

HOORAY! IT'S OUR FIRST BIRTHDAY ISSUE

R60



ISSUE 7 APRIL / MAY 2022



# Poultry Bulletin

THE HEALTH ISSUE

OFFICIAL MAGAZINE OF THE SOUTH AFRICAN POULTRY ASSOCIATION

THE WAY FORWARD WITH HPAI - AGRI MINISTER SHARES HIS STRATEGY

## THE BIG CLIMATE QUESTION

*Keeping flocks healthy  
in a time of shifting  
weather patterns*

**Avian flu  
and much  
else besides**

*A poultry vet  
shares the secrets  
of the trade*

**The  
farm  
where eagles  
prey on  
chicken**

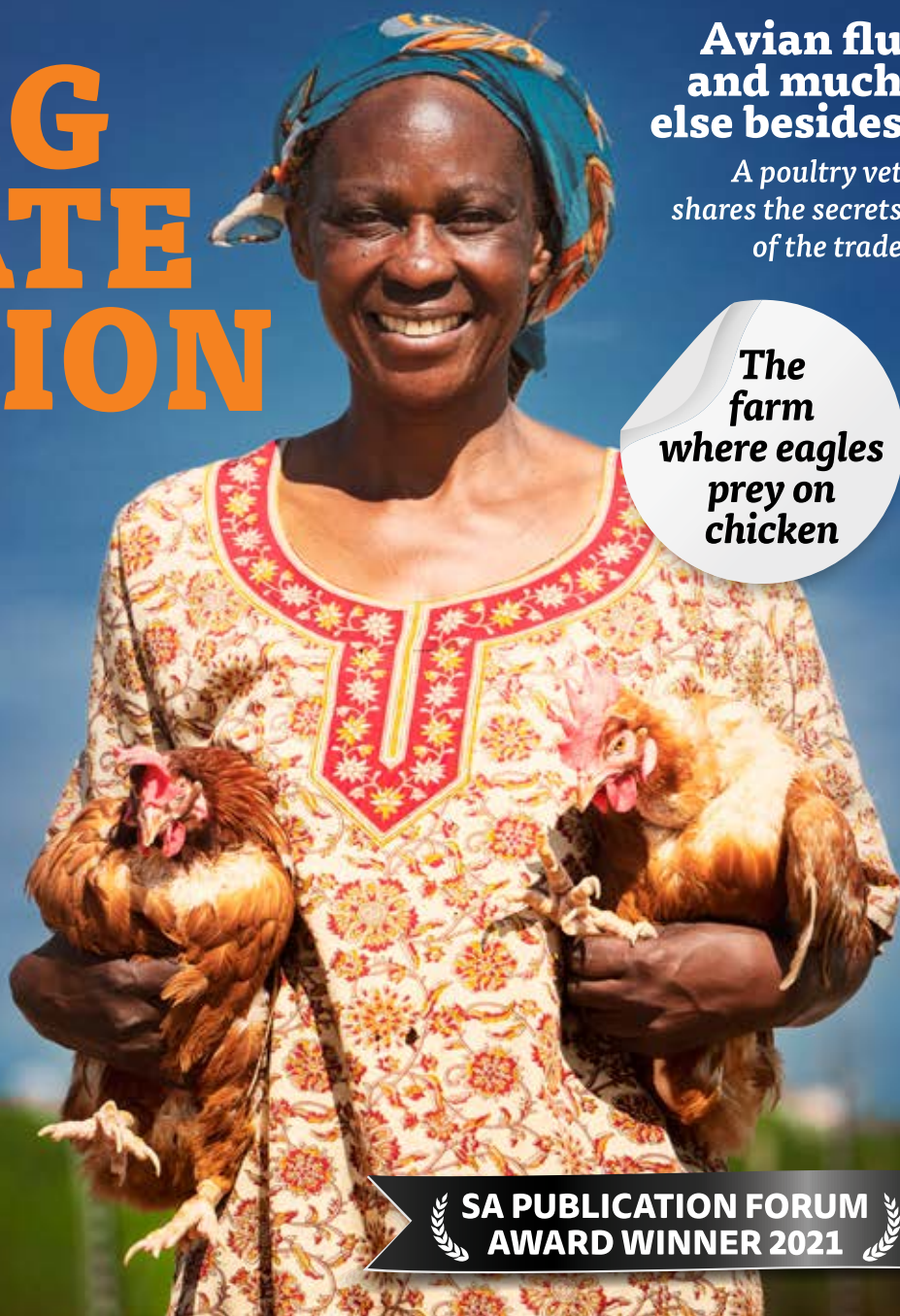
### HENS FOR SALE!

**HOW THE CULL TRADE  
EXTENDS THE POULTRY  
VALUE CHAIN IN SA**

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**Time flies when you're having fun**, and we can't believe the first year of the new-look *Poultry Bulletin* has flown by so fast. Telling the stories of this dynamic industry and its innovative and resilient people makes every day an adventure.

Our bigger, bumper birthday issue is packed full of even more juicy stories than usual.

With HPAI still lurking around and rumblings of a fifth wave of Covid, we focus on different aspects of health. We look at how the turbulent changes in the global climate may affect our industry and strategies to work around extreme weather (page 28). A specialist vet lifts the curtain on what it takes to keep a large flock healthy (page 40) and the Western Cape Minister of Health shares his department's strategies for managing HPAI into the future (page 11).

We also take a closer look at a part of the industry that is often overlooked, but which provides a living for thousands of South Africans – the cull trade, where spent hens go after they have fulfilled their primary function (page 12).

It wouldn't be a birthday without presents, so we are giving away tickets to the informative Food Safety Summit AND a couple of copies of our exclusive new *Poultry Bulletin* notebook. (We're all for technology but good old-fashioned pen and paper remains a firm favourite in our office!) Find out how you can win one on page 65.

Here's to the next year of inspiring poultry success stories!

Melinda

editor@poultrybulletin.co.za

🐔 @melshaw001





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# Progress on the agenda

## Dear members

**Tracking our progress as an industry** is a complex task that requires eagle-eyed focus, to ensure that steps envisaged in the poultry master plan stay on track, goals remain in focus, and that the gains we make are shared with our members.

It was a great victory to have our request for new antidumping duties granted at the end of last year, as part of the crucial trade component of the master plan. But what does it mean for South African producers that Brazil, Ireland, Poland, Spain and Denmark will now be paying duties between 67% and 265%?

It can't be stressed enough how important it is that ITAC with this finding removed all doubt that these countries are truly dumping chicken. Importers who profit from this predatory practice like to pretend that the "d" word is just a cliché and not a real problem. ITAC's further finding that dumping has caused material harm to our industry is another victory, as is its finding that there is a direct link between dumping and the damage suffered by our own poultry sector. With these findings now on legal record, we can expect that the damage will be contained, so that the industry can recover.

### MASTER PLAN GAINS IN NUMBERS

- **R1.4 billion** invested to date; R1.5bn by end 2022.
- **R450 million** to date for capital expenditure on farms, building hen houses; R650m by 2023.
- **R466 million** in cashflow invested in new emerging farmers; R474m by 2023.
- **5 new growers** assisted in acquiring finance, to be in production by end 2022.
- **8 further projects** awaiting financing.
- **9.8% increase** in slaughter capacity, to be realised by 2023.
- **1 365 new job opportunities** generated, 200 more expected by end 2022.
- **2 million** more chickens produced by black farmers than in 2019.
- **R4.2 billion** economic value added.



Do we see this as a victory over imports? Absolutely not. We welcome imports of poultry products that enter the market on equal footing and in compliance with global trade regulations, to add to the retail mix alongside homegrown chicken. Our victory is over unfair and illegal trade, which includes underdeclaration of prices.

The huge margins that ITAC imposed, underline the scale of the problem we faced: imagine chicken being valued at 256% less in its country of origin than the price it would be quoted as costing upon its arrival in South Africa!

Should consumers be worried that they'll pay more for chicken because of tariffs? Again, absolutely not. Remember, ITAC would never announce tariffs without considering the welfare of the South African consumer. Our industry has provided affordable chicken to South Africans for the past 90 years. We have a globally competitive industry and shoppers will not find chicken elsewhere in the world at cheaper prices. We remain committed to keep it that way, and we expect that with the increased production made possible in a dumping-free market, the increased economies of scale will allow us to keep producing the most affordable chicken.

If we look at what direct results we can expect with the duties in place, a very positive picture emerges for all South Africans. The end of unfair trade will stimulate local production, which in turn will create more jobs, bolster transformation, stimulate economic growth... in short, everyone benefits. 🇿🇦

**Izaak Breitenbach**  
GM, Broiler Organisation



# LETTERS

'Farming is another name for perseverance!' Great feedback from our readers



## Report back on my first upscaled broiler cycle

In the Feb/March issue *Poultry Bulletin* reported on the arrival of the first 80 000 birds in terms of our new agreement with Sovereign Foods that SAPA project-managed. I wanted to show you what it looked like when these first babies were collected at the end of the cycle. What a month it has been! Our stats:

**Feed used:** 222 tons (30 tons starter, 75 tons grower, 90 tons finisher, 27 tons post-finisher.

**Vaccinations done** on day 14 and day 17.

### Mortality rate: 5%

What can I say about the experience? Farming is another name for challenges/perseverance and it is vitally important that one should acknowledge that even though it's hard you must never give up or give in because it always gets better.

On day 14 we had a major disruption when our borehole pump burnt out when the power came back on during Level 3 loadshedding. Time spent replacing the pump meant we had no water for several hours which is detrimental to the chickens, but we luckily we didn't lose any.

Long shifts of 12-hour days and nights for 33 days, seeing the chickens grow by the minute, is very inspiring and motivating. Nurturing care is vital and passion for farming is what will keep you going even in the hard times.

Thankfully we had no weather challenges despite heavy rains because the new houses are very well insulated and environmentally controlled.

I've experienced how important strict biosecurity measures on the farm are and the impact they have on the farm environment.

**Chadé Groenewald**

CUTT Agriculture, Brits, North West



We want to hear from you. Send your letters  
to [editor@poultrybulletin.co.za](mailto:editor@poultrybulletin.co.za)

## Shake it till you make it

No days off; make do with what you have... our VW Polo is our "delivery van" for now! We are currently raising 400 to 600 broilers per cycle and start selling them from 3 weeks up to 6 weeks. We sell mainly to resellers in the informal market but also take some to the abattoir.

I believe I am one of the very few wheelchair-bound emerging poultry farmers in South Africa. Farming in a wheelchair is not for sissies! The hardest part is that farming is physically taxing and labour intensive and when you're in a wheelchair your body is weak and has limitations. But what keeps me going is my passion and conviction regarding the poultry industry...

**Thulasizwe Mathenjwa**  
Nhlolwethu Poultry, Durban



## We want more!

It would be an understatement to say that the Feb/ March issue was an interesting read. Already looking forward to the next edition! Not every sector can say they have an industry-specific magazine...

**Ade Camngca**

Ruffled Feathers Farm, via Twitter

## Economist feedback

Thank you for considering me for a contribution in your magazine ("Economist's view: Poultry needs investment in grain-sector technology", February/ March 2022). I am getting positive feedback from your readers, especially developing farmers. It is a really good project.

I have been getting a number of queries from people who are struggling to access the magazine online. Do they have to pay first? I am worried the download option is not so explicit on the website.

**Malapane Thamaga**

Ed – Thanks for the feedback, Malapane. The printed magazine is available free to SAPA members only, but the PDF can be downloaded free of charge, so it is accessible to everyone. Scan the QR code with a smartphone to gain access.





# NEWS IN BRIEF

Keep up to date with the latest poultry news, all conveniently in one place

Compiled by **Charmain Lines**

## New table-egg levy kicks off



**The regulations around** the statutory measures applicable to the local table-egg industry were published in the *Government Gazette* of 21 January 2022, following their approval by the Minister of Agriculture, Land Reform and Rural Development in December last year.

The updated measures, which cover statutory levies, registration and the submission of records and returns, are valid for four years, and will lapse on 31 March 2026.

In approving these statutory measures, the Minister also approved the following conditions for how SAPA can spend the income from the table-egg levy:

- A total of 70% must be spent on activities such as consumer education, consumer assurance, research and development, and industry information and liaison.
- Not more than 10% may be allocated to administration.
- At least 20% must be earmarked for transformation (empowerment of

previously disadvantaged individuals and/or groups in line with the National Agricultural Marketing Council's (NAMC's) guidelines on transformation).

In addition, the levies must be audited by the Auditor-General and surplus funds cannot form part of the assets of SAPA. SAPA must also maintain a database of black role-players and their market share in order to monitor the progress of transformation in the table-egg industry.

Once SAPA's 2022 financial statements have been audited, the Association has to indicate to the NAMC if it has achieved the transformation spend target during the 2018/2021 levy cycle. If not, the shortfall must be ringfenced for future transformation activities.

The NAMC has observer status on the board of the Egg Organisation to ensure compliance with the original intent of the application for the extension of the statutory measures. 📄

## Help capture SAPA's history



**Alan Saunders**, a stalwart of the egg industry, is busy with a big project: capturing the last quarter of the first century of SAPA's existence. The first 75 years – 1904 to 1979 – was written up by Marinus Oosthuizen.

During a 32-year career in the egg industry, Saunders served on various industry bodies, including SAPA's Egg Board, Egg Organisation, Breeders Organisation and Technical Committee. He helped to develop SAPA's Code of Practice.

