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Poultry Bulletin



THE RETAIL ISSUE

OFFICIAL MAGAZINE OF THE SOUTH AFRICAN POULTRY ASSOCIATION

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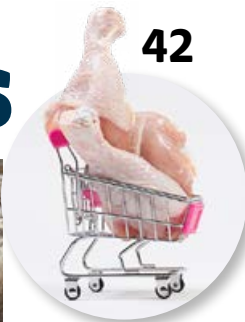
Contents



52



48



42



68



66



56

5 From the Boardroom

6 Letters

8 Economist's view

Don't blame producers for retail prices

10 News in Brief

A hatchery overhauled, weather warning and more

12 Motivation, discipline... and girl power!

Twin Chicks kick off our Poultry People special: two village girls on a roll

16 A legacy of eggs-ellence

Poultry People II: a second generation in poultry

19 Farming with a plan

Poultry People III: A business-plan winner's story

22 Members' Noticeboard

All key reports summarised and analysed

34 Long-life chicken: myth or miracle?

The innovation that could change how chicken is sold

42 Chicken's key role in retail

How chicken became a grocery essential

48 Story of an African (quail) farm

A Zambian farmer's quest to sell into Africa

52 Raising chickens in apple country

Free-range farming in the Western Cape

56 The lighter side

Chicken jokes eggs-plained

60 A learnership programme for the youth

Giving back to the community

64 Ask the experts

A reader's question about predator-proofing coops

66 Tech desk

Safe transport for eggs to retail

68 On the wires

Germany's bright eggs, Japan's HPAI chaos, fruity diets for chickens and more

74 Farmer's wisdom

The ins and outs of contract farming unpacked

76 Recipe

Spicy chicken and black bean stew



Winter is here and with it comes the renewed threat of avian influenza, which is expected to be on everyone's lips at AVI Africa this June. SAPA's congress is back this month after an absence of four years, and we're excited to meet our readers at Emperors Palace, as we look ahead towards to "A new tomorrow".

HPAI has already caused havoc in the Western Cape after recent outbreaks led to the loss of 540 000 layers. While many producers worldwide pin their hopes on a vaccine, we have a long way to go before vaccination might be an option in South Africa. Meanwhile a five-year European study has shown that human activity is often to blame for the spread of the disease through contaminated shoes, machines, bedding and more, underlining the importance of adhering to strict biosecurity principles.

Aside from keeping their flocks healthy, getting their products into the hands of consumers is a priority for everyone featured in this retail-themed issue – from the award-winning second-generation egg producer (p16) to the Zambian quail farmer with the Shoprite connection (p48) and the entrepreneur promoting his long-life chicken (p34). We also learn that chicken has long been a drawcard retailers use to get consumers through the door (p42).

See you at AVI Africa, and make sure you enter our competition below!!

Melinda

🐦 @melshaw001

🐦 @poultrybulletin

WIN!

Take a selfie in front of your favourite stand or exhibit at AVI Africa, and you could win a *Poultry Bulletin* T-shirt. Email your photographs to editor@poultrybulletin.co.za and be sure to include your contact details.



