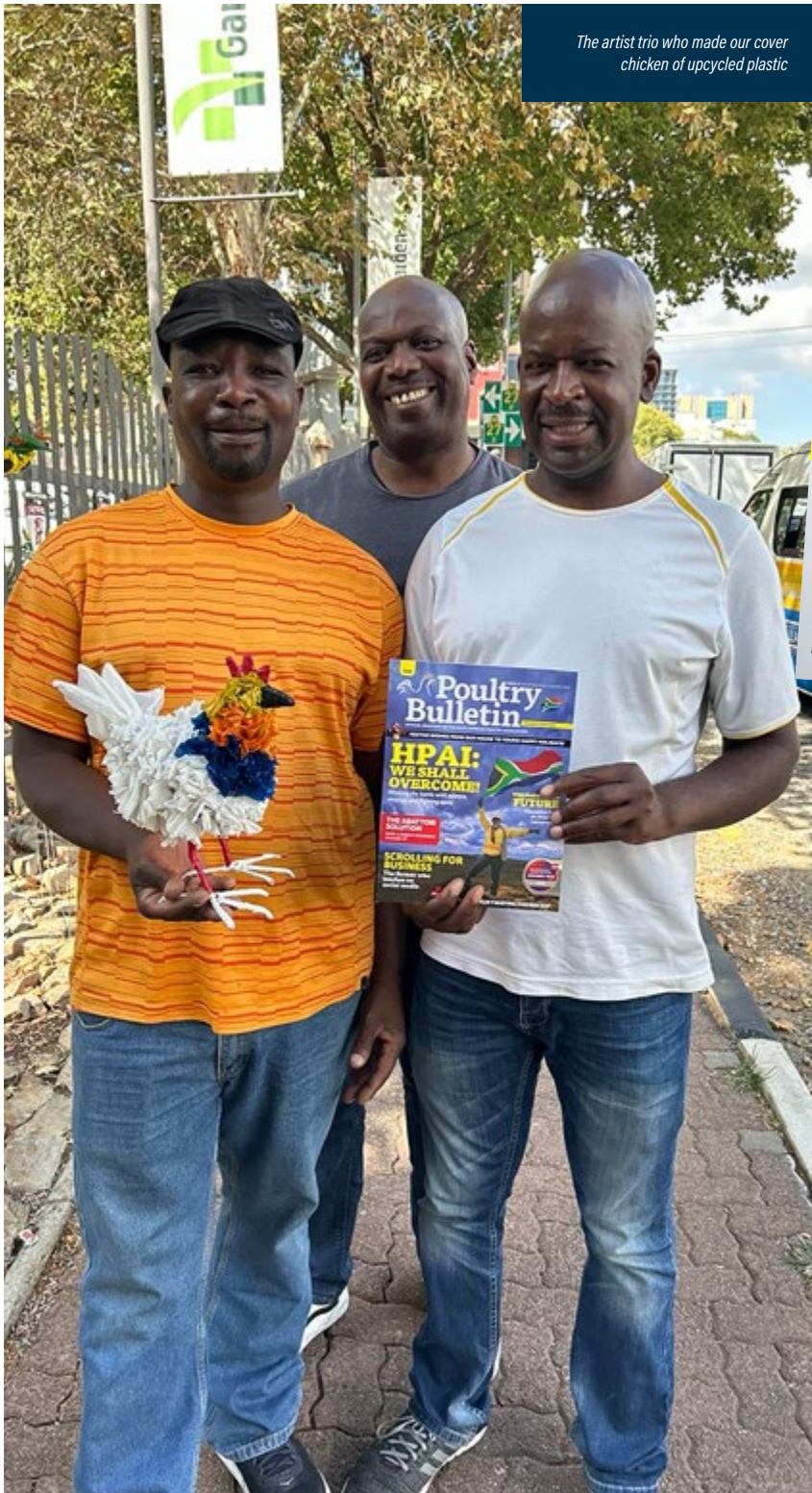
We look forward to progressing, along with Minister Patel and his department, the collective efforts to navigate industry challenges. By fostering constructive dialogue and strategic collaboration, SAPA reaffirms its position as a champion of the interests of our members as well as the broader poultry industry. 

Richard Manzini
CEO, Daybreak Foods



LETTERS

We want to hear from you. Send your letters to editor@poultrybulletin.co.za



The artist trio who made our cover chicken of upcycled plastic



CHICKEN MEETS ART

We really enjoyed the commission to make an upcycled plastic-and-wire chicken for *Poultry Bulletin's* cover shoot [April May 2024]. As artists we make all kinds of animals with beadwork and wire, but we've never seen this style of craft before and it was great fun to work out how to create this little guy! Thanks for the great idea, and the opportunity, and watch this space, because we think this might just be a new trend in African crafts. Here's an idea for your SAPA poultry companies – we can make branded chickens using the branded plastic packaging that your chicken meat is sold in. Whatsapp us on 079 641 6469 for a quote.

David Tandl, Lloyd Tandl and Peter Kazowa

Ed: Love your work, and also love the upcycling angle! Thank you for breathing life into our idea!



A reader spotted this boss rooster strutting his stuff in the streets of Soweto

HEITA SOWETO!

We spotted this boss rooster patrolling the streets while we were hosting a tour of Soweto for tourists from Hawaii. Everyone was very amused at this guy's *houding!* It was very clear to everyone that he knows who's in charge!

Gilda Swanepoel
EenBlond Tours

Ed: This is great! Calling all amateur (or pro!) photographers – send us your photos of chickens with attitude and we'll put them in the spotlight.



REMEMBER WHEN...?

Who remembers the PicknPay lady whose face appeared in every PicknPay advert in the newspapers in the 1960s and 1970s? And, more pertinent, who remembers when chicken cost just 15 cents "per pound"? Those were the days!

Graham Sonnenberg



Ed: Indeed times have changed. Also in our inbox this month was this reminder of when KFC was still Kentucky Fried Chicken, with prices from a bygone era!



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ECONOMY RESILIENT DESPITE PERSISTENT CHALLENGES

By **Paul Makube**

WE HAVE SO FAR not experienced any significant improvement in the challenges that plagued South Africa's economy in 2023 with electricity supply still erratic, transport and logistics infrastructure barely scraping through, and geopolitical tensions increasing further with negative implications for international trade.

Economic activity was still subdued with no respite for the manufacturing sector early in 2024 although sentiment was encouragingly brighter on the outlook, helped along with some improvement in the country's

'Meat inflation in South Africa has decelerated for the fifth consecutive month'

electricity production. Improved economic activity is critical for poultry demand while a lift in electricity production will help ease cost pressures for producers. Higher fuel costs due to the need to keep generators going squeezed producer margins in the sector.

Yet despite all these challenges the domestic poultry industry's outlook is solid, following the trend in the global industry. Globally, broiler production is forecast to rise by 0.9% year on year to 103.26 million tons which, according to the US Department of Agriculture (USDA), is 5% above the eight-year average. Exports are expected to increase by 2.5% year on year, largely due to increases from Brazil, which is up by 3.2% year on year.

Avian-flu outbreaks continue to be a challenge for the industry globally amid recent reports of the disease also being detected in dairy cows in the US. Meanwhile, the UN Food and Agriculture Organisation's global meat inflation outlook remained in a deflationary mode, showing a decrease of 1.5% year on year in March 2024 with poultry remaining in negative territory since April 2023.

Here in South Africa, meat inflation decelerated for the fifth consecutive month, also 1.5% lower year on year. However, we have observed near-term cost pressures as



surging yellow-maize prices lift feed costs, which will erode producer margins.

In addition, the rebates on imported poultry following the recommendation by ITAC to the Minister of Trade and Industry pose further risk for producer prices.

Forecasts of a strong transition to La Niña conditions in the remainder of this year, which will boost the maize crop, bodes well for an overall sector rebound in 2025. However, profit margins are likely to remain under pressure due to high feed costs and consumers' subdued disposable incomes given pedestrian economic growth. 📌

Paul Makube is a senior agricultural economist at FNB Business. He can be reached at pmakube@fnb.co.za.

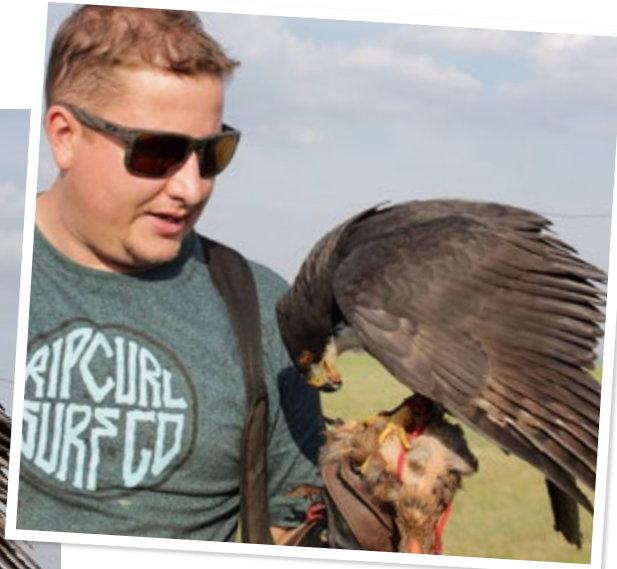
NEWS IN BRIEF

Food safety by hawk, effects of El Niño and more news from SA's poultry landscape

Compiled by **Charmain Lines**



HAWK TO THE RESCUE



The patrolling sessions are scheduled at different times every week to make sure the pigeons don't adapt to a pattern and just clear off when they know the hawk is due.

"She is quite intimidating and doesn't believe in making friends," says Coetzee. "She'll come for food and perch on your hand but don't even think about touching her or scratching her head." In fact, the hawk is so unattached to her handler, that she is fitted with a tracking device in case she decides to take to the skies.

The Harris Hawk is native to South America and is used for pest control locally as South African birds of prey may not be "employed" as working birds. Weighing in at about 800g, the CBH "contractor" is proof that size doesn't count nearly as much as attitude and reputation.

"I would recommend this approach to any food facility that struggles with pesky pigeons," says Coetzee. "A well-trained and managed hawk is the best, easiest and most natural way to control them." 🦅

PIGEONS CAN POSE a significant threat to food safety when they make themselves at home near food-processing facilities. These birds often carry pests and diseases, their nests attract vermin and when people step into their droppings, the nastiness can end up inside the plant.

Also, says Lily Coetzee, national SHERQ manager and acting general manager of Country Bird Holdings' further-processing plant in Germiston, Gauteng, bird droppings on a roof can leak into the building through tiny cracks when it rains. The bottom line is that pigeons must be controlled.

"In my free time I'm involved with wildlife rescue, so I didn't want to shoot the pigeons that were making a pest of themselves here at our Poultry Palace," says Coetzee. So she did some research and stumbled upon Avian Pest Services, a business that uses hawks as pest-control agents.

This explains why, two days a week, falconer Ernest Blignaut and his female Harris Hawk can be found at the CBH plant. She catches one, maybe two, pigeons per visit but poses enough of a threat that already more than half of the pigeons that used to nest on the site have moved away to safer spots.

EL NIÑO BITES OUR MAIZE CROP

South Africa's maize production is forecast to be around 13.3 million tons in 2024, more than 19% less than 2023's bumper harvest 16.4 million tons, according to the Crop Estimates Committee (CEC).

The impact on white maize (which is consumed by households) is worse than on yellow maize, which is used for animal feed. The forecast for yellow maize is a 12% drop in production. This has translated into a 4.5% increase in the yellow-maize futures prices compared to a staggering more than 23% jump in white-maize prices.

This difference not only reflects local production conditions; it is also influenced by global stocks. Around the world, white maize is in far shorter supply than yellow maize. The International Grains Council

forecasts the 2023/24 global yellow-maize harvest to be 1.2 billion tons, which is up by 6% year on year and thus drives down the international price of yellow maize.


Lower domestic maize production is bad news for food inflation and for the price of chicken feed.

Hopeful news is that El Niño, which is triggered by a warming of surface temperatures in the eastern Pacific, is expected to fade by June this year. It could soon be replaced by its opposite, La Niña, which usually brings good rains to this region.

Thanks to the previous and prolonged La Niña, South Africa has carry-over stocks of more than a million tons of maize. This means that



if the latest CEC estimate pans out, the country should have enough maize for domestic consumption.

There is, however, a chance that the maize crop could be worse as the impact of the dry and hot conditions we experienced in February and March becomes clearer. 