Saunders has outlined the project in six parts:

- The poultry industry at the 75th anniversary celebration of SAPA
- The egg industry 1978 – 1990
- The egg industry following production control until 2004
- The broiler industry post 1979
- Breeding and genetics
- Poultry health and technical issues

Saunders issues an open invitation to potential contributors. "I am particularly keen for information about the broiler industry, given that my involvement was mainly in eggs."

If you'd like to contribute and have material to share, Saunders notes that he will share the draft with anyone to add to. Reach him via email at [saunders.alanjohn@gmail.com](mailto:saunders.alanjohn@gmail.com). 📄



## Chickens in art

**We are used to chickens** in our kitchens, but don't be surprised to also find them in art collections.

Lee Sangsoo is an artist from Korea who creates animal sculptures inspired, he says, by the way Picasso used to draw animals with minimal lines. He uses lengths of square stainless-steel tubing, with each of the four sides painted a different colour, creating fluid lines that bring the essence of the animal to life in three dimensions. He's made dogs, parrots, cats and flamingos, but our favourite favourite – no surprises there – is this colourful rooster 🐔



To see more of Lee Sangsoo's "drawings in the air", scan the QR code with your smartphone.



## CHICK OF THE MONTH



### When your looks go to your head

**A few hundred years ago**, the Polish was known as a prolific layer breed; these days, darling, it's all about the looks.

Their origins are lost in the mists of time, but most experts agree that these flamboyant birds were most likely not first bred in Poland. The name, however, might be a nod to that country and the imposing feathered caps Polish soldiers used to wear in olden times.

The Polish chicken's 70s hairdo is unrivalled in the poultry kingdom. While it makes them visually striking, ironically it also hinders the birds' ability to see. Coupled with their

inquisitive natures, this handicap renders them unsuited to a free-range lifestyle. Fortunately, they are also docile and gentle and quite happy to be petted and cuddled, making them an ideal companion for children. Again, however, these traits also count against them as they usually end up at the bottom of the pecking order – where the more competitive (and less attractive) of the species often bully them by pulling out their Vegas-showgirl feathers.

Their former egg-laying glory long forgotten, these days the Polish trade on their looks, their thoroughbred status and their ability to delight. 🐔



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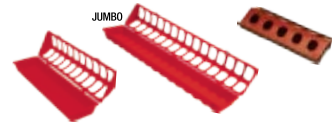
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Optional extras



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Optional extras



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Optional extras



JUMBO TUBE FEEDER  
(22KG CAPACITY)

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750ml  
WATER FOUNT



3l & 4l  
WATER FOUNTS



Optional extras



4l WATER FOUNT  
WITH HANDLE



10l  
WATER FOUNT



8l & 12l  
WATER FOUNT



Optional extras



8l & 12l WATER FOUNT  
WITH BUNG BASE

Drinkers



AUTOMATIC ECONO  
DRINKER (MK4)



AUTOMATIC BALLAST  
BREEDER DRINKER (MK5)



Optional extras



AUTOMATIC BALLAST  
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Optional extras



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LIVE BIRD CRATE



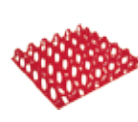
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# A considered strategy to deal with HPAI

Working together to manage HPAI will save lives and livelihoods, says **Dr Ivan Meyer**, Western Cape Provincial Minister of Agriculture



**South Africa has been experiencing** an outbreak of H5N1 highly pathogenic avian influenza (HPAI) since March 2021. Besides killing at least 25 000 endangered seabirds, the virus has infected 14 commercial poultry farms in the Western Cape, including egg layers and meat producers. The virus has killed or required the culling of over 1.6 million chickens.

The disposal of these birds could have created an environmental disaster due to the large carcass volume involved. Therefore, veterinary officials proactively engaged officials from the Western Cape Department of Environmental Affairs and Developmental Planning (DEADP) to employ carcass-disposal methods compliant with environmentally friendly waste management. In addition to environmental effects, HPAI viruses can survive in carcasses, so correct carcass disposal is necessary to prevent disease spread to more susceptible birds.

A 2018 BFAP report estimated a loss of R1.87 billion due to the deaths of 5.4 million chickens in 2017. This estimate included the cost of the animals, managing the outbreaks, and lost potential income.

The 2017 and 2021 HPAI outbreaks were due to virus strains transported by wild birds from Eurasia through Africa. Recent outbreaks in West Africa indicate a new virus

may be introduced to Southern Africa in the near future. The virus or viruses will be related to the current strain, but their effect on different production systems and bird species is difficult to predict.

The only preventive tools currently available are strict biosecurity measures to prevent direct and indirect contact between wild birds and poultry. Once an outbreak is detected, it is vital to notify the local state vet and dispose of infected poultry as quickly as possible, with guidance of DEADP officials, to prevent the further spread of the virus.

Western Cape veterinary officials have increased their awareness campaigns by engaging with industry role-players and stakeholders. For example, officials regularly host farmers' days focusing on biosecurity and good husbandry practices with emerging producers. Furthermore, in cooperation and with the assistance of the South African Poultry Association's Poultry Diseases Management Agency, a register of informal cull traders has ensured that biosecurity is further improved. The aim is to strengthen the monitoring of birds' movement and identify the source of suspected infection.

International guidelines only allow for vaccination under specific circumstances because the vaccines do not sufficiently prevent infection by HPAI viruses or virus spread. However, as a controlled disease in South Africa, the management of HPAI and policy formulation is the sole jurisdiction of the National Director: Animal Health. For this reason, I encourage the industry and other stakeholders to submit innovative solutions in the form of formal proposals to that office, at [info@elsenburg.com](mailto:info@elsenburg.com).

Ultimately, successfully managing the outbreak requires all role players in the industry to work together. Doing so will protect lives and livelihoods. 📌

***'The register of cull traders ensures that biosecurity is improved. The aim is to strengthen the monitoring of birds' movement and identify the source of suspected infection'***

## A THRIVING SECONDARY ECONOMY



Kennedy Magatho is a small-scale trader who conveniently lives across the road from Quantum Foods' West Rand depot



Thabang Nkgau got into cull trading to boost his broiler business cash flow, but is now a full-time, successful cull trader



# HOW THE CULL TRADE STRETCHES THE VALUE CHAIN

Few aspects of the chicken industry highlight the differences between developed and developing markets as starkly as the value attached to spent hens. **Charmain Lines** investigates South Africa's cull trade and finds that it offers immense value for large producers and traders of all sizes

**When hens that lay table-eggs** and the hens and roosters that produce fertilised eggs for broiler breeding come to the end of their commercial lives, they must be disposed of. This is no small task, considering that almost 7 million spent hens were depleted in South Africa during the last quarter of 2021 alone.

Where do these birds go?

In the poultry markets of the US, UK and Europe, spent hens have little commercial value. Most are euthanised and then either converted into protein meal for feed or turned into pet food. On some farms, the carcasses are simply buried or composted.

In South Africa and other developing countries however, there is a vibrant and profitable market for spent commercial layers and broiler breeders. Not only is it an important link in the food-security chain, it

is also a driver of economic activity in peri-urban and rural areas.

This lesser-known corner of the chicken industry is known as the cull trade.

## Inside the cull trade

At around 73 weeks of age, table-egg layers reach the end of their economically productive lives; for broiler breeders, depletion happens at between 60 and 65 weeks. Large egg producers such as Nulaid and Kuipers Group, and broiler breeders Ross, National Chicks and Festive Farms then transport these spent hens to depots that are registered with the Poultry Diseases Management Agency (PDMA) for traceability. These depots will then sell most of the birds to traders but some also to individual households.

## IT'S A FACT

*In December 2021, 977 producers and 3 286 traders were registered on the cull trade database.*

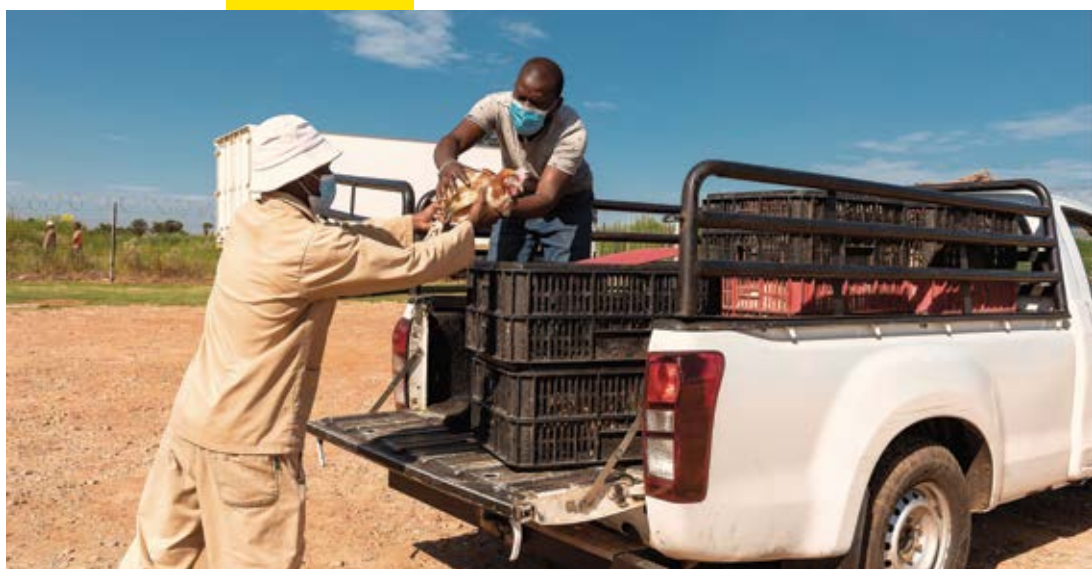
Photographs: Elaine Banister Photography

## A THRIVING SECONDARY ECONOMY



**Above:** Dumisani Miya, an employee at the Quantum depot, helps serve traders on sale days

**Right:** Strict SPCA guidelines for the cull trade ensure the humane handling of spent hens. One of these states that birds may only be transported in well-ventilated containers on open vehicles



At smaller egg farms, the hens are sold at the farm gate. Dorothy Joseph, for instance, sells 300 to 400 spent hens per quarter to households near her farm in Friemersheim, a village between George and Mossel Bay in the Western Cape.

There's a high and consistent demand for spent hens – commercial layers are called hardbodies and broiler breeders are known as rocks because they are so big and heavy – with pricing sensitive to market forces. Annelie Fischer, general manager of Bartlet Poultry, says the price at which the cull depots sell is determined by factors such as the weight, age and colour of the hens, as well as the balance between supply and demand in an area. "When there are egg shortages and farms keep hens back, the cull prices rise, and vice versa," she says.

Colour seems a curious deciding factor, but traders confirm that brown-feathered hens are

perceived to taste better than those with white feathers, and that a full-feathered bird is prized above one with patchy coverage.

The difference between hardbodies, rocks and retail chicken meat is significant in the eyes of these consumers.

The cull market's customers jokingly call broilers PM9s, says Pan Lamprecht, Kuipers Group divisional director, referring to batteries that are always flat. "Broiler meat is very tender and falls off the bone quickly when cooked. Hardbodies are older (18 months vs 32 to 35 days) when slaughtered, hence the meat is much tougher and more sinewy, requiring longer cooking times but also delivering more flavour."

As the operations manager of Cullco, one of Astral's cull-trade customers, Amanda Donaldson knows about rocks. "The broiler breeders average between 3.8kg and 4kg when they are depleted,



# BIOSECURITY ABOVE ALL ELSE



Disinfecting  
crates in the  
wash bay

**As elsewhere in the poultry industry,** biosecurity is taken extremely seriously in the cull trade. Where the movement of live birds is concerned, strict measures are in place to prevent the spread of diseases.

From traders cleaning their crates and vehicles every day, to the depots not allowing any outsiders in the sheds where the birds are kept, the rules are respected by everyone.

"We see ourselves as the biosecurity wedge between Astral and the public," says Cullco's Donaldson.

"Everything must be cleaned and disinfected all the time – this includes workspaces, common areas such as shower blocks and change rooms, trucks, truck cabins, uniforms and people themselves."

Paperwork has become a necessary element of the cull trade since the HPAI outbreak in 2017, with every farm or depot that sells spent birds having to submit a monthly report to the PDMA. Birds are only moved off a farm based on a veterinarian's health attestation.

"In case of any form of disease outbreak – not only HPAI – it has to be possible and easy to trace the affected chickens," explains Cynthia Ncube from Silverpath Consulting, the agency that gathers information on the informal poultry market on behalf of SAPA. "We should be able to trace the farms the birds came from, to which cull depots they were delivered and how they were moved, and in which areas the traders distributed the birds," she says.

For this reason, anyone who buys more than five birds at a time to resell must be registered as a live-bird trader, and all transactions must be recorded and submitted to the PDMA where the number of birds depleted at farms is reconciled with the number sold to traders.



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**Above:** Sindiswa Sitole and Zanele Moloi feed seven and five people respectively with one broiler breeder chicken

**Right:** Amanda Donaldson is the operations manager of Cullco, one of Astral's cull-trade customers



compared to 1.9kg to 2.1kg for a commercial layer. The breeders' meat is also more fatty and succulent, given that they're specialist meat producers. The two types of carcass are very different."

Consumers vote for taste and value. Cullco customer Sindiswa Sitole, who puts food on the table for seven people, says, "The meat does not go small when you cook, I can get enough to feed everyone." Zanele Moloi's household of five agrees, and she says, "The taste is not stale like the ones from the shops, it's fresh."