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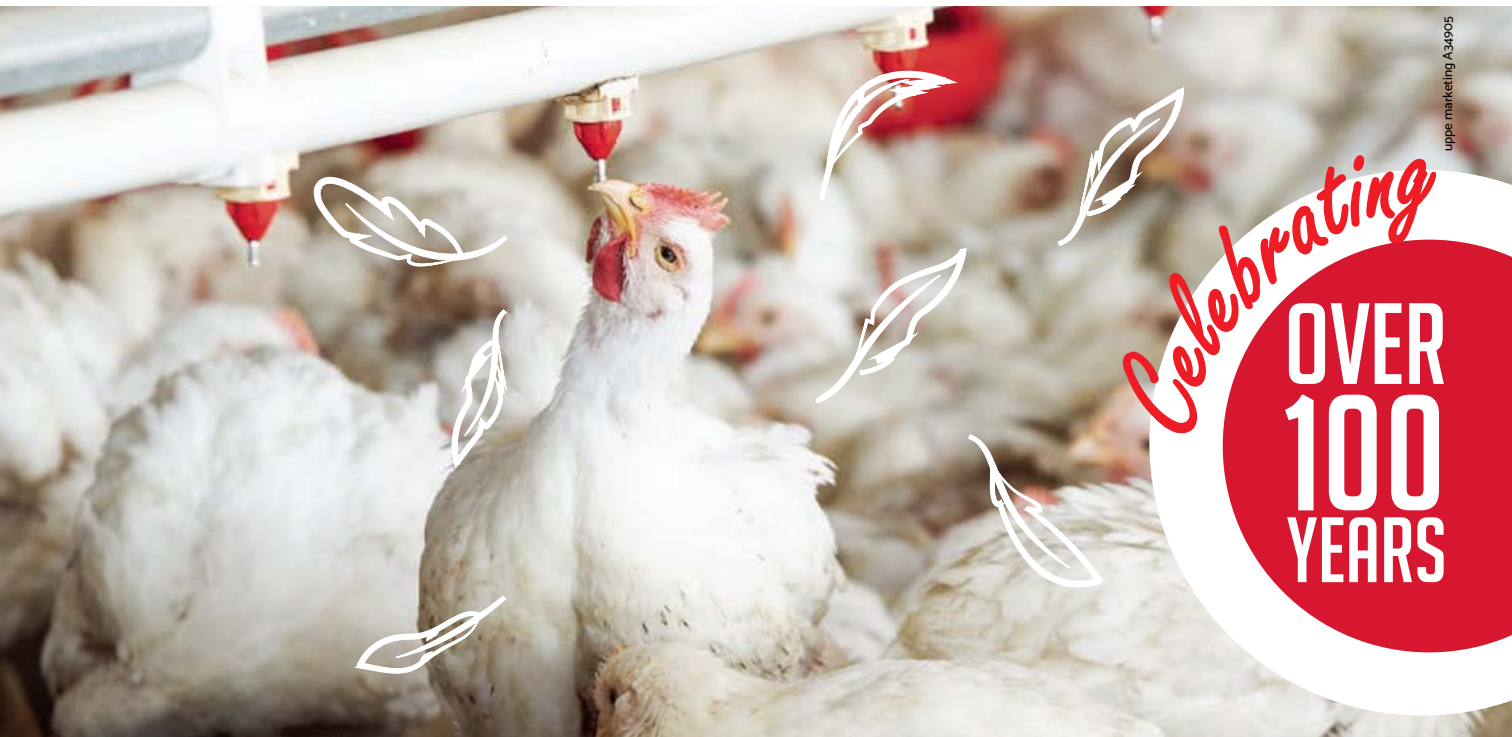
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Welcome to 'A new tomorrow'

This month heralds the welcome return of AVI Africa, our industry's big biannual congress which due to the restrictions of the global pandemic last took place in 2018. The opportunity to share information, learn from the experts and each other, view the latest technologies in the exhibition space and simply to network with other likeminded poultry people have been sorely missed. We know all of our members, readers, industry partners and poultry stakeholders are as excited as we are to get together again five years on.

This is also the first time that the new-look *Poultry Bulletin* is present at the congress, since editor Melinda Shaw and her team took it over in 2021. Watch this space for a report back on this year's event with the next issue.

We know that our congress attendees travel far and wide to join us and we are confident that it will be another great success thanks to everyone's continued support. We are particularly looking forward to seeing what our long-standing and new exhibitors bring to Emperors Palace with which to wow the rest of us. Our exhibition space and the support we get there is what enable us to host this event. We hope you will join us in extending a special welcome to our exhibitors.

The past five years have been particularly challenging to our industry and therefore we have themed the conference "A new tomorrow". This is an amazing industry which has grown in value despite all hurdles – the broiler industry achieved gross value growth from R47bn in 2019 to R59bn by the end of 2022, while the layer sector grew from R10.6bn to R12.6bn.

Poultry not only allowed growth in the feed industry, but also in the maize and soya industries. And to crown it all the new competitiveness study that compared our industry with that of Brazil, the USA and some countries in the EU, showed that we are globally competitive, and even more so than when it was last measured in 2019.


We achieved this despite Covid, avian influenza, extremely high raw-material prices, the suspension of antidumping duties against Brazil and four EU countries, stagnant growth in the consumption of eggs, and a significant deterioration in infrastructure and municipal



'This amazing industry has grown despite all hurdles, with the broiler industry now at R59bn and the layer industry at 12.6bn in value'

service delivery, which impacts electricity and water supply. This is why we are looking ahead with much hope to "A new tomorrow".

We look forward to catching up with all of you over the three days, whether you focus on the broiler programme, the egg programme or the veterinary/technical programme.