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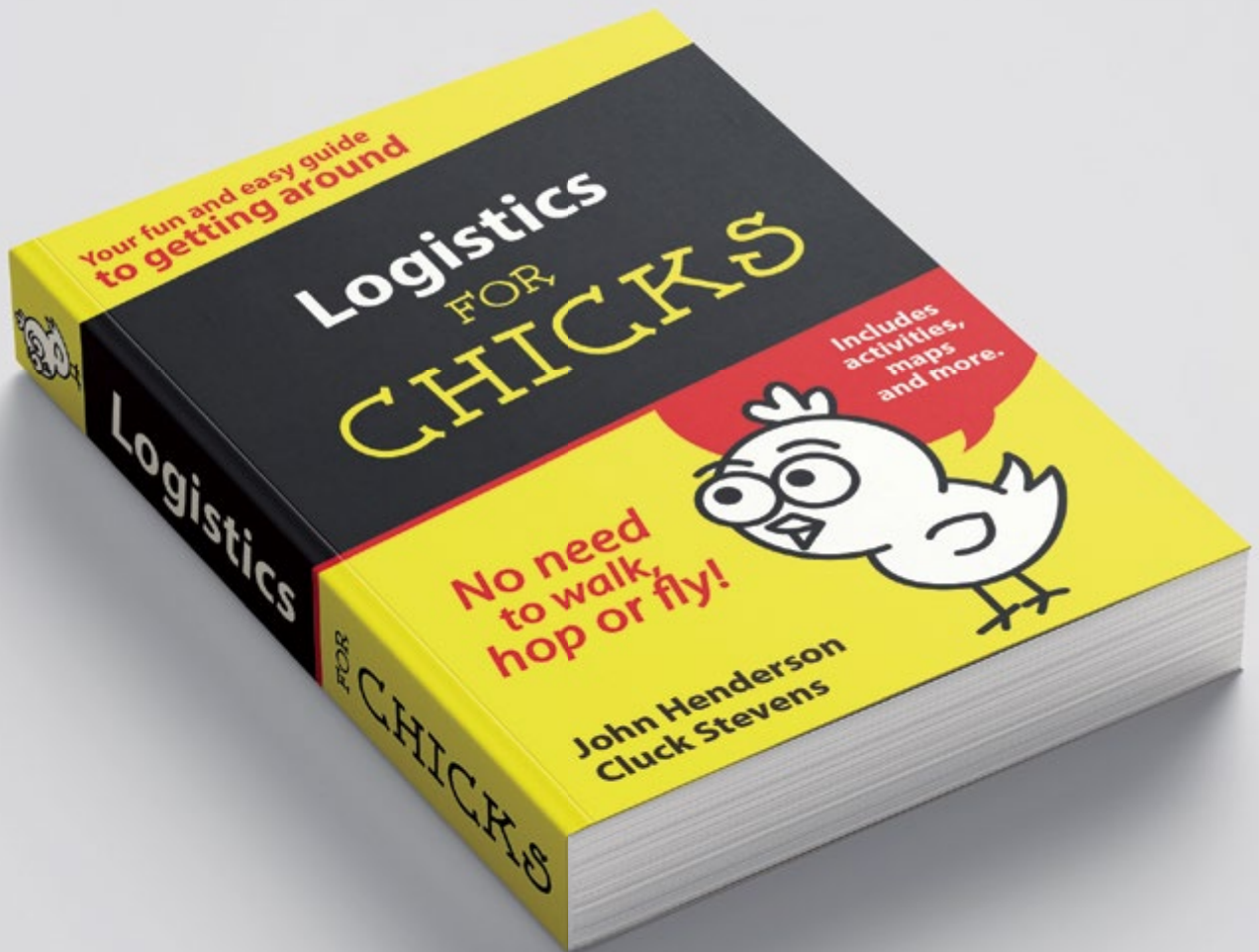
DAYBREAK FARMS has officially changed its name to Daybreak Foods Proprietary Limited. The company's management says the change reflects the board's commitment to renew the integrated producer with a focus on corporatisation.

Daybreak's owner, the Public Investment Corporation, has also strengthened the board of directors

with four new appointments earlier this year to bolster corporate governance. The PIC furthermore appointed new auditors and established a whistleblower hotline through a third-party provider.

This all forms part of the R250-million debt deal to stabilise Daybreak Foods and optimise its operations and balance sheet. 





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BIRD-FLU WATCH

Where we keep an eye on HPAI developments on our own perch and around the world

Compiled by **Charmain Lines**




BIG ISSUES WITH VACCINATION

VETERINARIAN Dr Shahn Bisschop says that to his knowledge no new HPAI infections have been reported since January 2024. "But we're concerned that there may be unreported cases as farmers fear being placed under quarantine by the state and forced to kill large numbers of birds."

Three vaccines against H5 strains of HPAI have been registered in SA; neither of the H7 vaccines submitted for registration has yet been approved. Some farms have applied for approval to vaccinate, but all are still waiting for the go-ahead. Discussions with DALRRD to simplify the current vaccination protocols have been unsuccessful to date.

"Given that it takes at least a month after vaccination for birds to develop immunity and that it won't be possible to vaccinate most of the national flock in a short period of time, even if we are


cleared to proceed, we're not optimistic that any vaccination will happen this year," concludes Bisschop. "Sadly, therefore, we head into winter without vaccine protection for our flocks."

Given the perilous state the industry finds itself in, SAPA appealed for assistance during May. In a media release, it stated that the stringent biosecurity standards and monitoring protocols demanded by current regulations prevented widespread vaccination. Not even the large integrated producers meet the requirements. SAPA urged Minister Didiza "to address the issues hampering vaccination efforts. By establishing practical, science-based guidelines and resolving existing barriers, the government can safeguard food security, mitigate economic losses and protect against the environmental impact of mass bird culling." 

STUDY INTO LOCAL STRAIN STILL AWAITS APPROVALS

UNDERSTANDING THE MECHANICS OF a virus is the key to unlocking prevention as well as options for treatment.

According to Prof Celia Abolnik, South African Research Chairs Initiative (SARChI) chair in Poultry Health and Production at the University of Pretoria's Faculty of Veterinary Science, a team of researchers is currently waiting for the necessary approvals to conduct in-vivo infection studies on H7N6, the uniquely South African strain of HPAI that decimated the national flock last year. "As soon as our DALRRD Section 20, SAHPRA (South African Health Products Regulatory Authority) and the university's REC (Research Ethics Committee)/AEC (Animal Ethics Committee) approvals come through, we can start our studies on the virus," she says.

Prof Abolnik also reports that the Southern African Foundation for the Conservation of Coastal Birds (SANCCOB) conducted a study into HPAI's impact on seabirds during 2023. A scientific paper on the findings is currently being prepared. 



Prof Celia Abolnik

FRANCE SEES VACCINATION ROI

FRANCE'S LARGE-SCALE HPAI vaccination programme, mainly aimed at ducks, are reaping results already.

By mid-March, the country's department of agriculture had registered 10 cases of HPAI since the first case was reported on 27 November 2023. In the same period in 2022/23, the number of cases was 315 and in previous winters it often exceeded 3 000.

The improvement is ascribed to the fact that, by the end of February, more than 21.6 million ducks had been vaccinated, which is one-third of France's national flock. Every bird receives two vaccinations, the first at 10 days and a second 18 days later.

The total cost of the campaign is estimated to be €100 million of which the French state pays 85%. [f](#)

FAST, ACCURATE ON-FARM TESTING NOW POSSIBLE

FIELD TRIALS FOR A NEW on-farm HPAI test are currently on the way in Europe. If the technology works as its developers intended, farmers and governments will be able to respond much faster to outbreaks and even predict outbreak patterns.

Flockscreen is a LAMP (loop-mediated isothermal amplification) test that was developed by three companies, namely US-based Alveo Technologies, Royal GD in the Netherlands and X-OvO in the UK. A handheld device uses electrical modes of detection and delivers results that are as accurate as those of molecular PCR tests, according to its developers.

Positive tests are timestamped, geo-located and uploaded to cloud-based storage. This enables public officials to accurately track the spread of HPAI in real time and create databases to better understand the behaviour of the virus. [f](#)

HPAI REARS ITS HEAD IN LIVESTOCK



DURING MARCH, the first cases of the H5N1 strain of HPAI in domestic livestock in the US were confirmed. The World Organisation for Animal Health (WOAH) reported that newborn goat kids on a farm in Minnesota had tested positive, while the US Department of Agriculture (USDA) confirmed cases in cows in Kansas, Texas, New Mexico and Michigan.

Wild birds are the most likely source of the cow infections, while the goats became ill after occupying a pasture from which HPAI-infected chickens and ducks had been removed.

These livestock cases

follow reports of other species of mammals having been affected, including coyotes, cats, opossums, gray seals, bobcats, striped skunks, tigers, harbour seals, raccoons, pumas, bottlenose dolphins, bears, foxes, leopards, fishers, otters, American martens and squirrels. In South America, around 32 000 sea lions died from the virus in 2023.

Initial testing by the National Veterinary Services Laboratories in the US has not found changes to the virus that would make it more transmissible to humans. This indicates that the current risk to the public remains low. [f](#)

BROTHERS IN FARMS



Sanctuary Farm nestles in the beautiful rolling hills of the Dargle Valley in the KZN Midlands

The Facebook page says Barnsley Farming is an integrated farming operation based in the Dargle Valley of the KwaZulu-Natal Midlands. A family business owned and run by brothers Robin and Kevin Barnsley, its main focus is on commercial egg production and marketing.

But that's not even half the story

By **Charmain Lines**

THE OFFICIAL FOUNDING DATE of Barnsley Farming was in September 1958 when Warwick Barnsley bought his first load of chicken feed from Meadow Feeds in Williams Road, Durban. It was for the farm in Waterfall near Hillcrest, which he had shortly before bought with his father Charles, and on which he planned to produce eggs and raise his family.

For the next decade or so, Charlwyn Farm (named for Charles and his wife Wynfred) was by and large a one-man enterprise that sold its eggs to



Inside a poultry shed at Barnsley Farming, where thousands of layers are hard at work

the small corner shops of the time. However, the 1970s brought the dawn of the age of the supermarket – outlets that needed more eggs than Barnsley Farming could supply – and Barnsley Senior accepted an offer to become a contract producer for Stein Brothers, the business that grew into the countrywide supplier Golden Lay.

The business ticked over until the late 1990s when Barnsley Farming faced another significant change. Golden Lay had been bought out and unbundled and the new owners were upfront about the fact that they could not guarantee future support for the contract layers. By then, Kevin Barnsley had joined his father on Sanctuary Farm, the land Warwick bought in 1970 in the Dargle Valley. Concerned about the future – “we had 70 000 hens at the time; that’s a lot of eggs to suddenly find a market for!” – Barnsley convinced his older brother Robin to buy out their father, who wanted to retire, and join the business as his equal partner.

Robin came from a corporate banking and finance background, while Kevin had a degree in animal and poultry science, and experience in genetic selection (gained at Ross Breeders) as well as customer-service



Kevin Barnsley (right) alongside members of Dargle Conservancy and Amanzi Ethu Nobuntho respectively. Cofunded by the state and a number of NPO/NGOs, they work on catchment improvement



KwaZulu-Natal Conservancies Association (Conservancies KZN), while Robin is the chairman of the TopLay board and an honorary life president of the KwaZulu-Natal Agricultural Union (Kwanalu). They are also proud and active members of the Dargle and Midlands conservation groups, and have a long history as members of SAPA and of the Egg Board. "We believe in participating in the bigger-picture stuff," is how Barnsley puts it.

Motivated by the extreme hardship that Covid visited on the Lions River village community in 2020, Kevin helped mobilise the local conservancy to raise donations from fellow farmers and distribute food and other



Packaging with a conscience

Barnsley Farming is pushing hard to reduce its dependence on unnecessary, wasteful and environmentally unfriendly packaging. In other words, less cardboard, less plastic, less waste.

"This is not easy," says Barnsley. "It means a lot of care and commitment from everyone who handles the eggs – from our staff to the store packers – and some retailers sadly only pay lip service to this type of endeavour."

In addition to instilling the right behaviours and mindsets, the food-safety aspect of less packaging has to be managed. There is, for instance, no glass in the Merrivale packhouse, other than four windows that are coated with a plastic membrane. There are also no toxins of any sort in the facility with only certified food-safe cleaning products being used. The same care and forethought are applied on the farm.

"We're on a never-ending journey to reduce our impact on the environment," says Barnsley. So, given that eggs need some form of packaging for safe transport and merchandising, Barnsley Farming, along with TopLay, makes sure egg packs earn their keep by printing useful information on them. 📄



Examples of information on egg packaging. The shape of the mountain overlooking the farm is referenced in the Dargle logo



Barnsley Farming has embraced minimum-waste packaging to shrink its carbon footprint and be more environmentally friendly



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necessities to the families living there. The system kept political interference at bay and helped to sustain the community until restrictions were finally lifted. Barnsley Farming's involvement did not end with the pandemic, however. "Our association with the people of Lions River now entails sustainable youth development and employment projects," says Barnsley.