One of the attractions of the cull trade is the fact that a buyer gets the whole bird, down to feet and gizzards. Sometimes, even an unlaidd egg is part of the deal. "We tried to offer slaughtered chickens at our depots," says Quantum Foods regional sales manager Darnel Viljoen. "But the traders made it clear they wanted live birds that they or their customers can slaughter and use as they want."

## A THRIVING SECONDARY ECONOMY



### Meet the traders

Donaldson notes that depending on the location of the depot – Cullco has dedicated depots in Cato Ridge and Kokstad in KwaZulu-Natal and Vlakfontein in Gauteng – about 70% of the customers are traders and 30% individuals. Fischer puts the ratio at around 60-65% traders and the rest individual households.

The traders all have their own stories. Thabang Nkgau from Vosloorus has a target of 1 500 birds per week and chases a margin of R9 per bird. In a pinch, he can settle for R5 and on good days he can make R10.

Don't be fooled by the small amounts – this savvy businessman makes at least R25 000 a month, he says. "It can be more, but there are not enough birds to keep up with the demand of my customers." His customers are mainly people who have come to Gauteng from the rural areas of South Africa and Zimbabwe.

Nkgau is a long-standing customer of the Quantum Foods depot on the Gauteng West Rand, but buys and sells as far away as the east of Pretoria if the deal is worth it.

Dakalo Mudau travels from Tshiawelo Ext 2 in Soweto to the Quantum Foods depot three times a week to buy between 200 and 300 birds. He has his own slaughtering facility and cold room, which allows him to build up stock during the week to meet the weekend demand of his householder customers. "When people drink beer over the weekend they want food, and these ►

**Above and above right:** Rochelle Danda is the manager of the Quantum Foods cull depot on Gauteng's West Rand, and Darnel Viljoen is the regional sales manager. The company also has depots near Rustenburg and north of Pretoria

## HOW TO COMPLY AS A CULL TRADER

**Register as a selling farm** or a buying cull trader at [www.poultrydiseases.co.za](http://www.poultrydiseases.co.za) and submit your monthly reconciliations to the same website.

Alternatively, work through Cynthia Ncube and her team at Silverpath Consulting – get the required details via email from [admin@silverpath.co.za](mailto:admin@silverpath.co.za). Silverpath also collects recons via telephone from traders who don't have access to emails and the internet. Simply call 067 198 3557 to submit your data.



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## A THRIVING SECONDARY ECONOMY



All stocked up for the weekend:  
Dakalo Mudau buys live hens and sells  
them on slaughtered and cleaned

chickens are the best, they are so full of flavour.”

In fact, says the self-confessed “good talker” of a salesman, hardbody chickens don’t need anything more than onion – preferably spring onion – and a sprinkle of salt. No spices, no curry powder, no stock: simply brown the meat at the start of the cooking process to enrich the taste.

Mudau employs five people who are paid per bird that is cleaned and prepared for sale. On a busy day, as many as 500 birds are slaughtered, resulting in a handy pile of cash for the employees.

Both Mudau and Nkgau are part of an information network that alerts them when spent hens are due to become available. Nkgau is on the distribution list of “Riaan”, a contact who owns a truck with which he can collect up to 15 000 chickens at a time. The economies of scale benefit everyone in this particular supply chain, with Nkgau paying up to R15 less per chicken – a saving he passes on to his customers. “I am known for my quality chickens,” he says. “My customers trust me.”

### More than birds

Nkgau capitalises on another aspect of the cull trade: the eggs that the spent hens lay. “I don’t sell all the birds I buy on the same day,” he explains. “I keep a few until the next day, by when they’ve generally laid some eggs.” The egg windfall pays for his petrol.

Rochelle Danda, manager of the Quantum Foods West Rand depot, notes that the depot is more than a trading point. “We have a lot of interaction with the community,” she says. “People come and ask for advice on starting a poultry business, and we keep our customers informed of when we will have stock for them.”

This sense of community showed itself during the unrest in July last year when the depot staff received advance warnings. “Our customers and our traders’ customers also protected the depot against the looters,” says Danda.

**The cull trade** is a uniquely Third World phenomenon, but its impact and value hold lessons for the global industry. Not only does it take a powerful stand against food waste and for food security; it is also a stunning example of a new value chain developing at the tail end of another.

Access to live birds gives the traders the scope to develop business models based on the value they offer their customers. In some instances, it is merely a case of convenience – housewives don’t have to travel to a depot themselves – while in others it’s about upholding a way of life and honouring traditional practices.

The cull trade is just one more reason why it is so important that SA’s poultry industry is protected against unfair trade practices such as dumping, which attempt to marginalise local producers in the quest to gain market share. 📌



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# MEMBERS' NOTICEBOARD

SAPA's reports keep members informed of all the important issues. Here they are, in handy bite-size bits for easy consumption

Compiled by **Michael Acott**

## Trade measures bode well for a year of growth

*Izaak Breitenbach  
applauds ITAC's early  
implementation  
of provisional  
antidumping duties*

Broiler Organisation GM **Izaak Breitenbach** had a positive outlook in his report to the board



Photographs: Visioncollective, Shutterstock

**The poultry industry** can feel confident about 2022 now that antidumping duties are in place, action is being taken against illegal trade and the spread of highly pathogenic avian influenza (HPAI) is receding, even though risks remain high for this coming winter.

In February last year, the industry applied for antidumping duties on bone-in imports from Brazil and four European Union countries – Denmark, Ireland, Poland and Spain. That investigation was expected to take up to 18 months.

But in December the country's trade regulator, the International Trade Administration Commission (ITAC), surprised us by announcing the immediate implementation of provisional antidumping duties on those five countries. The duties will

remain in place until June this year, by which time a final determination is expected.

This is good news for the industry, bringing to nine the number of major poultry-producing countries that now have to pay duties when they dump chicken here. Duties are already in place against Germany, the Netherlands, the United Kingdom and the United States.

This is a watershed moment for the broiler industry. Bone-in import volumes are expected to reduce, allowing the industry to take up market share in line with what was envisaged in the poultry master plan.

Further action is expected by the SA Revenue Service (SARS) against illegal imports and tariff evasion after the first successes in 2021. The first offenders have been found guilty and





product to the value of R100 million was confiscated. Incorrectly declared imports were found during November last year, and one importer was fined for buying BEE AGOA quotas from a BEE importer.

The last bit of good news we are waiting for is the announcement of government's review of the import tariff structure for poultry. If government applies the changes we have proposed, it can materially change the importing landscape and to a large extent address the underdeclaration issue. 📌

▲  
*SARS discovered  
incorrectly declared  
imports and the  
first offenders have  
been found guilty*



## HPAI – remain on high alert

**Although outbreaks** of highly pathogenic avian influenza in South Africa are diminishing, poultry producers should remain on the alert because there is a high risk of renewed outbreaks during the coming winter months.

SAPA's surveillance monitoring report for the fourth quarter of 2021 says that since the start of the northern hemisphere winter a few months ago there have been severe outbreaks of HPAI H5Nx strains across the UK and Europe, as well as reports of the first cases caused by this family of viruses in North America.

"All indications are that there is a high risk of HPAI outbreaks occurring in South Africa during the winter of 2022. International opinion remains opposed to vaccination against HPAI so losses to the poultry industry will be high if this does occur," it says.

"Although the spread of the H5N1 virus has slowed down, producers are advised to remain on the alert and continue to comply with HPAI protocols. The submission of test results to SAPA is an important part of the surveillance programme."

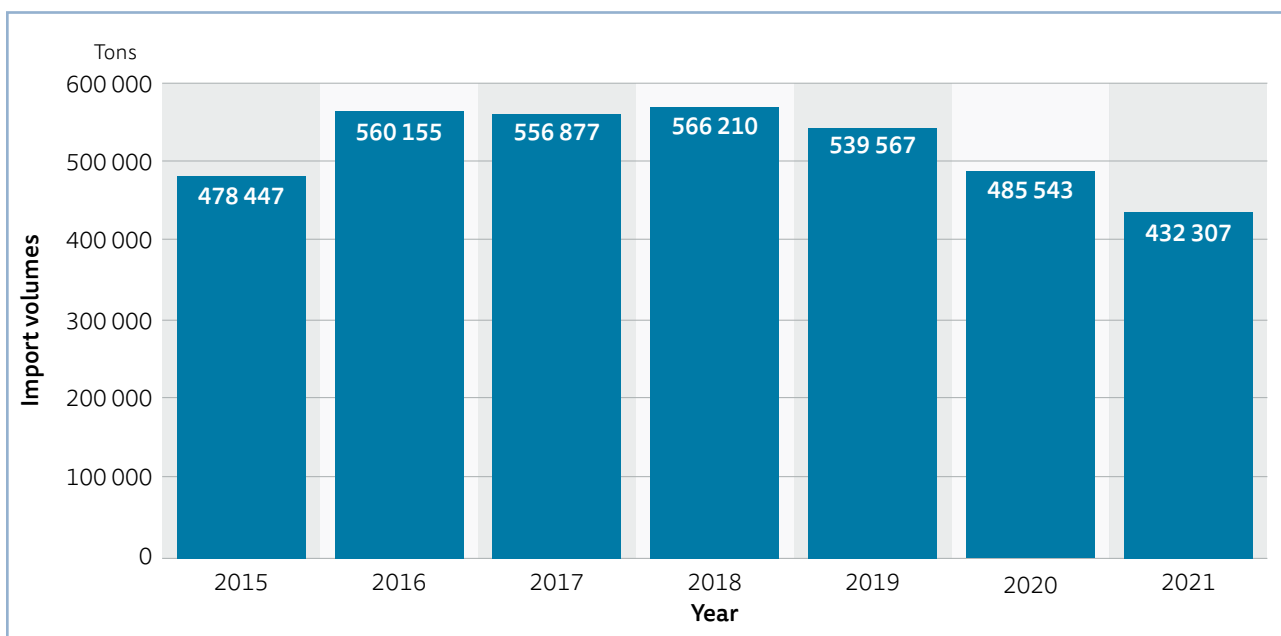
Since the first outbreak of HPAI H5N1 in South Africa in Ekurhuleni, Gauteng in April 2021, there have been nearly 100 further outbreaks across the country. The commercial egg industry has been hardest hit, with egg producers in the Western Cape suffering the most.

In total 3.2 million birds have been culled since April 2021. This constitutes 2.2% of the national flock of more than 146 million birds. In the egg industry 2.4 million birds (6.4% of the national flock) have been culled and 800 582 in the broiler industry (0.7% of the broiler national flock).

An initiative to improve wild-bird surveillance is about to launch by which producers will be encouraged to submit wild bird samples from areas adjacent to their farms to the veterinary science faculty at the University of Pretoria. 📌



# Volumes of imports keep dropping



▲ Total poultry imports  
Source: SAPA

**The 2021 poultry import statistics**, released in January, bring encouraging news for South Africa's poultry producers.

Imports have been dropping every year since the peak in 2018. There are three main causes – tariffs and antidumping duties, import bans because of widespread bird flu in Europe and, from 2020, disruptions to production, distribution and demand caused by Covid-19 lockdowns.

According to the official import statistics from the SA Revenue Service, total poultry imports in 2021 amounted to 432 307 tons, of which

broiler imports comprised 432 307 tons. Both totals were 11% lower than 2020, which in turn was lower than 2019.

Importantly, there has been a significant decrease in imports of frozen bone-in chicken portions. These are the cuts such as leg quarters, thighs and drumsticks which compete with local IQF packs and do most damage to the local industry.

Imports of bone-in portions for 2021 were 134 418 tons, nearly 18% below 2020 and less than half of the 287 071 tons imported in 2018.

While import volumes are down, the amount of money leaving the country to pay for these imports remains significant. In 2021, the R5.35 billion paid for poultry imports brought the total since 2016 to

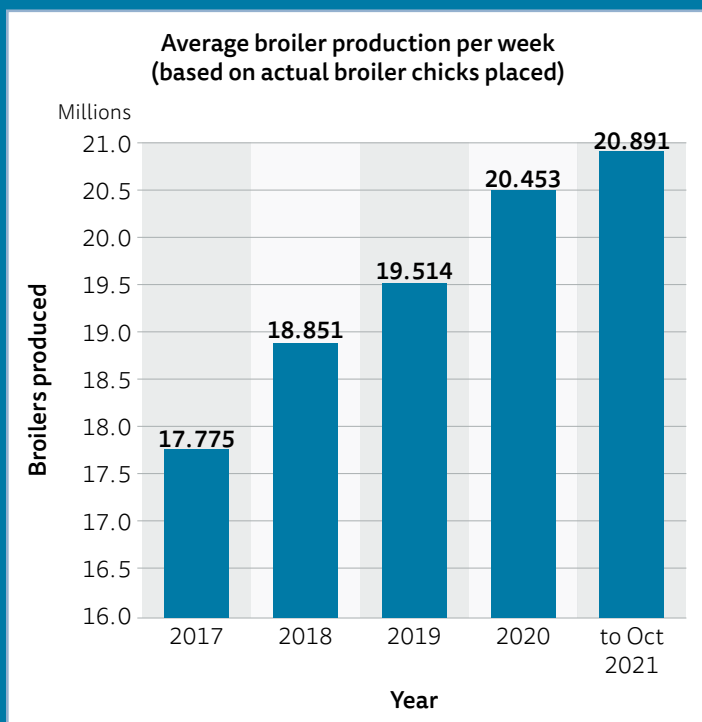
R36 billion – in effect an average of R6 billion a year for the past six years sent abroad to sustain producers and jobs in other countries.