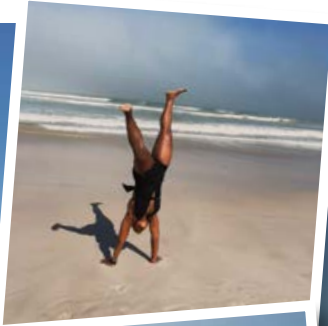
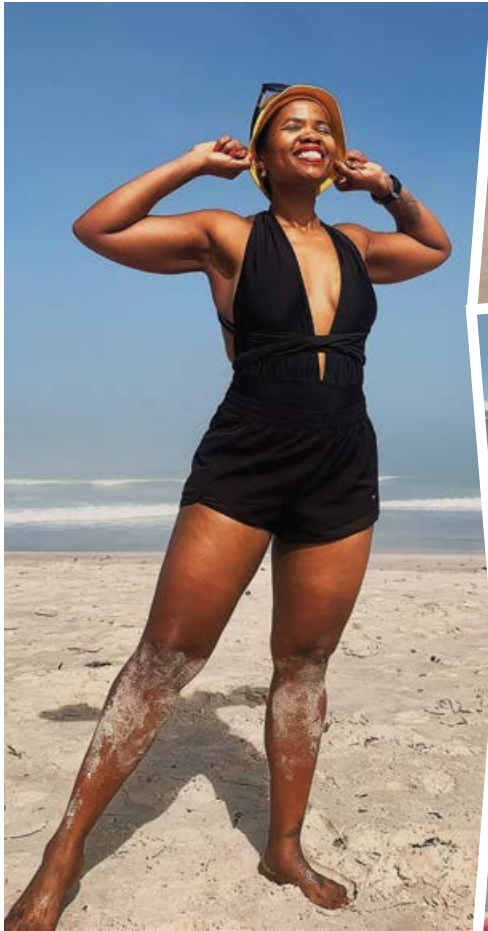
See you at AVI Africa! 

Izaak Breitenbach
GM Broiler Organisation



LETTERS

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



Keep mortality low this winter

As a small farmer I love to share my learnings about the art of poultry farming on Twitter and on my Youtube channel, and here are my best tips for winter. Firstly, make sure your chicken bedding is about 10cm deep so your chicks can be comfortable, and ensure your brooding equipment is working properly a day before new chicks arrive. Always start with high-protein feed and lower the protein as your chickens grow. Stresspac aids with stress levels, so provide this as a rule from Day 1 to Day 3, also when changing feed, when vaccinating and also when you transport chickens to a different location, whether chicks or fully grown.

Monitor the temperature in the house day and night as the chicks cannot regulate their body temperature until they are two weeks old. It is very important to follow biosecurity measures to prevent diseases such as Newcastle, coccidiosis, infectious bronchitis and bird flu. Make sure you clean in and around the chicken coop. Subscribe to my Youtube channel, Makwala Agri, for more!

Makwala Mphoke

@MakwalaAgri, Botlokwa, Limpopo



Farmer having fun

Hi farming fam, I have had an epic month in between hosting Poultry Spaces on Twitter and keeping my indigenous chickens happy and healthy, and wanted to show you that farmers can also have fun! I have been training like a machine this year, growing my long-distance running skills and in April I completed the Two Oceans ultra marathon, and got the medal to prove it! I truly made the most of being in Cape Town. Next stop, the Comrades!

Amanda Mdogana

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Don't blame producers for food prices

By **Wandile Sihlobo**

We live in a time of higher food prices, and this is not unique to South Africa but a global challenge. Let us consider the fundamental factors that have influenced recent food prices.

The drought in South America in the past couple of seasons and the growing demand for grains and oilseeds in China are the primary drivers of global grain prices. Moreover, as Covid-19 spread in early 2020, several major grain producers worsened the increase in global prices by temporarily banning exports. As this unfolded, shipping costs soared and pushed up global grain prices.

These essential fundamentals challenge food supplies, further exacerbated by the Russia-Ukraine war. Both countries are substantial players in the grains and oilseeds market. During this period, there were also sharp increases in energy prices. These events affected all countries, and food-price inflation suddenly became a worldwide topic.


In the past year or so, South African food producers and processors had to deal with higher agricultural commodity prices, making it more expensive to produce the food products we see on shelves. The activities between the producer (or importing country) and retailer do not happen without costs.