Through the Future Farmers Foundation, Barnsley Farming has found a way to combine business and social impact. The Foundation gives young people with the will and aptitude for a career in agriculture opportunities to develop by placing them in internships on working farms.

"We get such pleasure out of young people coming through the farm and finding careers with us or even



Sne Mathe is a former intern who has since been employed fulltime. Her position involves food safety and HR functions

Nelly Dlamini came to Barnsley Farming as an intern through the Future Farmers Foundation and now has a full-time job gathering and processing payment data



Barnsley uses pneumatic Dunnage bags to stop load-shift and unnecessary damage to eggs in transit

others," says Barnsley. He mentions Londiwe Dlamini who, after four years with Barnsley Farming, was offered a 12-month internship with Nelson Poultry in Kansas in the US. Her departure has created an opportunity for Ziyanda Njoli, who stands a good chance of getting similar international exposure once Dlamini returns.

Sne Mathe currently works in the

packhouse where she shoulders responsibility for food-safety compliance and occupational health and safety. She has also taken on an HR role.

Her colleague Nelly Dlamini gathers and processes the data that underpins quality control, supplier compliance and distribution logistics, while on the farm Silindile Ngubane is Barnsley

Farming's first female tractor driver.

"No amount of money can buy this sense of being a family and of providing a place where talent and potential get recognised and channelled towards business sustainability," says Barnsley. "It's like a beehive or an anthill here on the farm. We all do all we can to contribute to the greater good." 🌱

MEMBERS' NOTICEBOARD

The latest reports and analyses, summarised for a quick overview

Compiled by **Michael Acott**

CHICKEN STILL SA'S MOST AFFORDABLE MEAT

DESPITE SUFFERING THROUGH the worst year in its history, the poultry industry ended 2023 with its record intact for producing South Africa's most affordable meat.

And, in a year of rising food costs, producer prices of chicken were consistently below increases in food-price inflation.

These achievements are evident in SAPA's Key Market Signals statistics for the fourth quarter of 2023, which puts the whole year in perspective.

The industry was battered in 2023 by loadshedding, failures in other infrastructure such as water and transport, and the most severe outbreak of avian influenza (bird flu) that the country has ever experienced. These combined into huge cost increases that turned profits into losses and forced the closure of a number of smaller businesses.

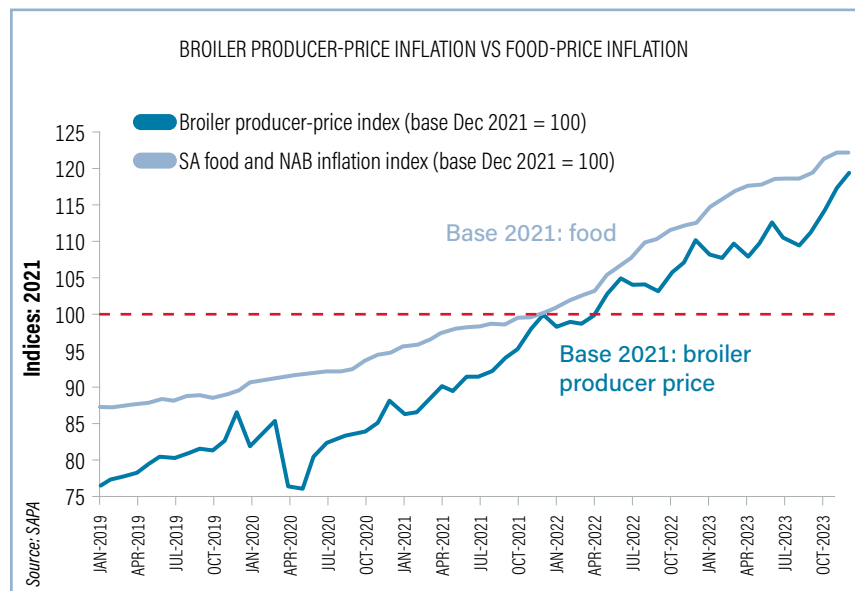
Yet, at the end of that disastrous year, chicken was still cheaper than pork, its nearest rival, and way less expensive than beef. Chicken is far more popular than pork, and accounts for 66% of the meat consumed in

South Africa. Nevertheless, pork is occasionally cheaper than chicken for brief periods.

Eggs have consistently been a cheaper source of animal protein than pork and chicken on a rand/kg basis, but eggs ended the year more expensive than both because of price rises as bird flu resulted in market shortages. Chicken supplies were supplemented by imports of millions of hatching eggs.

At the end of 2023, the producer price of chicken averaged R33.24/kg, a 6% increase on the previous quarter. Pork and egg prices both rose more steeply, pork to R37.26/kg (up 13.1% quarterly) and eggs climbed 32% to R39.92/kg at producer level.

A five-year graph comparing chicken producer prices with food-price inflation showed that chicken prices have been below food-price inflation every year since 2019. 📊



Cull trade perks up

THERE HAS BEEN a slight revival in South Africa's cull trade this year after the sale of live birds into the informal market plummeted when bird flu struck in 2023.

The cull trade is a feature of the South African poultry business. Older laying hens and broiler breeders are sold live off farms to traders who distribute them in townships across the country.

Since the country's first bird-flu outbreak in 2017, the cull trade has been regulated because of the risks when live birds are transported.

The impact of bird flu on the cull trade last year was marked. What had been a thriving business, with sales reaching 1.8 million in the last quarter



of 2022, dropped to 454 000 a year later.

SAPA's cull-trade report shows a

small recovery in the first quarter of 2024, with sales exceeding 562 000 but still way below previous years. ▶

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Here's what some of them had to say...

It has been a pleasure to have met Exco and you in that fashion. What I appreciate most is the sense of ownership instilled. Growth can be triggered in diverse ways, this, I took as one avenue for one to decide growing. Much appreciated.

- Sipho Mjiako



"I really appreciate that our concerns were listened to and noted. It shows that we are all valued in the business - not only senior management."

- Sam Mofokeng

"Sharing a table with some the most inspirational people in the company, was one of the best experiences I've had at Sovereign!"

- Zimkhitha Jumba

Bird flu cut production in 2023

THE IMPACT OF BIRD FLU on South Africa's chicken output last year is clearly shown in the latest production statistics.

Production in 2023 was the lowest in four years, averaging 20.39 million birds per week, according to SAPA's broiler-production report for January 2024.

Chicken output had increased steadily from 20.45 million birds per week in 2020 to 21.32 million in 2022. Then bird flu struck in 2023, and production dropped 4.4% on an annual basis to 20.39 million birds per week last year.

The lowest production months were June, November and December, when the total was down to 18.9 million per week. Output rose again in January

2024, averaging 20.32 million as the hatching eggs imported to bolster supply resulted in chickens reaching slaughter weight.

National chicken consumption dropped 2% to 2.1 million tons in 2023, with imports rising to account for 19% of the chicken eaten in the country.

ANNUAL BROILERS PRODUCED

Year	Total	% change	Avg./per week	% change
2020	1 069 645 984		20 452 676	
2021	1 090 271 728	1.9	20 923 753	2.3
2022	1 112 718 865	2.1	21 334 419	2.0
2023	1 063 395 564	-4.4	20 388 792	-4.4
Jan 2024	89 991 103		20 320 572	-0.3

Source: SAPA

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Chicken producer prices down in January

BROILER PRODUCER PRICES dropped in January 2024 with the annual reduction in demand after the December peak.

SAPA's broiler producer-price report for January shows that the average producer price, including both fresh and frozen chicken, was R32.16/kg, down from R33.98/kg in December.

The average producer price for frozen chicken, which made up 85% of production in 2023, was R30.43/kg in January, down from R32.41/kg in December. Fresh chicken, which accounts for the other 15% of annual production, dropped to R41.41/kg in January after peaking at R41.63/kg the previous month.

The largest component of frozen chicken is individually quick-frozen (IQF) portions. The producer price of IQF chicken was R31.38/kg in January,

down from R31.86/kg in December.

In the fourth quarter of 2023, IQF portions accounted for 43.7% of production volume. This was followed by frozen cuts (16.9%) and frozen sundries/bones (12.3%). The largest fresh product was fresh cuts at 7.1%.

The report's feed-price indicator, demonstrating trends in feed prices, showed that both broiler and breeder feed prices were noticeably lower in January than they had been in January 2023. This is despite a slight price increase from December to January.

In January 2024, the broiler feed-price indicator was R8 507/ton, which was 8.9% below January 2023. Similarly, the breeder feed-price indicator was R7 250/t, 10% lower than 12 months previously.

On a quarterly basis, the broiler feed-price indicator dropped 2% in the

last quarter of 2023 compared to the third quarter. The breeder feed-price indicator was 2.6% down in the final quarter of last year.

Globally, food prices are recovering from the sharp increases in 2021 and 2022 following Russia's invasion of Ukraine, which increased feed, fertiliser and energy prices around the world.

According to the UN's Food and Agricultural Organisation (FAO), global food prices dropped 13.2% last year. 📉



ANNUAL REALISATION (R/KG)

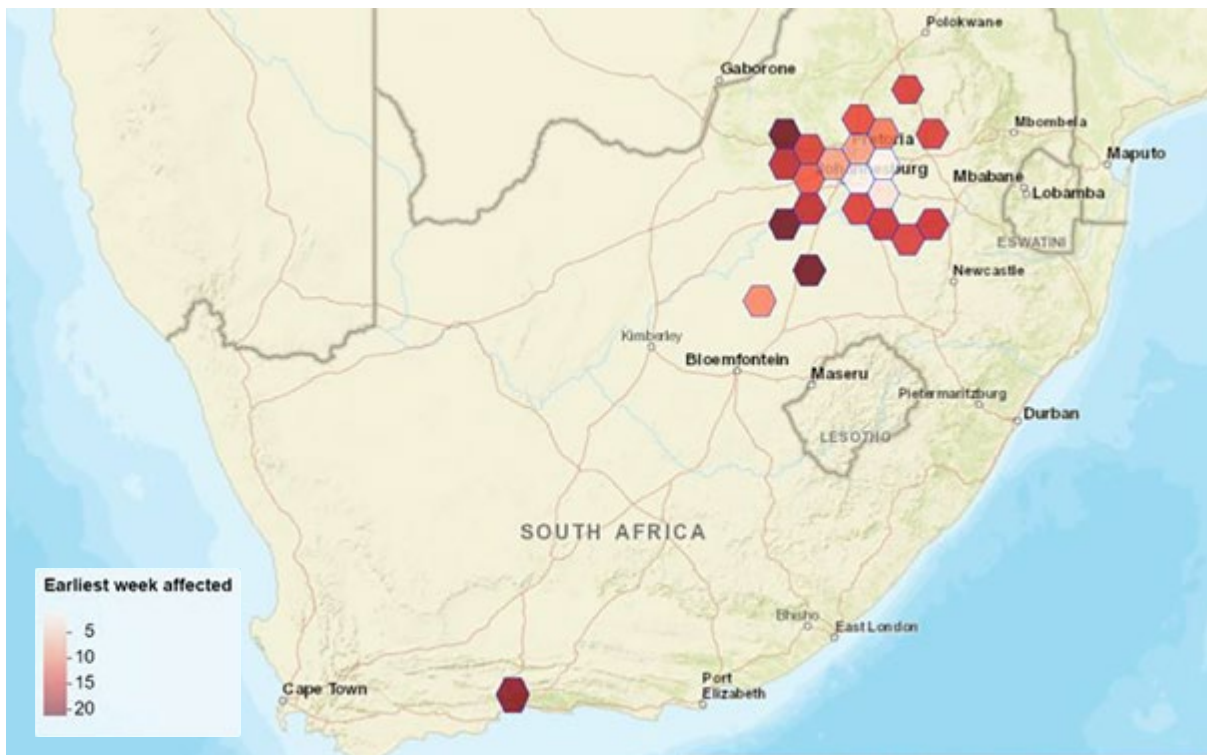
Year	Total	% change	Fresh	% change	Frozen	% change
2020	23.52		31.81		22.43	
2021	26.18	11.3	33.80	6.2	25.09	11.9
2022	29.36	12.1	36.38	7.6	28.22	12.5
2023	31.70	8.0	40.15	10.4	30.25	7.2
2024 YTD	32.16	1.4	41.41	3.1	30.43	0.6

Source: SAPA

SA'S BIRD-FLU STRAIN KILLS OVER 8M BIRDS



H7N6 OUTBREAK SPREAD (29 MAY 2023 TO 5 JANUARY 2024)



Source: SAPA

SOUTH AFRICA'S UNIQUE H7N6 strain of avian influenza (AI) has caused more than 80% of poultry deaths since bird-flu outbreaks began in March last year.