The bad news is that surplus volumes are building up in the EU, and the bird flu bans will eventually be lifted. Similarly, global production and trade is recovering from the pandemic and will soon be back to normal.

South Africa can expect a renewed assault of dumped imports, particularly frozen bone-in portions. This means that tariffs and antidumping duties will continue to be key factors in countering the unfair competition afflicting the local industry. 🐔







▲ Average weekly production per annum  
Source: SAPA

## Broiler production on the increase

**After a mid-year drop**, broiler production rose again from October last year and the total for 2021 is likely to be a continuation of the annual increases the industry has managed to achieve since 2016.

The final numbers for 2021 are not yet available, but SAPA's monthly production report shows that broiler production to November last year averaged 20.998 million birds per week. This is an increase on the 20.453 million birds per week produced in 2020.

Production has increased steadily from 17.775 million birds per week in 2017, rising to 18.851 million birds per week in 2018 and 19.514 million in 2019.

Annual totals show a corresponding increase. After dropping to 927 million for the 2017 year, totals went up to 983 million in 2018, 1.02 billion in 2019 and 1.07 billion in 2020. Given the rise in weekly totals, the final 2021 figure for broiler production is likely to be a further increase over 2020. 📈



## Healthy rise in producer prices

**In November 2021**, average broiler producer prices rose to 27.91/kg, an increase of nearly 3% over the previous month and 15% higher than November 2020.

According to SAPA's monthly pricing report, the rises are the result of increases in the producer prices of both fresh and frozen chicken.

Frozen chicken (86.9% of total sales for November) increased to R26.90/kg, an increase of 3.3% over October 2021 and 15.7% above the producer price in November 2020. There were lower increases for fresh product (13.1% of sales), which rose to R34.68/kg, 1.8% above October and 8.1% higher than November 2020.

For the year to November, the average producer price for 2021 is R25.97, 10.4% above the figure for 2020.

The report notes that the November 2021 producer prices are being compared to the fourth quarter of 2020, when prices were still recovering from significant drops caused by Covid-related lockdowns. It also says food price inflation is currently a global problem. 🌍





# Cull trade reporting is essential



▲  
*Reporting the sale of live birds on a monthly basis is an essential step in limiting the potential spread of disease*

**The SA Poultry Association** has renewed its call to traders and poultry producers involved in the trade of live birds to register and to submit monthly data on their transactions.


These sales, known as the cull trade, involve millions of birds every quarter and are an important part of the informal economy (see also "How the cull trade stretches the value chain" on page 12). The trade has been regulated since 2017 to monitor the movement of live birds because of risks involving highly pathogenic avian influenza (HPAI).

According to SAPA's latest cull traders report the highest numbers of cull birds purchased from farms during the fourth quarter of 2021 occurred in Gauteng with 398 546

birds sold (31.7% of the total), followed by the Eastern Cape at 379 824 birds (30.2%) and KwaZulu-Natal at 376 676 birds (30%).

However, reporting has fallen off recently and SAPA's latest cull traders report says either cull birds are being moved without the required permits, or the permits are no longer being submitted.

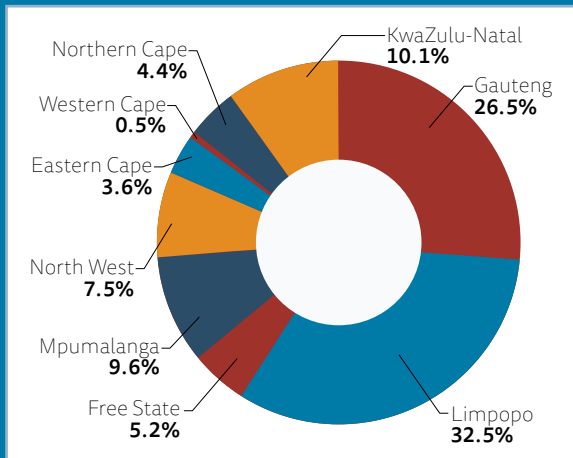
It has appealed to all producers and cull traders to comply with the regulations. Limiting the spread of disease is in the interests of the broader agricultural sector and members of the public.

Anyone needing assistance or more information about how to comply is advised to contact Cynthia Ncube ([cynthia@silverpath.co.za](mailto:cynthia@silverpath.co.za)) or Louisa Nel ([reception@sapoultry.co.za](mailto:reception@sapoultry.co.za)). 





# SAPA surveys help small-scale farmers



▲ The provincial representation of survey respondents  
Source: SAPA

**SAPA collects information** from subsistence and small commercial poultry farmers every six months. It then collates and publishes the information to help small-scale farmers benchmark themselves against other producers, improve their operations and plan for the future.

The six-monthly survey results are also used by international organisations, banks, government departments, research organisations and investment houses to make strategic decisions about funding and research priorities.

In addition to gathering information on input costs and prices achieved by both egg and broiler producers, SAPA lists difficulties encountered and the reasons why some farmers had left the business, temporarily or permanently. It also reminds farmers that the answers to the survey questions are the same ones they should use to measure their performance or as the basis for any loan application.

In the second half of 2021, SAPA surveyed 423 small-scale farmers, of whom seven had resumed farming and 38 had stopped farming. The full survey is available on the SAPA website [www.sapoultry.co.za](http://www.sapoultry.co.za).

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# Feed prices will keep on rising

*There has been a big move to white maize in the feed industry*

**Prices of maize and soya** are likely to keep rising, although with modest increases, until at least June 2022, according to SAPA's latest feed-ingredient report.

The report, dated the fourth quarter of 2021, uses December 2021 as a base with an outlook to June 2022.

International and local prices of yellow maize have risen considerably since October 2021. It was then trading locally at about R3 300 per ton, and has risen to trade at R3 720/t for March 2022. There are major exports of yellow maize and shipments for export have been booked until July 2022. Current yellow

maize prices are at export parity prices until July 2022.

There has been a big move to white maize in the feed industry. The spread on SAFEX prices between white and yellow maize reached R300/t in November 2021, and the difference is currently R125/t. This means a potential saving of about R70/t on broiler feed that has a maize content of 60%.


International soya-meal prices have also increased significantly in the last six months, and demand for soya products internationally is very high.

Locally, soya meal has risen from R7 600/t in October 2021 to R8 300/t. Soya beans are trading at R8 000/t on

SAFEX for March 2022.

The estimated feed-ingredient prices at Randfontein forecast for July 2022 are yellow maize R3 597/t (an increase of 2.2% year on year); sunflower oil cake R6 160/t (+ 3.5%); soya meal R8 475/t (+ 13.8%); and fishmeal R18 200/t (+ 3.4%).

The rand has also weakened from R15.11 in October 2021. The forward prospect of the rand is a trading range between R14.85 and R15.75/US\$ for the short term.

SAPA cautions that the forecasts are for guideline purposes only and SAPA does not, in any way, warrant that these predictions will be realised. 



◀ Broiler feed that has a 60% maize content currently offers potential savings of about R70 per ton





# Join the SAPA club!

As a member of SAPA you have access to targeted poultry industry information and a network of expertise to help you succeed in your business. All egg and broiler producers in South Africa are eligible to apply for membership, which is offered at a fee of R450 excluding VAT, plus an additional fee based on slaughter volumes for broilers or a statutory levy for eggs. Suppliers to the industry are also invited to join SAPA as allied members, and share in all the information regular members receive, in addition to be added to the Association's list of accredited suppliers. 📄



For more info on how to join as well as the various membership options, contact 011 795 9920 or email [reception@sapoultry.co.za](mailto:reception@sapoultry.co.za).




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# FLOCK HEALTH IN A TIME OF CLIMATE CHANGE

Climate change is bringing significant challenges to poultry health, including managing heat stress, ensuring sufficient water of a good quality and preventing mortalities. By **Jacques Claassen**



**Extreme weather events**, such as droughts, floods, wildfires, hurricanes and tornados have swept across the globe at an unprecedented rate in recent years. Those who find themselves in the path of these unpredictable phenomena often take extremely hard knocks, and farmers, in particular, can see years of hard work reduced to nothing within the blink of an eye.

The spectre of climate change and increasingly unpredictable weather have moved out of the realm of science fiction into the everyday reality of people and industries around the world. There are even those who believe that the current wave of avian influenza that is sweeping the globe might be related to the disrupted migration patterns of wild bird populations due to these unusual natural phenomena.

If nature tosses a curveball, there is little that man can do, as the story of Malan Heyns, a broiler producer of Steynsrus in the Free State, illustrates. "In December 2019 our area was hit by a tornado which created havoc for kilometres, including severe damage to

our poultry houses and office building." Seven years ago, during a drought, one of his boreholes dried up. Both these events resulted in expensive mitigation measures, including costly repairs to his new multi-million rand environmental controlled chicken houses along with the drilling of several more boreholes.


For smaller-scale farmers with limited resources, a weather crisis can be crippling. Take Phuti Sako of Konoto Poultry Farming at Mabopane near Pretoria, who in February lost his entire flock of 4 000 layers and broilers in a flood caused by a nearby public road that was badly maintained. Sako had given up his career in banking a year and a half before and used his savings, and a R32 000 loan, to start poultry production. "After the flooding, I sold some of my cages to raise a bit of money. I had to start over – this time with 700 broilers – but I'm still struggling to recover."

Whether big or small, poultry producers are all subjected to the uncertainty of what climate change holds. And with temperatures that exceeded 40°C in some ►



*The devastation caused by flooding at Phuti Sako's farm at Mabopane near Pretoria. Sako lost his entire flock of 4 000 layers and broilers*





Chickens do not have sweat glands, and pant when they experience excessive heat



Dr Obed Lukhele, Astral's managing director for agriculture

parts of South Africa this past summer, extreme weather events are likely to become a more common occurrence that will have to be planned for.

### When the heat is on

According to Rainbow Chicken's Alan Reddy the occasional temperatures of above 40°C at their plants in KwaZulu-Natal (KZN) result in a deadly combination whenever relative humidity (RH%) increases to above 70%.

"This leads to discomfort for the birds and even the possibility of mortalities. Moreover, an extreme increase in temperature as well as the length of such exposure will affect their performance," he explains.

Astral's MD for agriculture, Dr Obed Lukhele, points out that the humidity level inside a bird house is determined by the outside environment and the amount of moisture from the birds' breathing.

"Ambient temperature influences a bird's ability to lose heat," he says. "Chickens don't have sweat glands, hence panting is their main heat-loss

mechanism. Panting is triggered when humidity is about 50% and ambient temperature at about 29 – 30°C. Simultaneously they stretch their wings to increase air flow over the skin and enable heat loss through evaporation," he says. "When an increased volume of outside air rapidly comes into contact with the moist mucous membranes of the respiratory tract (trachea, lungs and air sacs) it results in heat and moisture loss."

Lukhele adds that the ideal humidity range for poultry flocks is 60 – 70%, while a bird's comfort zone is about 18 – 24°C.

"Through normal metabolic processes and muscle activity, birds produce body heat. The core temperature of a young chick ranges between 39.5 – 40.5°C, but increases steadily until it stabilises at 21 days of age at about 40.6 – 41.7°C.

"About 30 minutes after feeding, or when birds are exposed to high light intensity, the body temperature increases. The amount of heat produced must equal heat loss or else the internal body temperature will rise, resulting in severe discomfort at 44 – 45°C, or even death at 46 – 47°C."



# Future health now

## Managing heat stress

The teams at Astral and Rainbow Chicken share similar approaches to managing heat stress in their flocks, with some differences that are likely due to different housing facilities and geographical locations of their farms around South Africa.

The most common strategies to manage heat stress include:

- Keep the sheds cooler than the ambient temperature by insulating chicken-house roofs or coating them with a reflective (white) paint.
- Remove excess moisture by ventilating conventional poultry houses with fans and by controlling side curtains. This will introduce sufficient air volume at a desirable speed. You

## STRATEGIES IN AFRICA



A study undertaken by the Department of Agricultural, Food and Resource Economics at Michigan State University researched climate change adaptation strategies among poultry farmers in Nigeria. West Africa was chosen as a study area as global climate and crop production models forecast lower yields for staple crops in the region due to climate change, with the effects being worst in dry and semi-arid regions, where more frequent droughts will put strain on water resources needed for livestock production. According to USAID, Nigeria's climate projections indicate a rise of as much as 2.5°C in temperature by 2060, and as many as 260 extreme heat days compared to 10 such days in 1990.

According to the study, about half of the farmers sampled reported that they had "observed an increase in the length of heat stress in their state". Besides using recommended strategies to reduce heat stress, these farmers also included the keeping of (presumably more resilient) local breeds of birds. Another adaptation strategy employed was integrated farming systems that combined fish and poultry farms, which showed the advantage of providing a cooler environment for the birds when temperatures rose.

"Poultry farmers who also own fish farms shared that the water of the pond cools the environment for the birds and it also gives them access to water. This is useful because a cooler environment is conducive to better feed conversion ratios and increases egg production," the study stated. – Editor



Cooling fans, such as these installed by Big Dutchman, help in relieving humidity and keep flocks more comfortable during periods of excessive heat

# Future health now



Nozzle cooling systems such as this one by Big Dutchman help prevent heat stress



It is important to use high-quality ingredients to formulate feed



Chickens should drink two units of water for every unit of feed they eat

should also continue running the fans at night.