The food value chain first depends on expansive logistical systems and networks, while processing involves labour, energy, packaging and finance costs. Once the food is processed, it must be distributed to retail outlets, bearing these costs. We all know what happened to fuel prices and the interest rate in South Africa. On top of that, we can add inflation-related wage increases and the costs of loadshedding.

'If producers and retailers passed on their cost increases, consumers would face much sharper food-price hikes'

The poultry industry is a major user of grains and oilseeds and faces these higher input costs, combined with energy and labour costs.

Hence, the food value chain costs soared, amplifying the initial increase in commodity prices. Many of these cost increases are self-inflicted through state failure regarding energy, crime and local-government collapse. If food processors and retailers accounted for all these cost increases across the value chain, consumers would face a much sharper price increase.

With this in mind, I find the Competition Commission's recent comments irresponsible. It suggested various food-price increases in the past few months were "unjustified", insinuating that someone in the value chain is taking advantage of consumers. This is an unfortunate mischaracterisation of reality. 

Wandile Sihlobo is the chief economist of the Agricultural Business Chamber of South Africa



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NEWS IN BRIEF

Rounding up the highlights from South Africa's poultry producers

Compiled by **Charmain Lines**

A quantum leap for Quantum's Harties Hatchery

Every week 570 000 day-old chicks are hatched at the new hatchery



On 25 May, Quantum Foods officially opened its expanded Harties Hatchery, situated on the R500 between Carletonville and Magaliesburg in Gauteng.

Following a considerable investment approved by the company's board of directors in October 2021, the hatchery's capacity has been increased by 50%. It now supplies 570 000 day-old chicks per week to meet the growing demand in the province.

The expansion project started in

January 2022 and entailed doubling the size of the hatchery building and installing 50% extra set and hatch capacity. It also included the installation of new ventilation and water systems to accommodate the further 50% expansion that is planned for the future and that will increase the hatchery's capacity to 870 000 day-old chicks per week.

The new setters and hatchers were supplied by Royal Pas Reform, making

the Harties Hatchery the biggest Pas Reform facility in Africa.

"The new equipment and process flow enable us to supply the best quality chicks in the region to our customers," says Sello Lacton Mailula, broiler-farming executive at Quantum Foods. "The expansion also aligns with the launch of the Bellevue Chicks brand in Gauteng under which Quantum will market its day-old chicks in future." 

La Niña to swop with El Niño



Over the past three years, the La Niña weather pattern has boosted maize harvests in South Africa to record levels. But the party appears to be coming to an end, according to the seasonal climate-watch forecast recently issued by the South African Weather Service.

The weather watchers foresee that El Niño will set in from June, bringing with it unusually dry weather for the Cape and wet weather for the northern parts of the country this winter.

While we all know that weather forecasts are hardly ever 100% accurate, local predictions dovetail with the forecast issued by the US National Oceanic and Atmospheric Administration in terms of the switch from La Niña to El Niño.

The return of El Niño would not be good news for the agricultural sector in general and the poultry industry specifically. While dam and reservoir levels in the northeast of the country will benefit from above-normal rainfall in the coming months, the maize harvest is likely to be adversely affected, resulting in a knock-on effect on feed prices. 📌



Hammarsdale reclaims lost ground

The R620 million three-phase project to restore Rainbow's Hammarsdale production plant to pre-2017 full-capacity levels is about 60% complete.

Work to upgrade the hatchery and install air chillers and gyro- and box-type freezers started in May 2022 and at present the biggest job still to be done is the building of 78 new broiler houses. These will be located on one existing broiler farm that is being upgraded and the farms of several new contract growers whom Rainbow is bringing on board to meet its need for more birds.

The project is on schedule for

completion in January 2024.

"The overall objective is to return the plant to full capacity," says Rainbow managing director Marthinus Stander. "Operating a processing plant at only 50% of its designed capacity is not financially sustainable. By increasing our volumes, we will achieve economies of scale that will help to bring down processing costs."

In the process, new technology is being introduced to improve Rainbow's ability to produce fresh products for its customers. The project will increase Hammarsdale's production volume by 62% and create 406 jobs. 📌

CHICK OF THE MONTH



Add dazzle with the Frizzle

Who would have thought that a gene malfunction could have such fun consequences? The Frizzle breed of chickens, which even caught Charles Darwin's eye and was mentioned in his writings, owes its unique appearance to an incomplete dominant gene.