SAPA's AI surveillance report for the first three months of 2024 shows that just over 10 million birds died on broiler and layer farms last year in outbreaks of two bird-flu strains – H5N1, which has been spread world-wide by wild birds, and the H7N6 strain found only in South Africa.

The H5 strain broke out in March 2023, and has so far caused the death

of 1.7 million chickens. The H7 strain broke out in June, but has been far more deadly – it resulted in the deaths of 8.3 million birds.

The report says the H7 strain has been very difficult to control using conventional biosecurity approaches. It is apparently spread between flocks by direct transmission – possibly on the wind, probably in feathers – and outbreaks have additionally been linked to movement of vehicles between farms.

In contrast, the H5 strain is usually introduced onto farms by wild birds

and shows limited direct farm-to-farm spread.

The current H7N6 strain does not infect or affect wild birds.

By March 2024, no vaccination programmes had started, although two vaccines had been registered against H5N1. No vaccines had yet been approved against the H7 strain.

The report repeats SAPA's concern that the vaccination protocols set by the government are so onerous that most poultry producers would be unable to meet the requirements to vaccinate their flocks. 📄

Poultry prices peaked in 2023

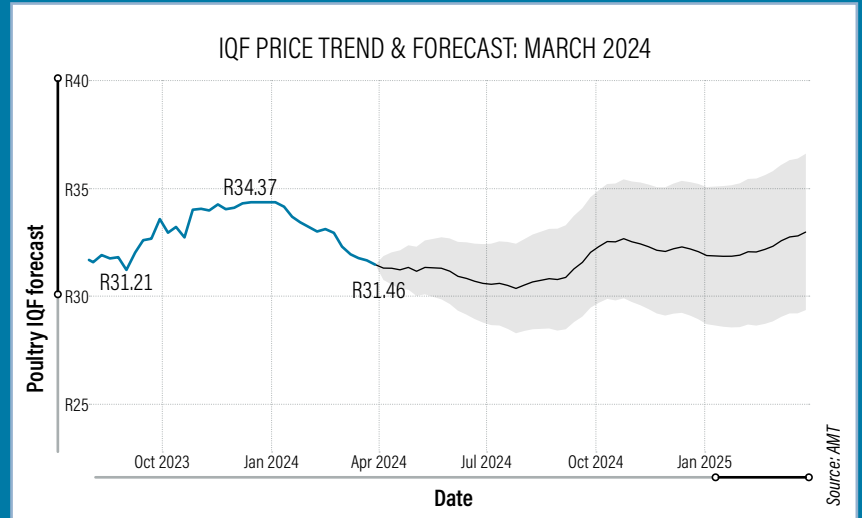
POULTRY AND OTHER MEAT prices are likely to remain lower in 2024 than the peaks reached at the end of 2023, according to agricultural trend-analysis company AMT.

AMT's livestock report for the first quarter of 2024 shows the expected price trends to January 2025. Producer prices of beef, pork, lamb and poultry all showed the usual seasonal drop in January and are not expected to rise during the year to the prices reached last December.

Producer prices for poultry in the first three months of 2024 were slightly lower than in the last quarter of 2023. Frozen poultry averaged R36.14/kg over the quarter, 0.64% below the previous quarter. Fresh poultry averaged R36.86/

kg, a drop of 0.69%, while individually quick-frozen (IQF) portions averaged

R32.85/kg, which is 0.68% below the previous quarter, AMT said. 📄



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Most chickens in North West by far

SOUTH AFRICA HAD MORE than 166 million chickens on 973 poultry farms in the first quarter of this year.

This is according to SAPA's provincial distribution report, compiled from information provided during its bird-flu surveys.

North West province has the most chickens (36.9 million) and the most broilers (33.4m), while Gauteng has the most egg-industry birds (7.3m).

Of the 973 poultry farms on SAPA's database, 684 are classified as large commercial farms (more than 40 000 birds in the broiler industry and more than 50 000 birds in the egg sector).

Of the large producers, 48 have

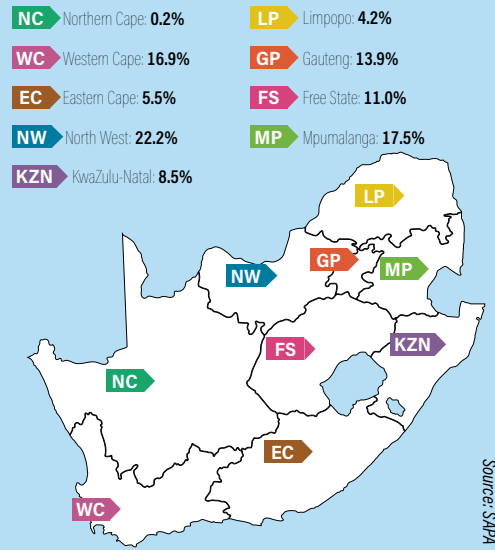
more than 500 000 birds, nearly all in the broiler sector where 17 producers have more than 700 000 birds each.

SAPA has 77 farmers with fewer than 5 000 birds on its database.

"It is of serious concern to SAPA that no farm has been approved for vaccination yet and no HPAI-challenged farm has had its quarantine lifted, despite a number of submissions for both. This confirms our view that the protocols need to be reviewed with the aim of making them more feasible for more producers to implement.

"Failure to vaccinate will result in further uncontrolled HPAI outbreaks in South Africa," SAPA said.

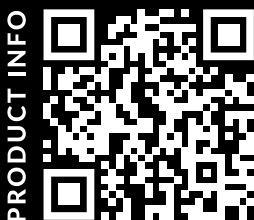
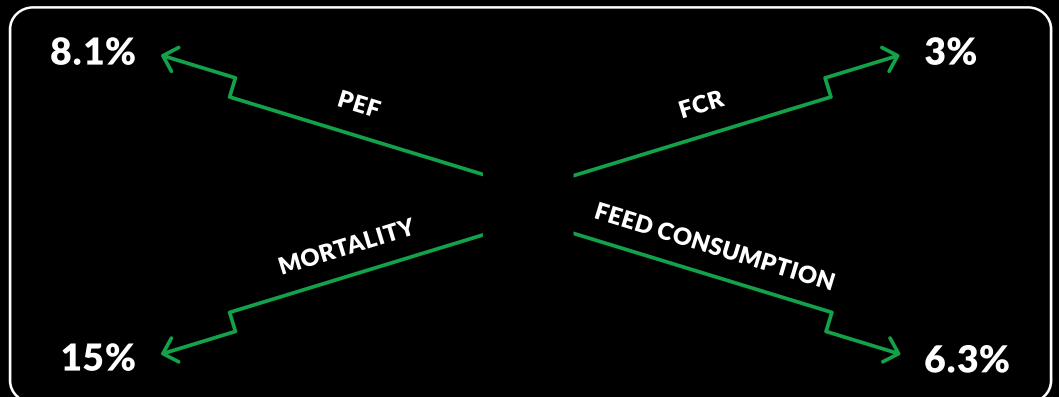
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*Data based on recent trials done and protocols implemented by 'SSS'. Excludes dozatron and installation.

FEED PRICES GOING UP

FEED-INGREDIENT PRICE FORECAST: AUGUST 2024

Feed ingredient	Randfontein		Pietermaritzburg	
	Price (R/ton)	y/y ** % change	Price (R/ton)	y/y ** % change
Yellow maize	4 476	24.5	4 626	23.5
Sunflower oilcake	6 750	10.7	6 750	10.7
Soya meal	9 100	2.2	9 300	2.2

** August 2024 compared to August 2023

Source: SAPA

YELLOW MAIZE IS EXPECTED to be 24% more expensive in August than it was at the same time in the previous year. The prices of sunflower oilcake and soya meal will also rise, but not to the same extent.

This is the forecast in SAPA's feed-ingredient report for April 2024. The report is compiled by an independent feed consultant and is published for guideline purposes only.

In August this year yellow maize is expected to cost R4 476/ton at Randfontein, 24.5% more than in August 2023. The price at Pietermaritzburg is predicted to be R4 626/t, an increase of 23.5%.

The forecast puts sunflower oilcake at R6 750/t (+10.7%) at both centres in


August. Soya meal is expected to cost R9 100/t (+2.2%) in Randfontein and R9 300/t (+2.2%) in Pietermaritzburg. Local prices have followed international prices but from an export-parity price to import-parity price.

After heatwaves damaged crops earlier this year, the 2024 maize harvest will be significantly smaller than the previous year – the latest estimate is 13 million to 13.5 million tons compared to 17 million in 2023.

The report says the crop should be enough for local consumption, but any exports to South Africa's northern neighbours will put significant pressure on local stocks and keep prices at Cape Town import parity.

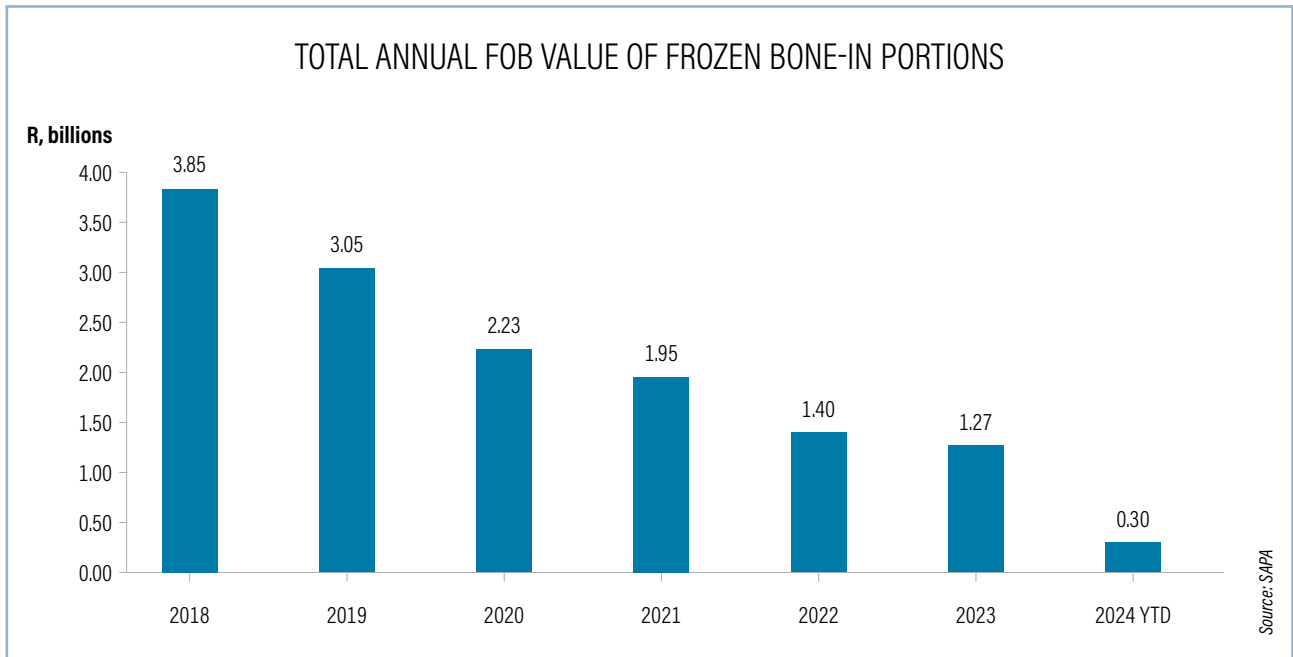
Local SAFEX prices in rand have

increased, mainly due to the fact that the market considers the current crop to be very tight and therefore local prices have been moving from export parity to Cape Town import parity.

SAPA's regular feed-ingredient reports contain a wealth of information for poultry farmers. The reports provide an overview of international grain markets and prices, and the rand exchange rate. Charts and graphs show expected prices for multiple broiler- and layer-feed categories, as well as multi-year feed-price history. 



CHICKEN IMPORTS ARE DOWN AGAIN



THE DECLINING TREND in chicken imports seems set to continue in 2024.

First-quarter import statistics indicate that 2024 is likely to be another year of lower imports, including the bone-in portions that most concern poultry farmers.

For the first three months of this year, chicken imports totalled just over 98 000 tons, 20% less than the same period last year. Frozen bone-in portions such as leg quarters made up 15 000 tons of that total, down 41% on 2023 imports.

Poultry imports peaked in 2018, and have dropped every year since then. This has been due to a combination of antidumping duties secured by SAPA, the trade disruptions of the Covid-19 pandemic, and the spread of bird flu in

producer countries

In 2018, South Africa imported 566 000 tons of poultry worth R6.5 billion. Bone-in portions totalled 287 000 tons and cost R3.85 billion. By 2023 poultry imports were down to 415 000 tons worth R4.8 billion, including 287 000 tons of bone-in portions costing R1.3 billion.

Another feature of the first quarter import statistics is the mixed success of the government's plan to increase chicken imports by offering tariff rebates to importers. SAPA has strongly opposed the rebates scheme.