- In the winter-rainfall area fine mist may be applied during dry, hot summer days to cool off the birds without getting them and their bedding wet.
- During dry, extreme heat, reduce the stocking density to allow for better air flow.

Feeding practices can also help chickens to control their body heat, and the following tips are useful:

- Feed birds earlier than normal in the mornings or later in the evenings when it is cooler.
- By keeping the lights on for longer broilers can be encouraged to eat in the evening instead of during the heat of the day.
- Breeder birds can be fed in the morning. Most of them lay eggs shortly afterwards, resulting in metabolic heat when it is still cooler.
- Use high-quality ingredients to formulate feed; better digestion results in birds producing less heat.
- Though birds will eat less in adverse climatic conditions, dietary salt levels, like other minerals in the feed, must be carefully balanced. The salt encourages them to drink enough water which may help to improve their feed intake during stressful periods.
- A bird should drink two units of water for every unit of feed it eats.

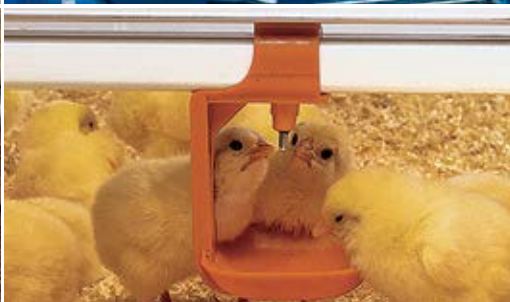
## Reliable water supply

Uninterrupted water supply is of utmost importance at all times, and with challenging climatic conditions even more so. The following are useful water-management guidelines:

- Paint water tanks and pipes white, or insulate them, to maintain the desired water temperatures (15 – 25°C). Insulating pipes will also prevent them freezing in winter.
- Monitor water-tank and reservoir levels at least three times per day.
- Install a back-up water tanker.
- Flush the water lines three times per day to reduce the water temperature. It also clears any blockages, improves the water consumption



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and keeps the birds hydrated.

- Adjust the height of water lines daily to ensure easy access to drinking water. However, when drinker lines are too low, water might spill onto the litter or bedding which might increase the amount of ammonia that could result in burnt feet, damage to respiratory tracts and other problems.

### Guidelines for small-scale producers

There is consensus from smaller-scale farmers across South Africa that climate issues are being felt close to home. According to the latest Subsistence and Small Commercial Farmer Report prepared by Justine de Winnaar of Leading Edge Poultry Software for SAPA, these farmers report high flock mortality owing to either the wetter, hotter climate, or to extreme cold winter weather. They also attribute many other challenges to extreme weather conditions in the different seasons.

De Winnaar provides the following guidelines:

- Avoid activities in your poultry sheds during the hottest part of the day to prevent birds from moving around unnecessarily.
- Don't overstock your poultry sheds during the warmer months.
- Hose down your poultry house's roof to cool it

down (provided it doesn't have any holes in it).

- Insulate the roof by packing organic material onto it.
- Add electrolytes to the drinking water to combat heat stress.
- Check the short to medium-term weather forecast on the reliable site [www.yr.no](http://www.yr.no) and be as prepared as you can be for any extreme temperatures that might be coming your way. This Norwegian-driven site is unusual in that it gives accurate forecasts for even the most rural of locations, also in South Africa, Winnaar says.
- When birds pant, it disrupts the pH balance in their blood which affects eggshell quality; you can counteract this by supplementing with sodium bicarbonate.

### Climate change and mycotoxins

Another side effect of unusually high rainfall is that summer grain crops suffer damage, as we've seen occur in some districts in the 2021/22 summer. More humid weather conditions also increase the risk of mycotoxins in grains, which present significant health risks to poultry if consumed in feed mixes.

These toxic substances, that occur naturally in fungi, can affect various organs including the

Justine de Winnaar

Excessive rainfall and other unpredictable weather patterns are observed globally



# Future health now

liver, gastrointestinal tract and immune system, and can result in reduced productivity of the birds and mortality in extreme cases. It can also have a negative influence on the quality of eggs.

With a climate that threatens unpredictable rainfall more frequently, astute producers will plan for the presence of increased mycotoxins in the grains used to feed their flocks.

Feed can be treated with the addition of mycotoxin binders, which are substances that bind with the toxins and prevent them from being absorbed in the birds' gut.

But there are also practical measures a farmer can take to minimise the risks. Patrick Beyeler, Cargill's technical lead of poultry in SA, says it is important to clean out feed bins or raw-material silos after every

batch of feed to prevent cross contamination of fungi or mycotoxins. "Moreover, your bins and silos should be dry; any extra moisture or temperature changes could result in an increased growth of fungi and increased mycotoxin levels."

He further advises that producers take regular samples of raw materials – including maize, maize bran, wheat, wheat bran and soya-bean meal – for analysis, and choose the correct mycotoxin binder based on the risk levels of the mycotoxins, specie and phase.

According to David Brandt of Feed First, using grade 1 maize will significantly mitigate the risks of severe mycotoxicosis, the disease which is caused by these toxins. "Under specific circumstances (especially if maize is received directly from farms), ▶



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# Future health now

producers can reduce mycotoxin levels significantly by removing most of the dust, chaff and small and broken kernels from the maize," he says. He adds that the monitoring done by institutions like the Southern African Grain Laboratories (SAGL) is an important resource for poultry producers.

"Members of the Animal Feed Manufacturers

Association (AFMA) have access to AFMA's mycotoxin database which will help them to understand the risks better."

Understanding the enemy is half the battle, and as climate change subtly shifts the goalposts, it is important for farmers to keep educating themselves and consulting the experts. 📺

## AVIAN FLU AND CLIMATE CHANGE



Various studies have looked at the possible links between climate change and avian influenza, and as the disease evolves over subsequent outbreaks across the globe, increasing attention is certain to be focused in this area.

In Europe, the largest AI epidemic ever is widespread and showing signs that it is no longer as seasonal as it once seemed. The virus is also being detected in mammals in certain countries, according to Poultryworld.net.

A study conducted at Fordham University entitled "The H5N1 Avian Influenza Virus:

Globalisation, Climate Change, and Other Anthropogenic Factors in New Emergent Diseases", uses the model of the spread of West Nile disease, which is caused by a virus that has some similarities to the H5N1 virus, to show how the environment plays a big role in the "acceleration and progression of a virus locally as well as globally".

Whereas wild birds are the vector that spreads avian influenza across the globe, West Nile disease is carried by mosquitoes, and it causes a wide range of symptoms with varying severity in humans. The study draws a direct causative

link between global warming and the spread of the West Nile virus to North America. The West Nile virus was first reported in Uganda in 1937, and according to the study has now been named a seasonal endemic within the United States. "By observing the factors that contribute to the West Nile virus, it can allow for further insights into how the H5N1 avian influenza virus may possibly spread and travel across the world as well... and can provide scientists insight into the possible scenarios that may occur."

At present avian influenza does not present a high risk to humans, however there have been some cases reported since 1997, according to the study. Those cases have resulted from contact with infected poultry or contaminated surfaces, and not from human-to-human spread.

In a world that has been battling the Covid-19 pandemic with its rumoured zoonotic origins, it is clear that any risks have to be taken seriously. – Editor



# Value Beyond Products

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Raising healthy animals limits the potential for disease spread, supports farmers' livelihoods, and provides nutrient-rich meat, milk, fish, and eggs to nourish and support human health. Through our products and services, we improve the health of animals by supporting the prevention, control, and treatment of disease. Guided by our vision of Food and Companionship Enriching Life, we ensure integrity, affordability, and availability of the food supply, and help to raise animals more efficiently, through supporting healthier people and a healthier environment.

Elanco's top priority is helping you raise healthy poultry. We know creating robust flock health is a hands-on job that requires careful and consistent collaboration. Elanco's poultry team includes technical consultants with extensive veterinary knowledge and experience. From hatchery to processing, Elanco offers an unbeatable combination of consultation and in-depth industry and product knowledge. Let's work together to help your flock and business thrive.

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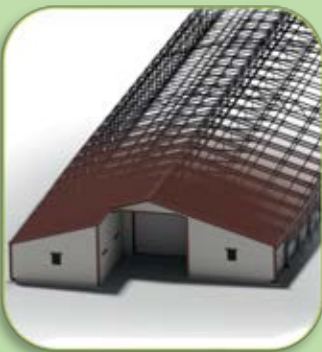
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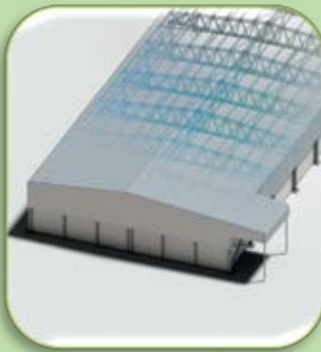
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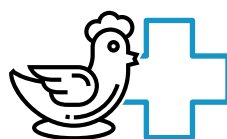
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Photograph: Mlungise Mbele

A poultry veterinarian of 25 years' standing, Dr Nokuthula Ntseki takes care of the health and wellbeing of RCL Foods' flocks





# A vet's perspective

The health of the nation's flocks depends on a group of highly skilled specialist veterinarians. **Melinda Shaw** speaks with Dr Nokuthula Ntseki, or 'Dok Nok' as the veterinary executive at RCL Foods' veterinary lab in Hammarsdale is fondly known, who unpacks this important role

## **What informed your decision to become a poultry veterinarian?**

Animals have always had a special place in my heart. When I was in primary school, my dad raised between 50 and 100 broilers at a time. My siblings and I used to take turns to raise a batch and for some reason, mine would be the best batch. I knew nothing about temperature requirements or vaccinations at the time but based on my father's training, I memorised the vaccination programme according to the colour of the vial top and I knew that chicks had to be kept warm. I honestly had no idea of what diseases I was vaccinating against, but I knew at exactly what age a certain colour vial top needed to be given!

I would also wake up at midnight to prepare hot-water bottles for the

chicks since we had no electricity. When I reached high school I was sent to boarding school in Pinetown and as we drove on the N3, I used to see these beautiful farms, with white poultry houses and green manicured lawns and say to my parents, "One day I will work here." At the time I didn't even have a clue that veterinarians were of value in the poultry industry! When I realised that as a veterinarian I could work with chickens, I never looked back. I've now been a veterinarian for 25 years – my first job was with Meadow Feeds for a year, and I joined RCL Foods on 3 July 1997.

## **Is it very different from, say, a livestock vet's work? Why should producers employ a poultry specialist?**

It's not that different – we take care

of the wellbeing of the animal while ensuring that the animal provides the desired income to the owner. The only difference is the importance of reaction time, because chickens die easily and when they die, they die in numbers. Another important factor is not to view them as animals only, but also as "someone's meal". At least that is how I approach it and this keeps me in check when it comes to the types of medication that I prescribe.

Producers need a poultry veterinarian on their team to design, implement and monitor flock health programmes and, most importantly, to ensure the safety of the consumer. There are zoonotic diseases that can be carried by chickens, and if not controlled or prevented they could have serious public-health consequences. ►

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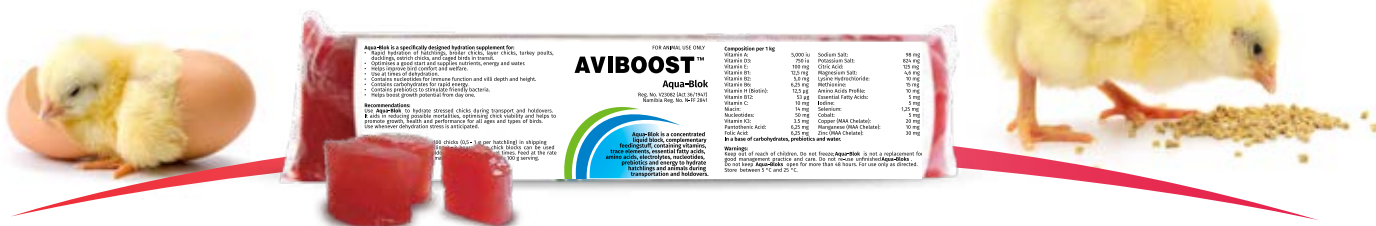
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#### References:

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2. A. Gil 2002 Modulation of the immune response mediated by dietary nucleotides. *European Journal of Clinical Nutrition* (2002) 56, Suppl 3, S1-S4

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### How many birds are under your regular care?

There are 170 000 grandparent birds, 2.2 million parents and 19 million broilers at any given point in time.

### That is significant! What are the health issues you deal with most often?

Most of the problems are intestinal, respiratory or musculoskeletal in nature. Immunosuppressive disease such as chicken anaemia virus (CAV) and infectious bursal disease (IBD) affecting the foundation of flock immunity cannot be underestimated. Reportable, notifiable and/or zoonotic disease such as Salmonella Enteritidis (SE), listeria and Newcastle disease (NCD) are also high on the priority list. Vaccine technology and surveillance as well as diagnostics have improved over the years and have made it easier to protect, detect and control against certain diseases. The number of broiler birds with ascites (a condition where there is excess abdominal fluid) or congestive heart failure has decreased over the years, however breeder birds have become

Broilers are vaccinated against a number of high-risk acute diseases

more difficult to manage, with a higher potential for metabolic-related disease than in the past.

***'With poultry what's important is the reaction time in the case of diseases. Chickens die easily and when they die, they die in numbers'***

**Is poultry health in 2022 very different than when you first started? And the role of the poultry vet – how has that evolved over the last decade/s?**

Disease challenges as such have not changed but the availability of

vaccines as well as monitoring and diagnostic tools have improved.