Frizzling happens when the feather and its shaft twist and curl upward and outward, instead of lying flat against the body as in a "normal" bird. One copy of the gene is enough to get the feathers curling, but if both parents contribute, the chick will have what is called "a high incidence of frizzles". Breeders don't usually allow this, however, as the chicks tend to suffer from health issues. A better option is to crossbreed with other breeds.

Frizzles come with some

unique care requirements.

Their curly feathers are fragile and prone to breaking, so they should be housed in a dry and protected area to prevent damage. They may also require additional grooming to keep their feathers clean and free of debris. They make up for the extra effort by having friendly and docile personalities.

Frizzles are generally good with children and can make good pets, although by now you would have gathered that they may not be the best choice for a flock that will need to earn its keep through the production of eggs or meat. 📌





MOTIVATION, DISCIPLINE AND GIRL POWER!

Twin Chicks is a thriving small poultry business created by two village girls with big dreams and focused minds. By **Melinda Shaw**



Teaming up is the secret to success,

and when women team up to create business, watch out world! So says *Poultry Bulletin* cover star Mpho Serabele and Dimakatso Motiang, two friends who started a poultry business called Dimphotse ke Lerue, aka Twin Chicks, in Madidi Village in North West province.

Coming from different business backgrounds – Serabele works in finance for a bank and also owns and runs a wellness spa in Johannesburg, while Motiang works independently as a clinical psychologist – both women were also interested in agriculture, which sparked the business idea for Twin Chicks.

“We are village girls and when we were growing up we were always farming something – either veggies or chickens – so I guess that passion has just found its natural outlet,” says Serabele.

The business was self-funded with their savings, as funding was not readily available to a startup with no relevant experience. Two years on, they are still using their salaries as running capital, sacrificing luxuries in their own households to ensure that the business comes first.

“We started out as resellers, buying chickens from producers and then reselling them, and once we knew we had a market, we started producing our own chickens,” explains Serabele.

Starting from scratch, the pair first sought training, and did a poultry course with Gladys “Nana” Towbola at Peezel Farms in Irene. “Nana is our mentor, and she is always there for us with advice, even to this day.” Being part of an active farming network is essential, they believe, and that is why they joined SAPA and nurture their relationships with great care, also making time to mentor other



Twin Chicks' customer base includes resellers, butcheries and shisanyamas

youngsters from the village with an interest in poultry.

The pair is extremely proactive when it comes to marketing their brand and their business. Twin Chicks is active on social media, and they distribute fliers promoting the business to potential customers. “We are not shy about self-promotion, and we know that customers won’t come to us, so we go to them.” Their customer base includes resellers, butcheries and shisanyamas, and they tailor their production to have enough stock for regular customers as well as a percentage extra to enable them to keep growing. The size of their operation is limited to around 700 birds per cycle, as that is what they have space for in their current infrastructure.

The business’s unique selling proposition is that they slaughter

The pair deliver freshly slaughtered birds to customers on Fridays and Saturdays





POULTRY PEOPLE



and deliver on the same or the next day, ensuring the freshest chicken possible, and this has cemented a loyal customer base over the past two years. Working with a small abattoir in Hammanskraal, their weekends are all about processing and delivering orders which they have confirmed in the preceding week. They ascribe their success to the fact that each of them plays to her professional strengths and knows her responsibility within the business. "With my financial services

background, I am the numbers partner, so I do the books and ensure that invoices are paid and we know where we stand financially at all times," explains Serabele. "Dima the psychologist is good with people, so she handles the marketing, negotiates with customers and handles any HR issues."

Juggling their day jobs and the farm is a challenge that the young women both relish. "We have a couple, Ginyane and Veronica Makamo, or

Baba and Mama as we call them, who run the daily tasks regarding the chickens on the farm; we couldn't do it without them," says Serabele. "We make a point of visiting at least four times weekly – we're there every weekend and also a day or two during the week, so that we stay on top of the business."