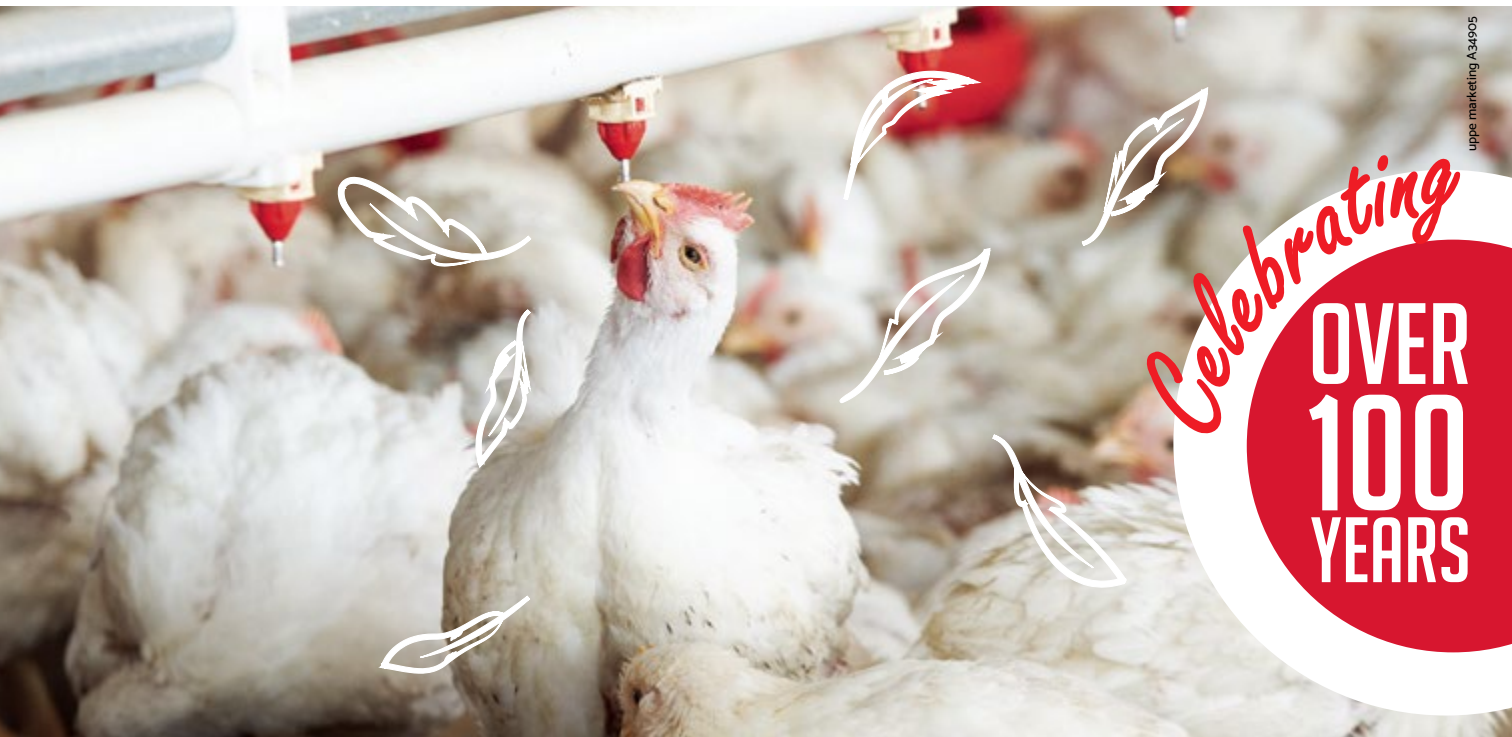
The first rebates were in place from January to March 2024. The incentives appear to have worked for the lower-volume imports of carcasses and boneless cuts, but not for the larger categories of offal and bone-in portions.

Imports of carcasses (+28.7%) and boneless cuts (+8.3%) were higher than the first quarter of 2023. Imports of frozen carcasses totalled 3 958 tons over three months, and boneless cuts came to 1 387 tons.

Offal imports were 20 792 tons for the quarter, down 12% on 2023 despite a sharp rise in March. Bone-in portions totalled 15 328 tons, 41% below the previous year. 



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RISING FROM THE ASHES

FROM THE

When your birthday coincides with a business milestone, you know that things are looking up. That was the experience of Charles le Maitré, CEO of Kuipers Group on 31 March, when he also celebrated the hatching of around 104 000 chicks at their rebuilt Koster facility, eight months after the building was destroyed in a fire

By **Charmain Lines**



The damage to the hatchery after the fire is clearly visible in this aerial shot

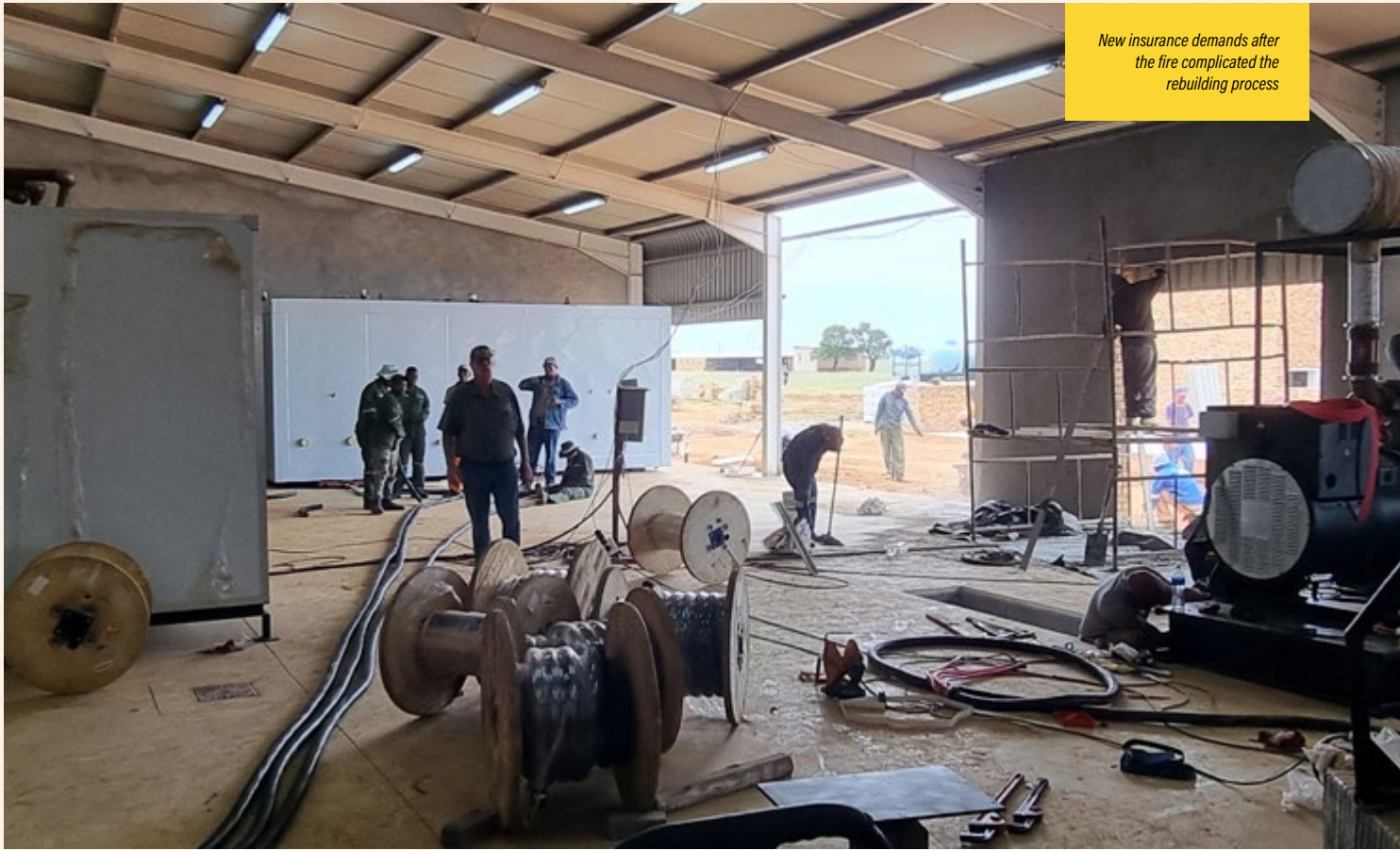


Replacement equipment were ordered soon after the fire and started arriving last November

Photographs: supplied



New insurance demands after the fire complicated the rebuilding process



EAGLES PRIDE HATCHERY suffered a devastating setback on 29 July 2023 when a fire broke out at its Koster facility. There are two hatcheries on the premises, but quick thinking and an efficient response saved the one. Sadly, the entire second hatchery, which hatched on average 600 000 chicks per week, was destroyed and had to be demolished. The damage came to over R100 million; the silver lining being that the hatchery was empty of chicks at the time.

The disaster had a significant impact on the ability of Eagles Pride Hatchery to meet the needs of its customers, but the disruption was resolved in a matter of weeks with short-term support from other industry role players. "We remain grateful that despite the highly competitive nature of the industry, we had support from all corners in our time of need, including

our customers' understanding," says Le Maitré.

The commitment to rebuild was never in doubt. "We have customers, employees and a greater community that rely on us," notes Wes Schwimmbacher, director of the broiler division of Kuipers Group. "Upfront we made it clear to employees that we don't want any job losses because of the fire, and we are proud to have succeeded in this."

Some Koster employees were temporarily assigned to other work areas where they were not performing their normal tasks. Everyone, however, returned to their usual jobs during March as all hands had to be on deck for the startup of the new hatchery.

Due to the long lead times involved, equipment orders were placed very soon after the fire and the Petersime machines started arriving at end of



November 2023.

The building work met with significant complications due to new insurance requirements that demanded numerous fire walls to be built into the structure. The shell of the new building was complete by February this year and installation and commissioning of the equipment took place while the internal works were being completed.

By the middle of April, the ancillary services around the new building were still under construction, including offices, showers and the workshop.

The first hatch, which coincided with the CEO's birthday, delivered record results, says Schwimmbacher. "The two machines that hatched on 31 March each have a capacity of 57 600 eggs. The overall hatch rate for the day was 89.22%; within that our prime flock hatched at 90.53% with a 95.22% hatch of fertile eggs



Kuipers Group used the opportunity to update its facilities with the latest technology



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(HOF) rate. The hatches from these latest-edition single-stage Petersime machines have been phenomenal: every hatch day is better than the one before."

Says Le Maitre, "I'm proud of and deeply grateful for the passion, dedication, hard work and sacrifices from our team. Thanks to them, our hatchery was rebuilt in record time and to world-class standards. We are pleased to be in a position to say to all our customers that while we know the last year has been disruptive, we are back at full capacity and thankful for their support. We remain committed to deliver the quality and quantities that they expect from Eagles Pride Hatchery." 📷



The new hatchers are delivering record hatch rates



Tech talk

The hatchery that burned down was 13 years old and Kuipers Group took the opportunity to update its equipment by installing the latest generation single-stage incubators and hatchers as part of the rebuild project. While the facility's capacity has remained the same, the new X-Streamer machines know which eggs are on board and use this knowledge to maximise incubation rates. 📷



Wes Schwimmbacher



CROWNING ROYALTY

THE LIFE OF A BREEDING ROOSTER



To get the perfect chicken for the market, commercial broiler producers invest in breeding the best possible parent stock – the hens that lay the eggs that hatch into the broilers we eat, and the prize roosters who pass on their superior genetics to their harem of hens.

Diane McCarthy investigates what lies behind the cock's crow

CHICKENS COME IN MANY SHAPES and sizes, all unique in their own way. The laying hens in the commercial broiler industry lay the eggs that provide millions of South Africans with the most affordable meat, while those in the commercial egg industry lay the table eggs for our breakfasts. But none of this bounty would be ours to consume if the big boy in the henhouse, Mr Rooster, wasn't around. Not only does he fertilise the broiler eggs to give us our broilers, he plays a crucial role in the structure of the henhouse. By establishing hierarchies and maintaining order, he keeps the flock in check.

Who is this rooster? How do the commercial producers decide which rooster to employ?

While small-scale producers and backyard farmers might have a variety of breeds on their farms, most of the chicken we see on our supermarket shelves comes from the big players, the commercial, integrated producers.

To maintain economic viability, and provide the population with affordable protein, all commercial producers have to ensure uniformity in their flock. To do this, they breed with a genetically pure line. This means they take a single ancestor, and through a process of selection and self-fertilisation, they create a uniform flock.

Rainbow's breed specialist, Kobus Barnard, told us how his team makes sure they have the best rooster for the job.