There is more focus on consumer safety in terms of zoonotic diseases and prudent use of antibiotics, especially those that are listed by the World Health Organisation as "highly and critically important". Also, the role of the veterinarian has evolved to include ensuring consumer safety as well

as the welfare of the birds, since customers do expect assurance of safe meat supply derived from animals that were reared humanely.

**We've just lived through another round of HPAI – as a veterinarian,**



## DISEASES TO BE AWARE OF

### Breeding stock, broilers and layers have different potential health risks:

- Longer-lived birds (breeders and layers) – Marek's disease (also called fowl paralysis), leucosis (a leukaemia-like disease) and Salmonella Gallinarum (fowl typhoid), as well as metabolic diseases.
- Broilers – NCD, IBD and infectious bronchitis (IB) are high-risk, acute diseases, and are vaccinated against. Broilers are fast growing and therefore potentially more susceptible to musculoskeletal defects such as rickets or avian tibial dyschondroplasia, especially if nutrition and management are inadequate.
- Young birds are at risk of chicken anaemia virus, avian encephalomyelitis and inclusion body hepatitis, but these are managed by vaccinating the parent stock for the transfer of maternal antibodies.



## MEET OUR PEOPLE

### **what does it mean when an outbreak of avian flu is reported?**

It's very depressing and worrying, and it makes no difference where the outbreak is in the country because one never knows who is next.

The producers and the veterinarians do everything in their power to keep it out of the farms but somehow it still finds its way through.

### **It must be devastating to have to also cull healthy birds that are at risk. How do you manage that with farmers who must be very upset at the losses?**

Yes. It is devastating but it is something that needs to be done in order to stop the virus from spreading. Although it is not part of my role, a veterinarian still needs to be present to ensure that the birds are culled humanely. I have been involved in a few of these culling processes and it is a very unpleasant experience especially to the farm personnel.

Before culling commences one needs to establish how the carcasses will be disposed of without putting other farms at risk. I must commend the poultry industry for cooperating with the veterinarians in this matter.

### ***'The role of the veterinarian has evolved to include ensuring consumer safety in addition to the welfare of the birds'***

#### **Take us through a typical day for a poultry veterinarian – what do your daily tasks involve?**

There is a variety of regular tasks. We design flock-health programmes and monitor the implementation thereof. This involves farm and abattoir visits, biosecurity audits, animal welfare and vaccination trainings and audits, performing post mortems and preparing health certificates for exports. At RCL Foods, the veterinarian is also responsible for

the laboratories that do flock health monitoring, diagnostics and finished-product monitoring.

#### **Do you have any advice for someone who is interested in pursuing this as a career?**

You should be passionate about the chicken species and always be aware that you are dealing with someone's meal. One doesn't necessarily have to work as a veterinarian for the rest of your life; if you

learn the production and operations aspect of the business you might have opportunities to move towards management.

#### **And finally, who is "Dok Nok" when she is at home? Who do you share your home with?**

My daughter, Nonduduzo, who is currently busy with her first-year internship as a medical practitioner and my adopted son, Khutso, who is studying international relations. 🐔

Photographs: Shutterstock



*Among the many duties of a poultry veterinarian are the design of flock-health programmes and farm visits*

## **DOK NOK'S TOP RECIPE**

### **What is your favourite chicken dish to cook?**

Roasted balsamic chicken with sour cream.





# Protected from beak to claw

## **Evonik Gut Health Concept – Launching a holistic view of animal health**

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# Evonik's holistic approach to poultry gut health

Successful poultry production depends on healthy birds – and that, in turn, starts in the gut

**As any poultry farmer knows**, there are many challenges that stand between you and your profits. From fluctuating raw-material prices and qualities, the availability of feed ingredients and the need to reduce or eliminate the use of antibiotic growth promoters (AGPs), to consumers' desire for higher production standards for animal protein, the list can feel endless.

Economic success depends first and foremost on healthy birds, which, in turn, requires a different understanding of gut health. That is simply because the gut is the animal's first line of defence against invasive pathogens, but also because the gut is responsible for proper immune function and nutrient digestibility. Indeed, the gut is the single largest immune organ in the body.

There exists a continuous interplay between the bird's environment, feed and digestive system, where any disruption in the external environment or feed can have a direct negative impact on the gut microbiota as well as gut morphology.

This, in turn will have a direct impact on nutrient digestibility and performance, leading to a continuous vicious cycle.

Broilers and layers experience different sets of challenges and it is important to understand these differences to offer the best tailor-made solution. The diagram alongside shows the challenges broilers face during production, and the poor outcomes that can result – from impaired growth performance and increased mortality to foot-pad lesions and dysbiosis.

***'The holistic solution to gut health incorporates a number of nutritional strategies such as implementing lower-protein diets'***

In the case of layers, as the diagram alongside shows, unbalanced fibre content and fine particle size in their diets can cause digestive upsets, while pathogens causing Colibacillosis and Salmonellosis are an ever-present danger. All of these can lead to high pullet mortality, poor laying rate and lay persistency, which naturally damage production and profitability.

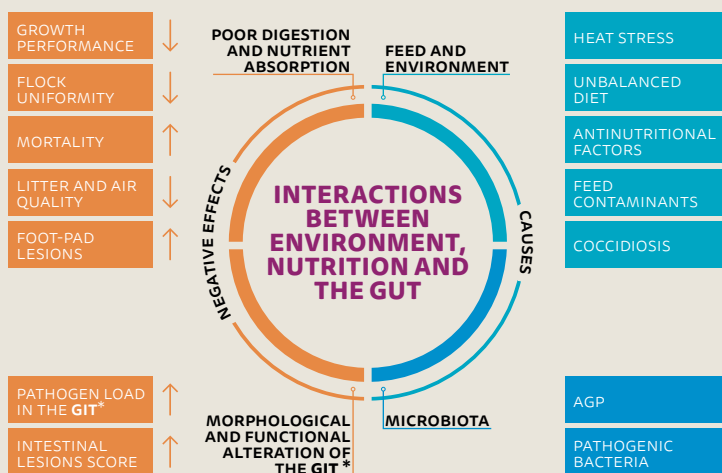
Evonik has spent decades conducting science-based research in the field of animal health and nutrition, and developed comprehensive gut-health concepts for broilers as well as layers. Its researchers have clearly identified the main challenges poultry face, and with its vast range



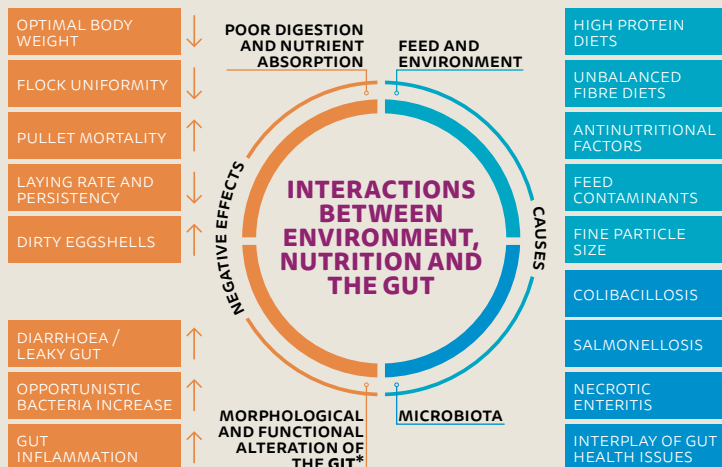
## ADVERTORIAL



### BROILER CHALLENGES



### LAYER CHALLENGES




\*Gastrointestinal tract

of products and service offerings it provides a holistic approach to tackle these challenges head-on.

The Evonik holistic solution to gut health incorporates a number of nutritional strategies such as implementing lower-protein diets supplemented with amino acids with particular emphasis on threonine and methionine, raw-material quality evaluation, and antinutritional factor measurement. Combined with these nutritional solutions, the addition of gut health stabilisers such as Ecobiol or ProPhorce™ SR 130 can ensure that the microbiota and physical morphology of the gut is maintained at an optimal level. This combined approach will ensure that the delicate balance between the environment, microbiota and gut function is not disrupted. These strategies will lead to improved poultry performance and health, with the happy result of increased profitability of your broiler or layer operation.

Evonik's experts are ready to work with you on your specific challenges, to analyse your flock's situation and implement the recommended concepts.

For more details on how Evonik can assist you in taking your poultry operation to the next level, contact technical service manager Natasha Davison at [natasha.davison@evonik.com](mailto:natasha.davison@evonik.com). 



# An organic chicken farm in Georgia has become an endless buffet for bald eagles

Dozens of the raptors crash White Oak Farms each winter to dine on its fields of pasture-raised poultry. With little recourse, the farmers are racing to adapt. By **Susan Matthews**

**In a battle between a bald eagle** and a chicken, the chicken is definitely the long shot. And yet you can't help but root for the eagle. It is a magnificent creature, precision-built to do two things that reliably fill humans with awe – fly and kill – and it looks completely at ease doing both. Swooping down, the eagle unfurls its hand-like claws, scoops up a chicken, and sweeps up to a tree, whereupon the larger bird lays the smaller bird on a branch to allow for easy consumption. It's unclear exactly when the chicken dies, but the eagle's beak is quite effective at pulling out

the other bird's meat. After a few minutes, all that remains is a clump of feathers and discarded viscera. These gory leavings splatter anything below the tall oaks at White Oak Pastures, a family farm in rural Georgia in the US South – including, one morning, Jenni Harris's SUV.

Jenni's father, Will Harris, the fourth-generation owner of White Oak Pastures in the tiny town of Bluffton (population: 100), is laughing as he tells me about the gut-drenched vehicle. Jenni was unperturbed, he explains; she simply wiped the bloody goo off the windshield before driving away.

What else could she do? The slaughter here is relentless. White Oak is home to one of the largest pastured chicken flocks in the US; at any given time, 60 000 birds wander the land in accordance with pasture-raised parameters. As the next level beyond free-range, this farm never contains its adult birds indoors, instead allowing them to roam without restraint at all times. This also means that for the bald eagles that showed up White Oak is an all-you-can-eat buffet.

When I visited, at least 75 bald eagles were living on the farm, where they overwinter October to March. ►





# CHICKEN AROUND THE GLOBE



*A bald eagle  
makes off with the  
shredded remains  
of one of White Oak  
Farm's chickens*



## BALD EAGLE UPDATE, 2022

*Since Matthews visited White Oak farm, six years have passed and the Harris family has scaled down their chicken operation. Not only has the cost of pasture-raising chickens proved too high to be commercially viable in the long term in the great numbers they stocked before, the eagles have not given up their favourite fast food. Says Jenni Harris, "We still have a lot of eagles. We have not received reimbursement from the government under the livestock indemnity programme." The conundrum of a protected species predating on a farmer's flock could not be adequately resolved. – Editor*





*Bald eagles probably don't consume more than one chicken a day, though they may kill others that aren't eaten. The raptors circle above the portable chicken houses, where they are guaranteed a fresh meal*



At that time, Harris estimated each raptor was killing up to four chickens a day, racking up a total of at least \$1 000 in daily losses. Due to the birds' protected status, Harris had few options. He couldn't kill them. He could try to shoo them, but most methods would be costly and likely to scare the chickens before the eagles.

So for a time the farm tried to live with them. Harris chose to view the sacrifice of some of his principal product in terms that verged on the spiritual. "You're supposed to give 10 percent to the church and we don't really do that, but we're giving 10 percent to nature," Harris says. Though White Oak probably gave

a little more than it could truly afford: around the time Harris contacted the National Audubon Society in December 2015, the eagles had moved from attacking chickens only

***No-one benefits from the setup – not the Harrises, not the eagles, and certainly not the chickens. The question at White Oak, where the trees rain guts, is how to fix the problem***

to taking down turkeys and then going after the newborn goats too. The US Department of Agriculture has a

programme that reimburses farmers who incur losses from protected wildlife, but to get the money, you must prove the predator caused each death – a complicated endeavour

when you're talking about thousands of chickens.

Of all places for this to happen, White Oak is probably one of the best spots for the eagles to have staked a claim. When he realised the predators were not going anywhere, Harris alerted the Georgia Department of Natural Resources (DNR) to the

birds' presence and asked for advice on how to handle them – a refreshing change from the "shoot, shovel and



shut up” strategy some farmers might employ, says Jim Ozier, former eagle coordinator for DNR. Of course, this holistic approach towards both farming and animals may explain why the eagles are there in the first place. During the past 20 years Harris has transformed White Oak from an industrial cattle operation into a farm that produces a wide variety of organic, sustainable products. “Everything we’re trying to do, we’re trying to emulate nature,” Harris says, though he quickly admits, “Sometimes it’s imperfect and sometimes it sucks.”

And sometimes it backfires. It may be true that the more natural and more humane way to raise a chicken is to let it run around in the grass rather than live its days cramped in a cage. But the raptor mob isn’t just bad for the chickens or for Harris’s profit margins. It’s also bad for the eagles themselves. The high concentration could have negative ramifications. If one gets sick, for instance, all of them could fall ill. What’s more, juveniles form bad habits: picking off chickens does not require the same skill as, say, snatching wild catfish from the churning Chattahoochee River. So no-one benefits from the current setup – not the Harrises, not the eagles, and certainly not the chickens. The question at White Oak, where the trees rain guts, is how to fix the problem.