"Farming is definitely not for the faint-hearted, and you need to be disciplined," says Serabele. "But if you're passionate you make the

Playing to their strengths is a secret to success: Serabele is the numbers partner who handles invoicing and finances, and Motiang takes care of marketing



'We're on the farm twice during the week and on weekends, to stay on top of business'

necessary sacrifices, and take care of your business first, because one day the business will take care of you." Twin Chicks has twin mottos, she explains: firstly, decide what you want and act as if it is impossible to fail. Change your mindset to create opportunities for yourself and stop making excuses. "Secondly, discipline will take you to places where motivation can't. Motivation is what gets you started and discipline is what keeps you going." 📖

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Johan van der Schyff with his family, wife Anel, Jakobus, Mieke and Karlien

A LEGACY OF EGGS-CELLENCE

His late father used to run SA's largest independent egg-farming operation and was one of the driving forces behind TopLay Eggs. Building on this legacy, Johan van der Schyff Junior became a mega egg producer at Dagbreek Eiers. By **Charmain Lines**

Farming and eggs run deep in the Van der Schyff DNA. "My dad often spoke of how he kept chickens as a child and sold the eggs in town on weekends," says Johan van der Schyff. This was on the family farm outside Ventersdorp, the same maize and layer farm where he grew up and caught the farming bug. "I had always

wanted to farm," he says simply.

That dream appeared to be under threat when his dad sold up for health reasons in 1994 – he was still in primary school – and moved the family to Plettenberg Bay. However, the desire to farm soon saw the father-and-son duo starting to develop a layer farm on a new smallholding.

In 2000, the business had 100 000 layers, housed in six layer houses with a capacity of 18 000 each. A year later, having passed matric, Van der Schyff officially became an egg farmer when he joined his father. Fast forward 18 years and he was named Toyota South Africa/Agri SA's Young Farmer of the Year for 2019, overseeing an operation



that packed 1.8 million packs of a dozen eggs per month across three facilities.

These days the Plettenberg Bay farm where it all started for Van der Schyff has 350 000 layers and the facility at Humansdorp that started operating in 2006 has 220 000. The depot in Kraaifontein, which opened in 2012 and sources eggs from one large-scale commercial egg farmer and several emerging farmers, packs and distributes 650 000 packs of a dozen eggs per month. Cracked eggs are separated electronically during the grading process and sold to the baking industry as liquid eggs. Their total monthly production fluctuates between 1.5 million and 1.7 million dozen eggs.

The geographical diversification was done for reasons of risk management and economies of scale, says Van der Schyff. The same thinking drove diversification in other areas.

In 2012, he established a feedlot in Willowmore with the capacity to feed 1 500 small-stock per month and, in 2018, he set up a partnership with a fellow farmer to rent an 8 000ha farm in the same area. Here 20ha of lucerne is grown under irrigation and 3 000 Angora goats and 1 000 Merino sheep are kept.

Cost and risk management also extends to keeping input costs under control. Van der Schyff invested in solar power in 2020 already when loadshedding started casting its shadow across the country.

Looking back over the past 20-plus years, Van der Schyff credits his father's influence and guidance for much of his success. "When I started out, Dad already had more than 40 years of experience under his belt. He also had a head for business and was always one step ahead in his thinking. I couldn't have asked for

a better mentor."

Johan senior passed away earlier this year, but his legacy lives on in his son's success. Van der Schyff regards joining TopLay Eggs in 2006 as one of his biggest breaks. "TopLay brings the market to you," he explains. "It was one of the great benefits my dad and his founding partners created for our industry."

Dagbreek Eiers currently employs 70 people and each of the layer facilities has its own human-resources manager and food technologist. Food safety, biosecurity and cleanliness are non-negotiables, hence each poultry house always has at least one person on duty to keep it clean and identify any problems early on, while the company's food scientist keeps a higher level eye on all matters relating to food safety.

Van der Schyff and his wife – a doctor who is also active in the farming business – have three children, ages 12, 10 and five. "All three love the farm and want to take our egg heritage into the next generation," he concludes. 📧

CONTACT DETAILS

Email: johan@dagbreekeiers.co.za

Dagbreek Eiers has 570 000 of its own layers and also sources additional eggs



The company produces and distributes 1.5 to 1.7 million dozen eggs per month



His hard work was rewarded when Van der Schyff was named Toyota SA/Agri SA Young Farmer of the Year



Van der Schyff was ahead of the trend and invested in solar power in 2020

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FARMING WITH A PLAN

Molweni near Hillcrest in KwaZulu-Natal is home to Samkelisiwe Sithole, owner of Luhnyezi Farming and the 2023 winner of a nationwide competition that recognises excellence in the business plans of entrepreneurs. By **Charmain Lines**

Samke Sithole was inspired by her grandmother to start a small poultry business, and now she is dreaming big



Having enough food that is also healthy and nutritious, is a thread that runs through Samkelisiwe Sithole's life. She remembers going to bed hungry and depending on food handouts as a child, and her grandmother's health struggles. "Gogo had diabetes but she couldn't afford the healthy diet the doctor told her to follow," Sithole recalls. "So, when she got Covid, her immune system could not fight the virus and we lost her within one day."