"Rainbow works with the Indian River breed of chicken, obtained from Aviagen in the UK," says Barnard. "We chose the Indian River breed because it has great genetic potential. It's known for producing good reliable breeders and strong robust broilers."

Globally, there are two leading genetic-stock companies, namely Cobb and Aviagen. Cobb markets various breeds, including Cobb 500 and Cobb 700, while Aviagen has

They start small but the rooster rules the hen house



three available commercial breeds: Ross, Arbor Acres and Indian River – Rainbow's breed of choice.

Breeding in this way is a significant investment and is only viable if you are breeding at scale. "The importation of the genetic stock is expensive and it needs to be in constant supply. About 60 000 grandparents are needed annually to cater for the broiler requirements at Rainbow," explains Barnard.

The birds are bred from the great-grandparent stock, creating the grandparent line, which are sexed and then bred again to produce the breeding stock, the parent line. Every parent bird carries all the traits of the great-grandparent. This is the pure line.

Once the parent-line birds are sexed, they are reared separately for the first 21 weeks. The sexes have

differing nutritional requirements, with males fed a slightly different diet to their female counterparts to cater for their unique energy and protein needs. A breeding rooster has to be at least 20% heavier than the hen, otherwise she is unlikely to breed with him and will even push him off her back before mating can happen. But he can't be too heavy as he might damage the hen while breeding.

To find the best males, those up to the task at hand, the birds go through a number of selection programmes.

At four weeks the birds are weighed and measured. The bell curve, also known as the normal curve, is used, where the average measurements of the whole are clustered around the centre of a bell-shaped graph. The lightest 25% and the heaviest 25% of

Illustrations: Elen Heydenrych
Photograph: Shutterstock



males are culled. The remaining 50% are divided into heavy, medium and light and left to thrive for another eight weeks. During this period, the skeleton develops fully and gradually the birds grow their tissue, muscles and organs to maturity. They are closely monitored, and the feed formulation is constantly adjusted according to their needs.

At 13 weeks another selection is carried out, and if the light birds haven't caught up, they are taken out and sold to the live cull market. The focus falls on the rest of the flock, to try and bring them in line with one another, to create a uniform flock to take into production, all at the same size and the same level of sexual maturity.

"For economic viability, they need to reach sexual maturity at roughly the same time," explains Barnard. "Plus, if your birds are not of a similar weight the bigger birds will dominate the

smaller ones and they will fall away. We try to prevent that happening through selection."

At 16 weeks, these chosen birds are put on a special pre-breeder diet tailored to their growth profile, rich in digestible amino acids to help them build extra reserves and to get them to sexual maturity.

At 20 weeks a final, visual selection is made. Any males who don't make the cut are sold on to the live market as meat.

At 21 weeks the top crop of roosters reach maturity and are transferred into the poultry house a week ahead of the females, because they are territorial and need to establish themselves in the house. When the females arrive, there is a bit of fighting among the males as they choose the females they want, in order to establish their harem. The ratio averages out at about 14

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females per male, starting at 1:10, but tapering off over time.

The hens are stimulated through light and feed to get them into production, and by the time the male is mature and his sperm is viable, the hens start producing eggs, usually at the 25-week mark. The rooster then goes onto a male ration for the remainder of his productive lifespan to sustain his vigour and keep his weight in check. He gets a slight feed increase every four to five weeks to maintain his performance. An Indian River rooster has an impressive fertility count, averaging between 92 and 94 percent.

These birds mate for life. There is no need to isolate them within their family

Roosters are placed in the poultry house a week before the hens arrive, to establish the hierarchy of the males




Kobus Barnard

groups. "They walk around freely within the poultry house," says Barnard. "The hens know who their male is. If a rooster is injured and unlikely to survive, he has to be removed immediately. The hens know if their rooster is still around. Once the injured rooster has left the house, the other males in the vicinity will fight for his harem, but the hens will not sit with another rooster while they can still hear his crow."

And the rooster crows a lot. He crows to assert his dominance, zealously guarding both his territory and his property, his hens. "He crows to warn the other roosters to stay clear of his hens," says Barnard, "but he also warns the whole henhouse of imminent danger, should he sense a threat."

The Indian River bird is bred in such a way that it maintains its fertility throughout its lifetime. But the lifetime of a commercial chicken is short. At 64 weeks the rooster is no longer economically viable, so the whole team, both roosters and hens, is retired and sold as meat to the live cull market.

After the house is cleaned and sanitised, the process begins anew. New roosters are selected and they in turn select their mates and strut their stuff, once more ruling the flock, keeping their hens in check.

By maintaining law and order in the henhouse, those roosters make sure we have a continuous supply of good eating chicken to grace our Sunday lunches and dinner tables. 



'IT IS ALL ABOUT THE IMPACT'

Our cover star, entrepreneur Lerato Nkhumane, wears many hats, as self-taught poultry producer and owner of LF Poultry in North West, but also as educator, author, and champion for female farmers

Photographs: W3ays Photography

By **Melinda Shaw**

SPOTTING A GAP in the market is what led North West educator and entrepreneur Lerato Nkhumane to dip her toe into poultry production and six years on her flourishing business proves that her instincts were right. "I come from an early-childhood development background, but I'm very ambitious and always on the lookout for business opportunities," she says. "Working with children is my first love, but I always tell my family that poultry farming chose me!"

While she is still active in educational initiatives and has even written an award-winning children's book, Nkhumane is now running LF Poultry in Lefatlheng, Mathibestad at the same time.

The company was born in 2018 in her mother's garage, with a box of 102 layer chicks. It took a year before Nkhumane started running it as a business, during which time she learnt all she could about poultry. She is not the first farmer in her family, although she never knew the grandparents who kept cows and chickens. "I'm told that my grandfather on my dad's side



LF Poultry has steadily grown since Lerato Nkhumane started it in her mom's garage with a box of 102 layer chicks



Nkhumane uses every opportunity to market her business - on this occasion at a golf day held in Centurion



LERATO'S LESSONS

- Roll with the punches. "We never know when the next disease outbreak or other challenge will come. Embrace the difficulties, because those are the lessons that provide knowledge."
- Keep learning. "Draw inspiration from Youtube videos or go directly to other people who run successful businesses."
- Your flock's nutrition is key. "We use Meadow Feeds for the best nutrition for both layers and broilers." 📺

Nkhumane with her mother and business partner, Violet Telo



raised chickens and sold them to the community, but that was before my time and unfortunately I never got to see for myself and learn from him."

The internet, especially Youtube, were her main sources of knowledge starting out. "I had to start from scratch and learn the basics, so I spent a lot of time doing research and then applying those lessons in practice."

This learning is ongoing, she says, and she credits other farmers, and poultry-farmer Whatsapp groups where knowledge is shared daily, as her go-to sources for information and advice.

Learning to raise chickens created a new bond between Nkhumane and

her mother, Violet. "We became very close, as we learnt all the ins and outs through trial and error. Everyone supported us, making the whole

household budget to keep the business going. He never once complained!"

In the years since, the business changed and adapted, even closing down twice. "First time was when I had a difficult pregnancy – I was sick the whole time and couldn't work at all," Nkhumane, says. The baby is now a toddler, and LF Poultry has shown that slow and steady wins the race, although every step forward brings

new challenges. Until its flock of 3 500 Hyline and Potchefstroom Koekoek layers started laying in May this year the company sourced table eggs from third-party suppliers. On the meat side LF Poultry produces 10 000 Ross 308 broilers per cycle. ▶

'Having other people - particularly women - create their businesses through mine changed the game for me'

start a very positive experience," she says. When Covid hit in 2020, their clientele grew as the community rallied round. "My sisters helped with selling eggs to their friends and colleagues, and my husband had my back with financial support, while I was using our



Lerato Nkhumane shares knowledge about poultry farming with students in the Tsakane Agri Produce programme

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The business is slowly moving towards commercial production, and Nkhumane has started collecting all the required compliance documentation. LF Poultry's clients span the spectrum of the informal and formal markets and it supplies franchise supermarkets and independent restaurants, including Roots butchery in Sunnyside, Pretoria, and PicknPay Silverton. For now, it employs a team of three workers.

When asked to identify her biggest business challenges, Nkhumane names the cost of feed, but also the financial-management skills she had to learn. "I used to do it 'freestyle' and that was not wise at all because I'd end up not knowing how much I make. It was very much a hand-to-mouth situation,"

Macray Manyoza has been with LF Poultry from the very start and oversees the day-to-day running of the chicken houses



she says. "All this has changed as I now have a professional accountant who is handling all of that and also guiding me."

Looking back, Nkhumane says her most significant milestone was the day when resellers became part of her business. "Having other people – particularly women – create their businesses through mine changed the game for me." She is proud of having impact on other lives and that, she says, made her realise that she was ready for growth, so that she can empower more women to go into poultry farming. "For me, growth is all about the impact on the next person," she says.

There is much to be proud of, and finding shelf space with a retailer as a small-scale producer is another achievement she cherishes. "No matter how small my business is, I managed to get my products on shelves and to the people. If I can do it, so can others, and I aim to share what I have learnt."


'MY FAVOURITE CHICKEN RECIPE'

I love chicken-feet soup, and snacking on chicken necks. I also enjoy boiled eggs – and my best tip for easy-to-peel eggs is to add slices of lemon to the water while boiling." 📌



Photograph: Shutterstock

What does the future hold for LF Poultry? If Nkhumane has her way, it will keep growing and creating jobs, so that she can be a game changer who teaches women how to become successful poultry farmers.

"I am proud that families benefit from my business because I was able to create jobs for breadwinners, who in turn can put food on their tables. This for me is priceless. It's the impact for me before the money. Money will follow. For now we're building something that will be there for generations." 

LF Poultry produces 10 000 broilers per cycle



CONTACT DETAILS

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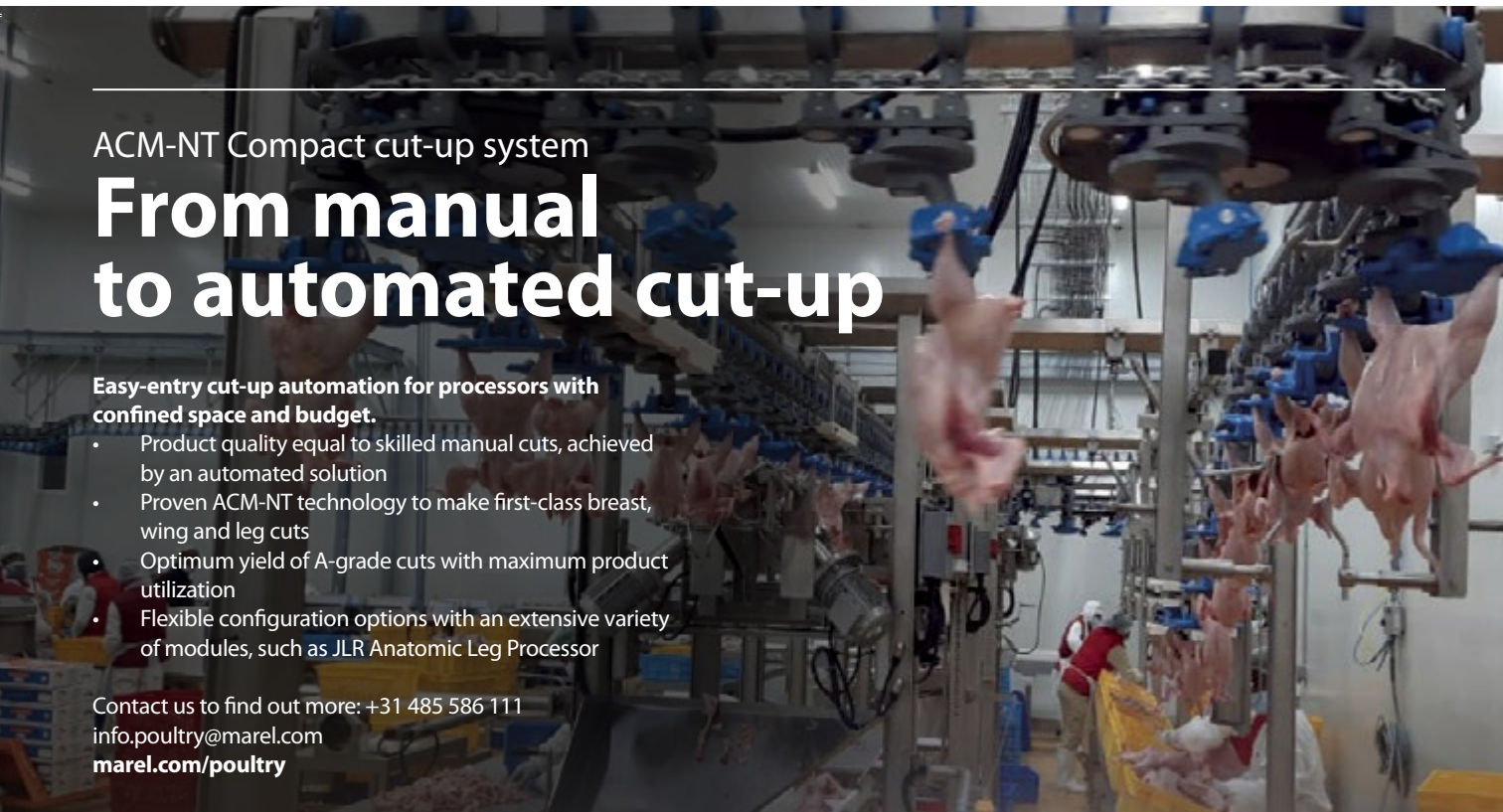
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THE MYSTERY OF THE ARAUCANA CHICKEN