The situation is difficult to remedy in part because it is unique. While non-breeding eagles are known to gather in large concentrations in winter where food is abundant, they’re usually feeding on fish, not poultry. Most people who pasture-raise chickens have much smaller flocks, and on any farm you might expect to see a few chickens roaming. At White Oak, if you’re in the right place, the birds appear in thousands-strong swarms. ▶

*In 2010 Will Harris decided to welcome chickens into his family's cattle business. A year later, the eagles began inviting themselves over*







# CHICKEN AROUND THE GLOBE



Poultry manager Daniel Coady walks the farm at dusk to collect the remnants of chickens torn apart by eagles

The chickens tend to congregate around their small homes – mobile sheds that block wind and contain shade, seed and water. The houses are clustered in groups of six and are moved every few days, following cattle as they graze from pasture to pasture across the 1 000 hectare property. The arrangement benefits bird, ruminant, and pasture alike: as the animals move across the land, their droppings help fertilise it. The chickens also eat bugs in the cow dung, cutting down the number of pests that bother the cattle and reducing the risk of infection by some smaller parasites and disease-carrying larvae that would otherwise thrive in manure.

At dawn and dusk throughout the winter, if you pull off the road near a cluster of White Oak's chicken shacks, you're guaranteed to see at least a dozen eagles, some perched in

trees and some snatching prey below. A human observer might perceive the magnificent raptors' actions as lazy, but Ozier describes them as "naturally efficient". After all, they're maximising caloric intake and minimising energy output. It may not be the kind of impressive behaviour we'd like to see,

***There used to be no eagles on the farm. Then Harris brought in the chicken operation. By the next year, a dozen eagles showed up, and the year after that, around 30. In a recent photo, 78 eagles perch in the oaks around the farm***

but it's clearly effective.

I'm sitting on the trunk of my car one evening watching eagles take their pick of the poultry when Harris pulls up in his Jeep. I ask him whether the

eagles drive him crazy. "You bet," he says. Most of the time he's pretty good-natured about the birds, joking about their presence, but standing before them he knows he's watching money swirl down the drain.

There weren't always so many eagles, because there weren't always so many chickens. Six years ago, there were no eagles on the farm. Then Harris brought in the chicken operation. By the next year, a dozen eagles showed up, and the year after that, around 30. Eventually that number more than doubled; in one photograph, 78 eagles perch in the towering oaks that border much of the farm. Their postures are both regal and self-assured –

it's almost as if they know how admired and protected they are.

"I don't know how they spread the word," Harris says. "Must be on their eagle blogs."





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# CHICKEN AROUND THE GLOBE



Jodi Harris Benoit, Will's daughter and the farm's events manager, has found that eagle-focused tours bring in paying visitors, which help offset the cost of chicken losses to the raptors

As much as the uninvited guests aggravate Harris, the chickens themselves don't even seem to notice the huge predators in their midst. A bald eagle can land in the middle of dozens of chickens and they'll continue pecking at the ground as if nothing were there.

"Once I even saw a bald eagle inside a chicken shack, just picking them off one at a time," the poultry manager, Daniel Coady, tells me. The chickens didn't make a peep.

Harris has turned to state and federal agencies for help. Georgia DNR employees visited the farm and made a number of recommendations. Two of the main suggestions – put up wire over a swath of pasture to keep out eagles, or move the chickens closer to humans – were impractical for White Oak. They'd prevent the chickens from

following the cattle, thus unravelling Harris's carefully built system. The farm has adopted targeted noise-makers, which go off in the trees and, so far, cause the eagles to scatter. There's no guarantee that they'll continue to work, however, and the cost in terms of man-hours and money adds up.

Harris is in talks with the USDA about seeking reimbursement for his financial losses through the Livestock Indemnity Programme, which offers a percentage of the value for each animal lost. The tricky part is proving that the eagles directly caused the losses, and the government demands hard evidence such as records from a veterinarian or photographs or video of the attacks.


Ironically, the eagles themselves might help alleviate some of the

financial strain they're causing. As events manager, Jodi Harris Benoit, another of Harris's daughters, runs the farm's agritourism business. The birds are helping address one of her big challenges: there isn't that much for people to do on the farm, besides learn about things like beekeeping and seed starting. But everyone loves watching bald eagles, and workshops about the birds are fully booked.

Most attendees are photographers lugging serious gear, intent on getting close-ups. Yet Harris isn't shy about attempting to recruit them as customers: "Go home and order a chicken," he wryly suggests at the end of his talk, before everyone loads into trucks to go see the eagles. "Not only can you help us with our economic hardship, but you can be damn sure that that was a healthy chicken – that son of a bitch was quick."

Harris has his own ideal solution, and it has nothing to do with noise-makers or reimbursement programmes or tourism. If everyone farmed in the nature-first way he does, he says, eagles wouldn't concentrate on his farm. Flocks of chickens scattered across the Georgia countryside would naturally cause eagles to disperse into smaller, healthier populations.

Of course, a pasture-raised chicken revolution won't happen any time soon, and Harris says he has no interest in evangelising for his cause. He's too busy plotting how to best make White Oak thrive.

For now, he's willing to accept his oversized eagle population as the best evidence he's got that he's swung the pendulum back in the right direction. Not that he has much of a choice. 

*This story was originally published by Audubon magazine on Audubon.org*



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# A Dictionary of Lesser-Known Chicken Diseases

Words **Alyn Adams**

Illustrations **Jason Bronkhorst**



After two years of Covid and HPAI, nobody's in the mood to worry about any more real diseases. So, we made some up...

**Between bacteria, parasites**, viruses and genetic conditions, there seems to be no end to the illnesses that plague the poultry farmer. We've no doubt you're well aware of all the biggest nasties out there, and none of them are a laughing matter.

But thanks to those dedicated researchers at the British University of Modern Poultry Farming (BUMPF\*), we have discovered 10 entirely imaginary diseases that chicken producers should be aware of. Not that they're all that dangerous – but they could cause uncontrollable giggling.

## Airy Syphilis

Not something we like to talk about in polite company, so let's get it out of the way immediately. It's a nasty virus that roosters pick up if they spend too much time socialising with ducks, who as any respectable hen knows are shameless, round-heeled hussies. Flighty, the whole lot of them – and boy, do they get around! Not the sort of company you want your impressionable young cockerels to keep; make sure they stick to flightless chicks the way Nature intended, and they'll avoid a nasty rash.

## Asparagusmosis

Brain parasite affecting the feeding habits of free-range chickens. Infected animals develop an insatiable appetite for crops that are a) difficult to grow, b) expensive to produce and c) in a neighbour's garden. Some connoisseurs insist that the luxury diet enhances the eventual flavour of the

bird, but they're careful not to say that too loudly around anyone who has just lost an entire bed of strawberries to an over-the-fence raiding flock...

## Cock's Idiotis

A hormonal imbalance in males that causes them to behave irrationally and ignore all risks, including potentially fatal ones, in pursuit of mating. Not restricted to chickens; the gene responsible has been found in several species, including *Homo sapiens*. Named not after the bird, but after pioneering experimental endocrinologist Sir Arthur Cock, whose research on a variety of rooster breeds in Norfolk, involving a maze filled with lethal traps and using ovulating hens as bait, earned him the censure of the Royal Society for the Prevention of Cruelty to Animals in 1873.

## Carowza

Bacterial infection that can strike both roosters and hens, resulting in giddy, irresponsible behaviour that lasts far into the night. Infected birds will raid washing lines for human underwear, which they then wear upon their heads while dancing clumsily into each other and singing off-key. They may even do the Human Dance. Can be cured, ironically, by a dose of alcohol.

## Line Feet

Viral infection that can render an entire flock susceptible to country music. Farmers have reported entering a barn in the morning to find every bird

sporting a Stetson, and wearing little leather vests, boots and silver spurs. If an itinerant fiddle-player happens to be passing by, as they so often are these days (now that all the big fiddling jobs go to lawyers and accountants), the whole flock will spend the day line-dancing. Since this is excellent for superior muscle tone and superb meat quality, the veterinary profession is not taking the epidemic very seriously as yet.

## Oomphalitis

Inflammation of the breast tissue in hens that makes them resemble, well, breasts. Modest farmers have attempted to introduce BirdyBras™ to mask the symptoms, but afflicted chickens tend to sashay around to a saxophone soundtrack, smoking cigarettes seductively while peering through their false eyelashes and making suggestive remarks to passing roosters. Thought to be one of the triggers for Cock's Idiotis (see above). ▶



*\*This is definitely a real university and not just something we made up to give our article some spurious credibility.*



## Fowlsox

A brain parasite that causes infected birds to seek out sheep, hop on their backs and scratch for ticks, fleas and other tasty parasites. Sufferers develop characteristic “socks” of loose wool around their feet and ankles. In later stages, these extend to full leg-warmers. The disease is thought to have originated in the 1980s, but nobody noticed it at the time, because everyone was wearing leg-warmers.

## Pastry Butt

Swelling of the fatty tissue in the tail, which eventually leaves the “parson’s nose” looking more like a Portuguese roll. The additional weight can cause lower back pain, so if you ever see a chicken standing up, leaning back and stretching its neck, with both wings pressed into the small of its back, it either has pastry butt, or it’s auditioning for the role of Foghorn Leghorn in a cartoon.

## Rad Mite

Arthropod skin parasites invisible to the naked eye that have evolved the ability to grow teeny, tiny skateboards from their exoskeletons.

Since they feed only on dead skin and feather flakes, they pose no immediate health threat to a flock, but once they start building half-pipes in between the feathers, the noise can keep a bird up all night. Also invariably leads to an increase in beak graffiti. The most effective treatment is to play music that is more than 20 years old in the coops all day and night. The mites will decide that the vibe is lame and leave of their own accord.

## Salmonellafitzgerald

A mild variant of salmonella that comes with its own jazz soundtrack. Symptoms are seldom fatal, although birds spend a lot of time swaying and crooning. 🎷



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1. Callender ME and Jeffers TK (1980). Anticoccidial Combinations Comprising Nicarbazin and the Polyether Antibiotics. US Patent 4,218,438, pp1-12.

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# Biosecurity: critical for local and international trade

By **Dawie Maree**

**The value of biosecurity**, which includes animal health but also feed safety and water quality, always comes under the spotlight when trade issues are raised or discussed. And more so when there is a disease scare or outbreak. In international trade, a country's pest and disease status is directly linked to market access and ultimately to the producers' bottom line. To access certain markets, both local and export, industry has to comply with predefined phytosanitary measures that are designed to protect domestic interests.

Broadly defined, biosecurity is the protection of production, ecosystems, health and the social infrastructure from external threats caused by pests, pathogens and diseases of various forms and origins. The prevention of disease-causing agents entering or leaving any place where farm animals or crops are present can start at farm, factory or country level.

Biosecurity has important economic, social, ecological and health-related dimensions. Opening your borders, whether as a country or a farm, ensures the flow of goods in and out of the specific area. The rapid flow of goods and movement of people due to increased trade comes with its own challenges in terms of the spread of different disease-causing organisms.

This is exacerbated by changes in the production structures and climate. As a result, there is an increased demand for biosecurity policies and processes.


Bio-invasions affect operations in a variety of ways that are measurable in economic terms. Producers might find they are forced to incur additional costs, or they might experience production losses that harm their profits. In any type of production, inputs are used to generate outputs in the form



***'The flow of goods and people due to increased trade also increases the risk of spreading disease-causing organisms'***

of goods and services to satisfy demand. Disease reduces the efficiencies by which inputs are converted into output, and hence affects profits.

However, the negative impact of bio-invasions or the probability that they may occur can often be reduced or completely avoided. By having efficient biosecurity measures in place, a farmer can reduce the likelihood of infectious exposure and the extra expenses that might bring about.

Unfortunately, the implementation of tighter biosecurity measures do come at a cost, and that of course diminishes profitability every time there is a health scare and/or a disease outbreak. This goes for producers as much as for countries. Yet it is exactly at those times when the critical importance of biosecurity is hammered home. 

*Dawie Maree is head of information and marketing at FNB Agriculture*





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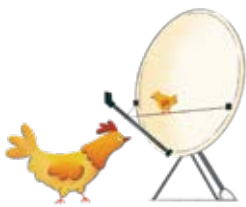
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# ON THE WIRES

A view of the latest in international poultry industry news

Compiled by **Charmain Lines**

## Preserving the power of diversity

**One of the cornerstones** of the poultry industry is breeding technology which has enabled the development of breeds that are genetically disposed to produce meat or eggs as efficiently and cost effectively as possible.

There is, however, also another side to the coin when it comes to genetics. In many parts of the world, rural communities depend on traditional breeds of chicken for food production and income. It is, therefore, in the interest of biodiversity, food security and the overall sustainability of the poultry industry in the widest sense of the term, that these so-called roadrunner breeds be protected and promoted.

Against this backdrop, a recent breakthrough from the Centre for Tropical Livestock Genetics and Health

at the UK'S University of Edinburgh, along with commercial partners Cobb-Europe, is splendid news.

The partners have developed a low-cost cryopreservation method that could help preserve the 1 600 domestic chicken breeds that are a source of income for smallholder farmers in low- and middle-income tropical countries in Africa. The research is being conducted in Kenya, Tanzania and Ethiopia.

The simple technique entails that reproductive organs are extracted from chicken embryos, pooled by sex and frozen. After being thawed, the reproductive cells are injected into sterile surrogate embryos – male reproductive cells into male embryos and female cells into female embryos.