Sithole had also always wanted to be an entrepreneur but didn't know where her passion lay. "I wanted to find a solution to all these issues," she says about her decision to farm with chickens. In this her grandmother also had a hand, as she used to raise a few chickens for the festive season every year.

Amid the hardships and restrictions imposed by Covid, Sithole bought 50 day-old chicks and before the broilers were anywhere near ready to be slaughtered, she had orders for all of them. "As I spent time in the chicken house, I realised that I had found my passion," she remembers.

But the young entrepreneur had learnt something else from observing her grandmother's forays into raising



POULTRY PEOPLE



chickens: it's not easy to keep a business going. "Gogo could never sustain and grow her chicken farming and I wanted to do it differently." This desire keeps her on the lookout for ways to learn more about the industry and its best practices.

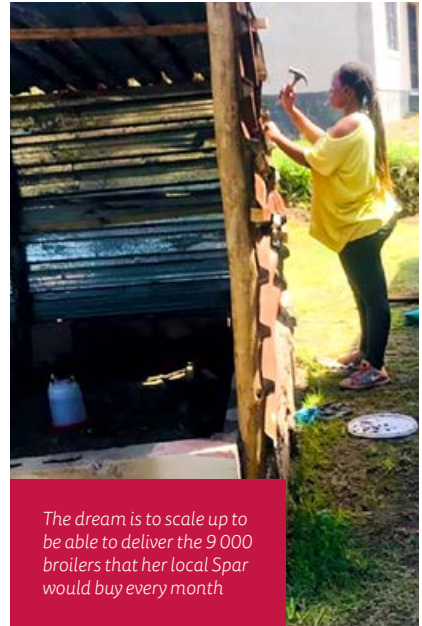
Scrolling through Facebook one day, she noticed a post from Business Partners Limited (BPL), a company that finances entrepreneurs. It was an invitation to participate in its annual business-plan competition. She attended the business-plan workshop in her area, submitted her entry and was excited to be invited to the prize-giving ceremony as one of eight finalists. "I had never even been to Joburg before!"

Sithole was blown away to be awarded first prize, which came with a welcome cash reward and ongoing mentorship and technical assistance from the BPL business-development team. "The competition has taught me a lot: how to make sound decisions, the importance of understanding my industry, at what level my business is operating now and where it can be, and how to track my financials."

Most importantly, though, Sithole

now has a roadmap for Luhnyezi Farming. Her vision is to provide quality meat and eggs, and help to make healthy eating possible for more people. To turn that vision into reality, she wants to develop an integrated value chain – from owning her own hatchery through to slaughtering in her own abattoir. Sithole already slaughters 100 chickens per day with the help of a part-time assistant,

Sithole has benefited from the ongoing mentorship and technical assistance that came with winning first prize in BPL's business-plan competition



The dream is to scale up to be able to deliver the 9 000 broilers that her local Spar would buy every month

and she's not happy with the chicks she buys from a local hatchery. "The quality is not consistent and I can lose up to 50% of a batch."

Feed costs are a challenge, but Sithole is a stickler for quality and buys only from Meadow. She says that other chicken farmers in her area sell live birds and only look at price. "I'm the only one here who slaughters, and I understand the difference good feed makes."


For now Sithole runs a modest operation from home, raising between 300 and 500 broilers per cycle, in addition to keeping 200 layers. Her customers include shisanyamas and crèches in Molweni. But she has big plans. Having successfully negotiated with the local authority to get access to more land, Sithole is now pursuing the funds she needs to expand. Her immediate goal is to scale to the point where she can provide the local Spar with the 9 000 birds a month it wants. "I am very excited about the opportunity, and about the fact that my business plan gives me the roadmap to get there." 📌



For now Sithole raises between 300 and 500 broilers per cycle


CONTACT DETAILS

Email: sitholesamkeliwiwe4@gmail.com



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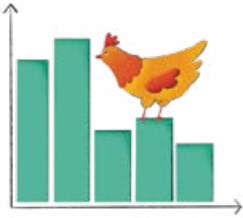
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MEMBERS' NOTICEBOARD

All the information that is of the essence for SAPA members, selected and summarised into an easy-to-digest package

Compiled by **Michael Acott**

Successes in SAPA's plan to curb dumping

Broiler Organisation GM **Izaak Breitenbach's** insights as presented to the board

Izaak Breitenbach looks ahead to August when duties are expected to be imposed on imports from five countries

Photographs: Visioncollective; Shutterstock



The SA Poultry Association (SAPA) has had some notable successes in its campaign to limit the flow of dumped chicken into South Africa, but new concerns have arisen.