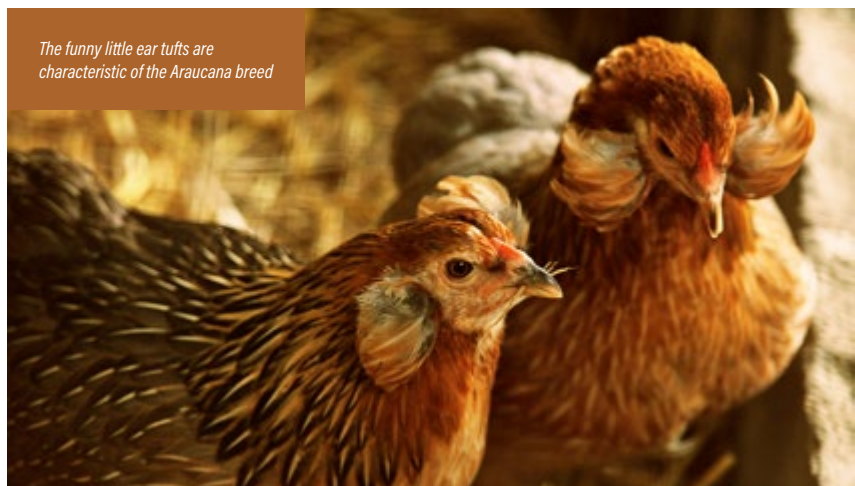
The origin of this breed is a murky, fascinating mystery. Theories place it as the lynchpin of a mass migration across the oceans. By **Dan Nosowitz**

OF ALL THE CHICKENS in the world, one of the weirdest is the oft-tufted South American breed known as the Araucana. Its origin continues to puzzle scientists.

Every chicken you buy, whether it's a Cornish game hen from the UK or a black chicken from China, is a domesticated form of the red junglefowl, a bird native to south and southeast Asia that looks basically like a slightly more elaborate chicken. The junglefowl (what a name!) was domesticated at least 5 000 years ago, probably first in China, a process that involved cross-breeding the more docile birds until a new, easier-to-handle species emerged.

Today, there's a fairly wide variety in chicken breeds. They are different sizes, have different coloured skin and feathers, make different noises, lay different coloured eggs.

One of the oddest, in appearance and in its questionable timeline, is the Araucana. The long-held theory, according to most historians, is that this breed was probably first bred by the Mapuche people in Chile. The Araucana lays brilliant blue-turquoise eggs, and sometimes demonstrates



The funny little ear tufts are characteristic of the Araucana breed

adorable little Civil War mutton-chop-like ear tufts.

And as weird as these ear tufts are, things get weirder, but we have to dive back in time to get a sense of why – all the way back to Spanish explorer Francisco Pizarro's journey to South America in 1532. Pizarro wasn't the first European to visit the Pacific coast of South America; he was beaten by a few decades by Diego de Almagro. But here's the fact that has long baffled historians: there were, according to some accounts, already chickens in



When Spanish explorer Francisco Pizarro arrived in Peru in 1532, the Incas already kept chickens

Photographs: Shutterstock

South America, and they were an integral part of the lives of the native peoples when Pizarro first arrived in Peru in 1532. Chickens made up a large part of the local Inca diet, and featured heavily in legends and rituals. Historians and anthropologists have long been confused by this – how can something introduced, at most, a couple of decades before Pizarro’s arrival have had such a firm hold on a society?

The leap from there comes from that factual confusion. The basic concept: what if the native South Americans had so thoroughly integrated chickens into their society by 1532 because they had actually had chickens for a much longer period? What if they had chickens before any European contact at all?

Historians and anthropologists, with that in mind, have taken a second look at the origin of the Araucana. It seems to make sense that this strange-enough bird doesn’t come from Europe, since there’s nothing much like it anywhere in Spain or Portugal. With tufted cheeks, no tail at all, and bright-blue eggs, the Araucana is most common just down the coast from Peru, in Chile. The theory is that the Araucana might be a hybrid of European chickens and whatever chickens existed before there was European contact.

And so we come to the rub: there is a long-standing theory, still basically unproven, that islanders from Polynesia did, at some point, make contact with the Pacific coast of South America, long before the Europeans got there. The Polynesians were certainly explorers before the Europeans “found” the Americas, making contact with remote islands from New Zealand to Hawaii. But it’s quite a long trip to get from the South Pacific out to Peru. Still, some are convinced they did it – and the Araucana is right at the center of that theory.

In 2007, a scientific paper was published in *Proceedings of the National Academy of Sciences of the United States of America* stating that it was possible, even likely, that the chickens found in Chile aren’t just a fairly old, fairly isolated Chilean breed of chicken. The study examined the DNA of what’s now known as the El Arenal Chicken Bone, a very old bone found in an archaeological site called El Arenal on the Pacific coast of Chile. This bone was radiocarbon dated to somewhere between 1321 and 1407, more than a



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LEADERS IN PLASTIC POULTRY TECHNOLOGY

Just like the sweet potato, the ancient history of the Araucana remains a mystery today



century before Pizarro wrote about the Mapuche and their chickens. Aha, say the scientists: proof! The chicken pre-dates Europeans in South America!

Even better: that 2007 paper found a specific DNA sequence in the El Arenal Chicken Bone that's shared with samples of chickens from Polynesia. Everyone was very excited about old chickens in 2007; basically every publication with a passing interest in science wrote about it.

(The other main point of reasoning for the pre-European-chickens-in-South-America theory comes from the sweet potato, native to South America, that has been found in the Cook Islands of the South Pacific and radiocarbon dated to 1000 AD, long before any contact with South America is supposed to have happened. Nobody really knows how the sweet potato got there.)

But in 2008, and then again in 2014, studies came out in the same journal that disputed the findings in the 2007 paper, going deeper into the specific,

particular DNA of Polynesian chickens and finding that there is no real connection between the Araucana and Polynesian chickens.

The 2014 paper specifically argued that there were some problems with the radiocarbon dating on the El Arenal Chicken Bone, although that has in turn been challenged by another paper, which has itself been challenged...

So what's the status of the Polynesian-explorer theory now? It is, basically, a mess. There is no scientific consensus on the radiocarbon dating

of the El Arenal Chicken Bone, there is no scientific consensus on the DNA connection between the Araucana and Polynesian chickens, and we still know basically nothing about the timeline and specifics of the various waves of discovery that resulted in the peopling of the South Pacific islands.

One thing's for sure: The Araucana chicken is even more mysterious than it looks. 📷

This article was originally published by Modern Farmer and is reprinted with permission.



Araucanas lay bright-blue eggs



GET THAT BUNNY OFF OUR EGGS!

Words: **Neil McCarthy**

Illustrations: **Jason Bronkhorst**

This year's Easter egg hunt got us wondering: rabbits don't lay eggs, so what are these floppy-eared imposters doing, stealing what should be a gig for chickens?

IMAGINE THE SCENE. It's Easter morning and the children leap from their beds excitedly to hunt for the eggs that have been laid especially for them in a secret part of the home by the Easter chicken. For the last few weeks they have been drawing happy, downy chickens in their classrooms to prepare for this morning. They have been having heated discussions on their playgrounds about whether the Easter Chicken is real or not. "Of course she's real! Where else would the eggs come from??" All conversations revolve around chickens and eggs and how exciting and magical they are. What a boost that would be for the poultry industry. Sales would skyrocket.

It's time for a real debate. Why has the poultry industry allowed the biggest marketing gift of Easter to slip from their hands into the hands of a huge bunny and the chocolate industry? As they grow up kids now carry with them a confused image of eggs and the process that produces them: they think eggs have something to do with over-sized rabbits and on special occasions arrive brightly wrapped and made of chocolate. In later life this can lead to them to retreat from real eggs because they are not

dark brown, sweet, and wrapped in red and gold foil like the eggs they first encountered at Easter. "What are these white things with shells that break, and gloopy stuff inside?" The result: they disengage from poultry entirely because it's too confusing.

When did this over-large rabbit get in on the act, and why wasn't there pushback from poultry producers of the time when the huge bunny first appeared? "No!" they should have said. "Bunnies have no place in the egg business!" It doesn't even make any sense. Bunnies wouldn't know what an egg was if they were hit on the head by one from a passing car. Bunnies have paws which means they couldn't even pick it up, let alone wrap it in brightly coloured foil and develop an elaborate distribution mechanism to ensure that the eggs were delivered throughout the world on a single morning.

On top of having no fingers, bunnies are not very bright. If anyone was capable of pulling off a complicated logistical operation like that, that person would not be a giant bunny. It's crazy. If there is to be a huge friendly animal delivering eggs to

children one Sunday morning in March or April then it should obviously be a huge friendly hen, not some floppy-eared rabbit. We suggest calling her Huggy Henny.

Okay, we know the inevitable pushback will come. Chickens are not very bright either and they also don't have fingers. What makes them better candidates for the symbol of Easter than bunnies? How would they design an international egg-delivery system?

This is where the global poultry industry gets in on the act. They already have such a system which would just have to be tweaked. And ▶



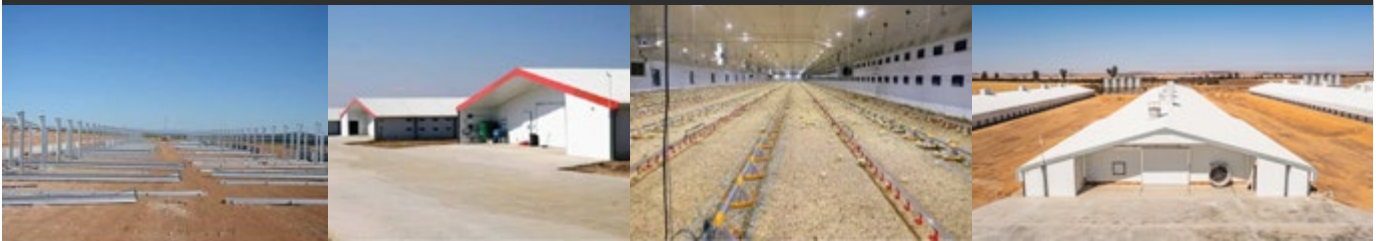
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on top of that we are forgetting that it doesn't have to be real because (spoiler alert!) moms and dads are the real egg-delivery system. There. Problem solved.

But the eggs should be real eggs, not chocolate ones. The push for chocolate eggs is a confusing and illegal hijacking of the image of the egg from its rightful owners, poultry producers and hens!

But even as I write this a thought occurs to me.

What good has the fluffy Easter bunny done for the rabbit industry? More importantly; *is* there even such a thing as the rabbit industry? There isn't really. And why is that? Could it be because the Easter bunny has made it impossible to market rabbits as any source of protein? Because of bunnies being responsible for Easter eggs in the minds of children, they grow up thinking the only things rabbits are a source of are chocolate eggs and cuddly, fluffy thrills on a chilly morning at the start of autumn. They would never think of eating one. So the rabbit industry never had a chance. Alarm bells are ringing now.

If the Easter bunny were an Easter chicken, might the same thing have happened to us? The downy Easter chicken might have made it impossible for children to grow up and see the same animal as something you could roast with potatoes or cook in a casserole or a stew with mushrooms, carrots and perhaps some cream. Not our precious Huggy Henny!

So, on second thoughts, maybe we should just leave things as they are. Sorry to have caused a fuss. Let the rabbit industry take the hit. They can have all the cute crayon drawings on the walls of all the preschools. They can have their bouncy, buck-toothed Easter mornings. We'll hold onto our chicken dinners, thanks very much! As an industry we should put all our weight behind the



cuddly Easter bunny movement.