While cryopreservation of reproductive cells from adult livestock is routine, it is problematic in poultry, and in-vitro alternatives are technically demanding and expensive. This simple technique does not require cells to be created in-vitro in the laboratory, making it easier and cheaper to preserve genetic material.

The benefit is not confined to small-scale farmers: the new method could also help secure poultry genes from indigenous breeds for efforts to develop commercial breeds with climate resilience and/or disease resistance. 

## France ends culling of male chicks

**The poultry industry in France** will end the practice of culling of day-old male chicks by the end of 2022. Farmers and producers will need to employ alternative methods to ensure that the up to 50 million male chicks culled in France every year are never born in the first place, according to Poultryworld.net.

To adhere to the decree, producers will need equipment that can determine the sex of an embryo by no later than day 15 of incubation. Producers


will need to show they have at least ordered sex identification machines by the end of March to avoid fines.

In a paper published in January, Dutch breeding, genetics and technology company Hendrix Genetics lists three alternative approaches to culling day-old male chicks:

1. Identify a mechanism that can tip the sex ratio in favour of females.
2. Develop tools that would allow the determination of the sex of the embryo in ovo prior to hatch.

3. Develop dual-purpose strains where female chicks would be reared as future egg-laying hens and male chicks for meat.



The French government's move is likely to prompt other nations to follow suit. The German agriculture minister, Julia Klockner, already made a similar announcement last year. 



## One person one egg, every day



### The International Egg

Commission (IEC) is launching an initiative to double egg consumption globally to 365 eggs per person per year.

Called Vision 365, the campaign will use scientific facts to build and boost the egg's reputation as an essential food for health. In addition, Vision 365 wants to position the egg industry as a global leader in sustainable protein production.

According to IEC chairman Suresh Chitturi increasingly opposing opinions on what is good for our health and the environment have created the perfect opportunity to promote eggs as an affordable, nutritious and low-impact food source. "But we need industry-wide support and investment to unleash the full potential of Vision 365 and more than double global egg consumption by 2032," he says.

To this end, the IEC has released a short video highlighting the power of the egg and the strength of the egg industry. "The video illustrates perfectly how powerful the egg itself is and how we, as an industry, are stronger together," says Chitturi. 📺

Scan the QR code with your smartphone to watch the video:



## How Brazil dominates exports



**As one of the main sources** of chicken exported to (and in some cases, dumped in) South Africa, Brazil is worth keeping an eye on when it comes to developments in its chicken industry.

The Brazilian Association of Animal Protein (ABPA) expects 2022 chicken production to reach 14.9 million tons – the highest ever output – with international sales growing by 5% to 4.74 million tons.

The growth is driven by domestic and international factors.

In Brazil itself, government support measures to boost per-capita consumption has seen a 2% growth in 2021 and a further 4% increase is forecast for 2022. This will translate into the average Brazilian eating 48kg of chicken meat during this year.

Internationally, avian influenza is

the single biggest reason for increased demand for Brazilian poultry products.

In addition to poultry products, ABPA has also reported a 25% increase in poultry genetic exports. In 2021, Brazil exported 14.518 tons of fertile eggs and 1.173 tons of poultry genetic material, generating USD147.7 million. These numbers represent a 26.7% increase in revenue and a 53% increase in volume from 2020.

In 2019, Brazil launched its international genetics strategy, spearheaded by the Brazilian Breeders brand. Since then, countries such as Japan, Cameroon, Jordan and Uganda have opened their genetics markets to Brazil, bringing to more than 60 the number of markets in Asia, Africa, Europe and the Americas that import Brazilian genetic material and fertile eggs. 📺





# A farmer's health checklist

Setting up a poultry farm? **Leonard Thaphati** gives advice about broiler health

**"I am starting out as a broiler farmer. What are the basics that I need in place to keep my birds healthy?" Tsheko, via Twitter**

**Firstly, only buy your chicks** from a reputable supplier. The chicks should be vaccinated for common diseases.

Before the chicks arrive, step one is to get your housing ready, with enough ventilation and insulation for varying weather conditions, and brooders or heating lamps to keep the chicks warm.

After cleaning and disinfecting with a product such as Virukill, cover the floor with dry litter such as sunflower husks. Feeders and drinkers should be cleaned and disinfected.

When the birds arrive, it's step two: confine them to a demarcated area in the house to ensure that they are close to the water, feed and heating sources at all times.

Check that all chicks know how to drink and feed as you place them in the demarcated area – dip each chick's beak in the drinker. To encourage feeding, tap the feeder tray containing feed, mimicking what the mother hen would do.

For the first seven days add a stress pack product to clean drinking water to replenish the chicks' minerals and vitamins. Only use feed from a reputable supplier, and follow the programme as per the feed brand, from starter, to grower and finisher – do not change brands mid-cycle.

Check your birds daily for signs of disease. If necessary, you can dose them with an antibiotic such as Doxy-



Max 50% to treat bacterial respiratory disease and bacterial gastrointestinal infections. You can also add crushed garlic in the drinking water to boost respiratory immunity. Sick birds should be culled and disposed of properly (burnt or buried deep – ask your local veterinarian if uncertain).

Biosecurity is very important, so use foot dips and limit visitors and traffic in and out of the housing. Ensure that no wild birds have access to the housing, as they spread disease.

Regularly check drinkers and feeders and the heat sources, and eliminate any drafts.

Keep the litter clean and dry by turning it and adding more fresh litter

as the birds grow. Change the litter as necessary. Manure should be disposed of properly, such as by composting.

Importantly, avoid stressing the birds, so prevent sudden noises or extremes in temperature.

When you get to the end of the cycle, you will have learnt a few lessons through experience. Write them all down so that you can improve on any mistakes you may have made. Follow the first two steps to prepare for your next cycle and be sure to order your birds in time. Good luck! 🍀

*Leonard Thaphati is the manager of developing agriculture at NWK Limited. Reach him at [leonardt@nwk.co.za](mailto:leonardt@nwk.co.za)*



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Says Prof Lucia Anelich, "We'll be covering some of the most pressing topics facing our industry, such as sustainability, food defence, plant-based consumer demands, product-testing trends and food-safety auditing. Attendees can also look forward to insights on cyber security, pesticide risk assessment and new food standards on the horizon. There will be a good combination of presentations and panel discussions this year."

The speakers include such leading thinkers on the topic as:

- Food safety and food integrity specialist Prof Louise Manning

from LJM Associates Ltd, UK;

- Janusz Luterek from Hahn & Hahn, SA, an expert on compliance and other legal issues in the food industry;
- Dr Ellen Evans, a research fellow at Cardiff Metropolitan University in Wales, UK;
- Jompie Burger, MD at Dairy Standard Agency (DSA), SA;
- John Donaghy, corporate food safety microbiologist at Nestlé, Switzerland;
- Prof Ryk Lues, from Central University of Technology (CUT), SA;
- Dr Marjon Wells-Bennik, a scientist at NIZO, the Netherlands; and
- Dr Yanyan Huang, global director of quality control and food safety risk assessment from ADM, USA. 📄

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Prof Lucia Anelich



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**Competition rules:** The closing date for entries is 6 May 2022. You can enter as many times as you like. Staff of *Poultry Bulletin*, the SA Poultry Association and the sponsors and their families are not allowed to enter. You have to have answered the question correctly to be eligible to win. Winners will be chosen through a random draw. Winners will be informed telephonically. We will phone a winner three times during office hours; if he or she cannot be reached with one of these three calls, a new winner will be drawn. *Poultry Bulletin*, SAPA and the sponsors accept no responsibility for any harm or damage resulting from participation in this competition. The Food Safety Summit is an online event requiring internet connectivity; *Poultry Bulletin*, SAPA and the sponsor accept no responsibility for ensuring the winner's connectivity. Prizes are not transferable and cannot be exchanged for cash or another prize.

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# Tough times ahead in a turbulent world

As senior global specialist in animal protein for Netherlands-based Rabobank, **Nan-Dirk Mulder** has a unique view of the road ahead



**The global poultry industry** is experiencing some of the most turbulent times in history. Over the last two years it's been affected by the big impact of Covid-19, avian influenza and a feed price rally that's now accelerated by the war in Ukraine. Looking ahead, the following four factors will determine the outlook:

- 1. Ongoing high grain and oilseed prices.** Ukraine and Russia produce 20 – 30% of the world's grain and the big worry now is if the summer crops can be seeded before May. If not, prices will rise even more. Prices are also up due to disappointing yields caused by El Niño in South America and lower fertiliser use due to high prices (also partly because of the sanctions imposed on Belarus and Russia). Grain prices in Europe are already up by 40 – 50% while Chicago Board of Trade prices are around 15% higher since Russia invaded Ukraine.
- 2. High energy prices and challenging availability of inputs.** Energy costs are around 5 – 10% of the cost of a whole chicken but this share is rising with current high oil and gas prices. This will further disrupt distribution at local level (via trucks, due to high petrol prices) and via containers or airports (already disrupted due to Covid). Labour has also become a big challenge in Europe, North America and Thailand.

***'The economic outlook was improving but the Ukraine crisis and big cost inflation might push economies back into recession'***

**3. Reopening of economies as demand improves.** The economic outlook was improving but the Ukraine crisis together with big cost inflation might push economies back into recession.

**4. Animal disease as an ongoing challenge.** The current wave of AI in Europe, Asia and Africa is the most significant in years and impacts global trade. A close eye is now on North America where HPAI is spreading in the US and Canada for the first time since 2015. This could have a global effect.

**Considering the above**, the outlook is gradually changing from quite optimistic at the beginning of the year towards challenging. The high grain and energy prices especially, plus concerns about supply chain disruptions are raising concerns about food availability in certain regions.

All meat prices will rise significantly, which will impact affordability for consumers. Poultry might benefit because of trading down, but some volume loss can be expected in low-income countries as purchasing power will be under pressure due to weaker economic growth and price inflation. For the poultry industry it will mean that producers need to pass on the cost increases to their clients. On the upside, many countries already tightened poultry production during Covid which might offer them more power to pass on higher costs. The power play here will however be significant.

The reopening of food service in many markets is also supporting global trade, and especially Brazil is well positioned to benefit as it is one of the few key exporters who haven't been affected by supply challenges like avian flu (Europe, US), Ukraine war (Russia, Ukraine), or labour issues (Thailand). 🇧🇷



# CLASSIFIED ADS

If you have goods, services or vacancies to offer others in the poultry industry, this is where to reach them, for only R530 per advert

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## FOR SALE

### EQUIPMENT

#### MPACT PLASTIC CONTAINERS

Mpact Plastic Containers is an industry leader in manufacturing recyclable plastic crates, offering a full range of poultry products:

- Egg setters in four sizes
- Hatching crates
- Chick crates
- Chicken coops
- Easitrays
- Blast freezer trays

Get in touch with us for more information:

**salesforce@mpcsa.co.za** or call **012 250 9100 / 021 573 9400**.

**www.mpcsa.co.za**

## SERVICES

### PHARMACEUTICALS

#### BIOFARM

Want to scale your business? Biofarm invites you to meet with a specialised sales representative.

Biofarm is a wholesale distribution company providing the market with a comprehensive range of products and solutions. We specialise in products/services for companion animals, large animals, poultry, swine and equine.

For poultry enquiries in the northern regions, contact **Casper Du Plooy** on **079 491 1764**, or **Deon Vosloo** on **083 266 3489** if you are located in the south.

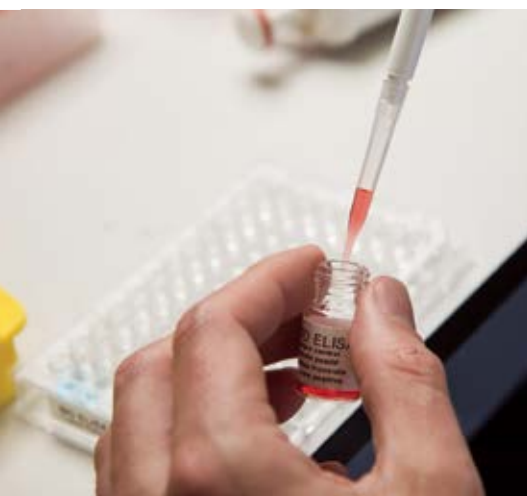
For more info, see <https://biofarmcc.co.za/>

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## How to book

- Contact ad sales manager Louisa Nel at [advertising@poultrybulletin.co.za](mailto:advertising@poultrybulletin.co.za) or on 011 795 9920.
- Format: send us a maximum of 50 words detailing your poultry-related product or service. Classified adverts are text only and we cannot accept logos or product images at this stage.
- Ads may be edited for length and clarity and we reserve the right to reject any advertisement at our discretion.



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AKA: HARDBODY CHICKEN!

THERE'S NOTHING LIKE A ROBUST HARDBODY CHICKEN FOR FLAVOUR. COOK YOUR BIRD LONG & SLOW, AND TASTE THE MAGIC!

### YOU WILL NEED:

1 HARDBODY CHICKEN CUT INTO PIECES



1 DICED

GREEN PEPPER



1 SLICED

ONION

1 LITRE WATER  
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2 BAY LEAVES  
2<sup>+</sup> MIXED HERBS  
SALT & PEPPER

- IN A LARGE, LIDDED POT, BRING WATER TO BOIL - ADD STOCK CUBES & BAY.
- ADD CHICKEN PIECES, COVER & SIMMER FOR 2 HRS. TOP UP WITH WATER AS NEEDED.
- ADD VEGETABLES & SEASONING.
- SIMMER FOR ANOTHER HR. UNTIL MEAT IS TENDER.
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