But there is still the issue of the eggs. Millions of additional eggs are purchased over Easter, but they are all chocolate ones; and are of no benefit to our industry. There seems to me to be two ways to go on this. Either we produce the chocolate eggs

Imagine all the tooth cavities that could be avoided if kids ate real eggs instead of chocolate ones

ourselves; which would require the development of chocolate hens and a whole chocolate feeding routine, or the chocolate eggs get replaced by real eggs. We'd get the support of all the organisations advocating for healthy eating for kids. Imagine all the tooth cavities, stomach cramps and projectile vomits that would be avoided if the huge amount of chocolate eaten

by kids over Easter were replaced by healthy eggs. Egg salads, poached or boiled, scrambled or, if all of that felt a bit boring, pickled eggs.

But another problem occurs to me.

Might we in the poultry industry then be blamed for taking treats away from children? Might the children of the world not rise up and shout with many voices "We want our chocolate back! We hate real eggs!" and then they'd go on to break things and become even more difficult to communicate with than they are already. Fingers

would point in our direction and harsh things said about us having made the Easter egg boring and healthy, instead of fun. So, all things considered, maybe this is a minefield we should not venture into.

Thanks for this chance to air some thoughts on this crucial poultry-related issue. But perhaps I should never have said anything in the first place. 🐣



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ON THE WIRES

Eggs for cancer research, exports in Azerbaijan, peroxide help in hatcheries, and more global news

Compiled by **Charmain Lines**

PEROXIDE FOR *SALMONELLA* IN HATCHERIES

Washing eggs without damaging them is a challenge in all hatcheries



Photographs: Shutterstock

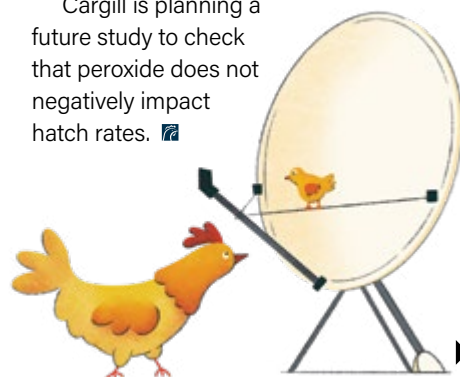
HOW TO CLEAN EGGS without damaging their cuticles is a vexing problem in hatcheries. The cuticle is a thin protein layer that covers the surface of the eggshell and helps prevent moisture loss and bacteria penetrating the egg.

Now a study done by US-based Cargill Global Food Safety & Scientific Services suggests that peroxide might be the answer. The study compared different egg-wash sanitisers for

efficacy against *Salmonella* specifically and cuticle preservation. Peroxide proved most effective, reducing *Salmonella* prevalence by more than 73%, doing so without damaging the cuticle.

Chlorine is currently most often used for egg sanitation in hatcheries. However, it tends to break down quickly in the presence of organic matter such as bacteria and can be corrosive to equipment.

Cargill is planning a future study to check that peroxide does not negatively impact hatch rates. [📖](#)





ACQUISITION WILL BOOST IN-OVO SEXING TECHNOLOGY

HATCHTECH GROUP B.V., a Dutch hi-tech poultry incubation-solutions provider, recently acquired NYtor B.V., a Dutch developer of DNA-based tests, in a transaction that will help to solve one of the poultry industry's biggest headaches: the need to cull male chicks.

In recent years, HatchTech has built up significant expertise in the use of polymerase chain reaction (PCR) technology for sorting male and female eggs during incubation, a process known as in-ovo sexing.

Since 2018, HatchTech's subsidiary Respeggt has applied in-ovo sexing commercially. The speed and accuracy of the PCR technology has stopped the culling of millions of male chicks. It has also paved the way for billions of eggs



not associated with chick culling to be sold in supermarkets in countries across the EU.

The new acquisition of NYtor will allow HatchTech to expand and commercialise its expertise and speed

up the development of lower-cost in-ovo sexing. "Our ultimate goal is to determine sex in the egg at such a low cost that it is attractive for all types of poultry hatcheries," says Tjitze Meter, founder and CEO of HatchTech. 



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ROYAL PAS REFORM WINS HATCHERY BUSINESS IN TANZANIA



Silverlands' new hatchery was officially opened in August last year

Photographs: Shutterstock

TANZANIAN POULTRY PRODUCER Silverlands has chosen Royal Pas Reform technologies for its new hatchery operation in Arusha in the northeast of the country. When fully operational, the facility will have a production capacity of 7.3 million day-old chicks per year. Silverlands operates a poultry and feed business and a cropping business

from its headquarters at Makota Farm, Ihemi Village, in the Iringa region. The poultry farm has a feed mill, hatchery and poultry houses. Silverlands is the only company in Tanzania that produces three different day-old-chick varieties for the commercial market. Its broiler and layer breeder stocks are imported from internationally recognised breeder

supply companies, and it has exclusive rights for the distribution of the Sasso bird in Tanzania.

The dual-purpose, slower-maturing Sasso chicken improves bird genetics for small-scale rural farmers and, together with technical assistance and training they get from Silverlands, gives them access to new markets. This initiative aims to increase poultry production and productivity, improve rural household income and nutrition, and empower women.

Commenting on the installation, Adriaen Sligcher, Pas Reform's sales director in Southern Africa, says that the company is delighted to have partnered with Silverlands. "The hatchery will help to bring new skills and prosperity to the region. We look forward to arranging a hatchery managers course with Silverlands soon to extend the knowledge of potential hatchery managers in Tanzania." 





EGGS STAR IN CANCER RESEARCH

WE KNOW THAT EGGS can do much to help children grow into strong adults, but now they are proving to be worth far more than their weight in gold when it comes to research into possible treatments for childhood cancer. A pediatric precision-oncology initiative known as the Better Responses through Avatars and Evidence (BRAvE) at the University of British Columbia (UBC) in Canada uses fertilised chicken eggs to research how different medications could affect children's tumours.

According to Dr James Lim, UBC scientist and researcher, eggs are an excellent medium in which to grow a child's tumour sample in a petri dish. Once the sample is large enough, researchers can test different drugs to see how the cancer cells respond. It takes only one to two weeks to grow a tumour in a fertilised egg from the time of the first biopsy, compared to three to six months in other hosts. Childhood cancers are different from adult cancers in that they are not linked to lifestyle or environmental risk factors, meaning that conventional treatments,



such as chemotherapy, are often neither effective nor safe. With this research, Lim believes that the right medication can be matched to the right patient.  

AZERBAIJAN'S EXPORT AMBITIONS

THE HEAD OF THE Azerbaijan Poultry Association, Myurvyat Hasanli, reports that his country's poultry farmers have big plans to start exporting broiler meat to Russia and Middle Eastern countries. This follows the launch of egg exports over the past few months.

Since the Russian government started allowing duty-free egg imports, Azerbaijan has delivered around 60 million eggs to its northern neighbour. In addition to table eggs, the country has also started exporting hatching eggs for the first time in its history.

During the first three quarters of 2023, poultry farms in the country produced 57 500 tons of poultry meat, 2.9% less than in the previous year. Egg production, on the other hand, jumped

by 27.5% to 764.5 million units.

According to Hasanli, Azerbaijan can fully meet domestic demand for poultry meat and eggs. In contrast to many other countries, egg prices have dropped.

While the Azerbaijan government has introduced state subsidies for poultry farmers to buy equipment and components to build and modernise poultry farms, Hasanli says lack of land severely hampers the industry's growth. "Government should

allow the construction of poultry farms on agricultural land that is found to be unsuitable for crops; this will help us to expand production to the level where surpluses can be exported."



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FARMERS' WISDOM



BREEDING YOUR OWN BREEDERS

Sharing his knowledge about breeding stock for the benefit of small-scale farmers, County Fair's Alewyn Carstens unpacks some trade secrets

As told to **Melinda Shaw**


I've often been asked if breeding is something that small-scale farmers can also participate in, to ensure better outcomes. The first point to make is that a farm's location really is key – it needs to be as far as possible away from urban encroachment, because the

proximity of high numbers of people who also keep various pets, including avian species, makes maintaining biosecurity virtually impossible. Farms also need access to sufficient water, but biosecurity must be top of the list of priorities, so it is crucial for a farmer


to ensure that their workers adhere to strict biosecurity measures. The integrity of the people who work at the operation is key.

Then the other key requirement is to make sure that wild birds are kept away from the chicken houses.

Photographs: Shutterstock



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The housing and environment a farmer provides for their flock will ensure the wellbeing of the birds, so it is also key to ensure that there are suitable housing facilities. A comfortable and clean environment contributes to better growth and productivity.

The next box to tick is record-keeping. My advice to farmers is to make sure you maintain meticulous records of the flock, including breeding data, health records and their performance metrics. This information will help you to make informed decisions so that you can improve future breeding programmes.

Of course the management practices in the business are also very important. By developing effective management practices, which would include proper handling of birds, vaccination schedules, and disease control measures, a small-scale operation will be a step ahead. A well-managed flock is more likely to yield successful breeding outcomes.

As with any business, the economic considerations are front of mind. Farmers who are considering rearing their own parent stock should be realistic about assessing the economic feasibility of such an undertaking, and should weigh up the pros and cons. They should consider the costs involved in terms of facilities, feed, veterinary care, and other operational expenses before deciding whether breeding their own parent stock is viable.

I would advise farmers to network and seek advice and mentorships, because there is strength in a chain. By building a network with experienced farmers, joining relevant forums or associations such as SAPA, and seeking advice from seasoned professionals, farmers will improve their chances on business success immeasurably. Learning from others' experiences can provide valuable insights.

And lastly I want to mention what needs to come at the very beginning,

which is a well-thought-out plan and a commitment to ongoing improvement. If you start there, even smaller-scale or newer farmers can successfully rear their own parent stock and establish a sustainable and thriving poultry operation. 📧

Alewyn Carstens is operational manager for broilers at County Fair. Contact him on alewyn.carstens@countyfair.co.za.



A well-managed flock is more likely to yield successful breeding outcomes



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Pyrolygneous acid (**wood vinegar**) is a liquid produced during controlled pyrolysis of biomass. It is made up of more than 200 chemical components; with acetic acid, acetone and methanol as primary (10%) constituents. Usage of conventional chemical substances to clean poultry houses to address red mite (*Dermanyssus gallinae*) infestations have resulted in resistance development.



USE OF WOOD VINEGAR FOR RED MITES ON POULTRY

As shown by Yamauchi, K *et al* in their article titled 'Exterminating effect of Wood Vinegar to Red Mites and its Safety to Chickens' published in the Japanese Journal of Poultry Science (51, 2013), wood vinegar has a negative effect on red mites on poultry while not influencing egg production. **Wood vinegar can therefore be considered a natural alternative to conventional chemical substances used for red mite control in poultry rearing systems.**



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FIGHTING MITES ON POULTRY

Veterinarian **Andrew van Wijk** advises on keeping this pest at bay

'My layers are not flourishing and they scratch a lot. I've noticed little bugs on them. What is my best way forward?' *Simphiwe, via DM*

IT IS VERY LIKELY RED MITE (*dermanyssus gallinae*, poultry red mite, chicken mite), which is one of the key epidemiological and economic problems for the poultry industry worldwide. This blood-sucking pest causes losses in poultry production because of irritation and anemia.

Mite-infected hens excessively self-groom and scratch their heads during the day and at night, and you'll see a reduction in weight gain, egg production and egg quality; and even anemia and death. The red mites mostly feed on the birds at night and during the day you can typically find them in cracks, crevices and dark areas in the chicken house. They're about 1mm in length so can be seen with the naked eye, especially when engorged. It's best to look for them at night (with a torch), as that's when they are most active. You will see them on the birds as well as in the crevices where they hide inside the chicken house.

It's thus important to treat the birds and the environment to break the cycle.

A Japanese study (see the QR code in the box alongside) found that wood vinegar is both safe and effective in controlling red mites through spraying the environment at 1:500 dilution, while not adversely affecting growth or egg production of the birds.

If you have a small number of birds you should consider dusting or spraying the birds with an insecticide/acaricide as an environmental treatment alone is not sufficient.



Microscopic view of a red mite. These pests can be seen with the naked eye

When spraying the birds, it's important to ensure that they are wet to the skin afterwards. Focus on areas around the vent, the upper thighs and under the wings. Dusts and liquids should be applied directly to the skin. Do not spray the feathers, as that is not where the treatment will be effective.

The characteristics of each formulation and/or active ingredient may require different types of application equipment. Actives like permethrin and dichlorvos can be used on birds and the environment, while spinosad and pyrethrins should be used in the environment only.

Another option is to treat the birds for red mites via the drinking water with a product containing fluralaner (for example Exzolt from MSD).

It's important to follow a holistic

approach when dealing with mites by also ensuring that you buy noninfested poultry and by doing proper environmental cleaning and replacing all litter between setting flocks. 📌

Dr Andrew van Wijk is a veterinary executive at Rainbow

ALTERNATIVE HEALTH

Point your smartphone camera at the QR code for more about the Japanese study of wood vinegar and red mites.

Photograph: Shutterstock

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