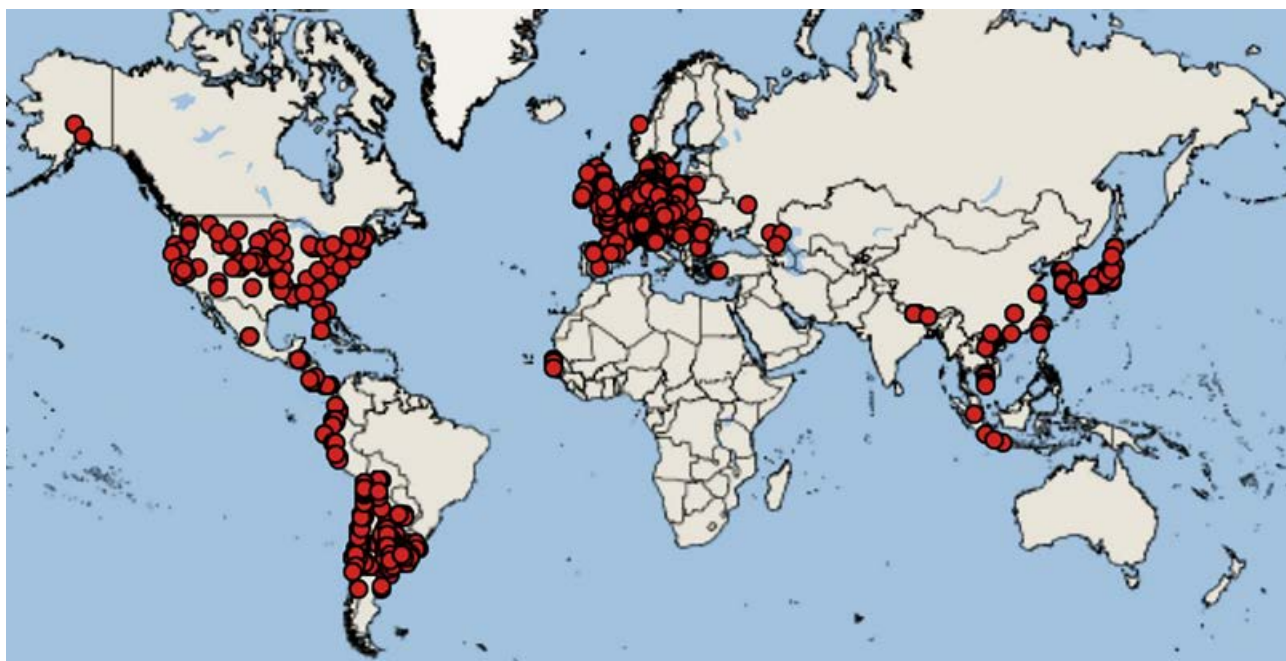
When the masterplan was signed in 2019, SAPA aimed for a revision of the tariff structure for imported chicken, as well as the imposition of antidumping duties on bone-in portions from nine producer countries.

Antidumping duties have since been renewed against three countries – Germany, the Netherlands and the United Kingdom – and the government is considering a recommendation for

the renewal of antidumping duties against the United States.

In addition, the government has approved antidumping duties against Brazil and four European Union countries – Denmark, Ireland, Poland and Spain. Unfortunately, the imposition of these new duties has been delayed until August this year, because the minister feared they might increase consumer prices.

If the antidumping duties are imposed as expected in August, it will complete that part of our trade policy. A decision from the minister on revising import tariff structures has



▲ Recent outbreaks of HPAI around the globe, excluding SA
Source: FAO

Bird flu's global spread

The global spread of highly pathogenic avian influenza (HPAI) is dramatically illustrated in a world map showing recent outbreaks.

The map, obtained from the Food and Agricultural Organisation (FAO) website, is used in SAPA's avian influenza report for the first three months of 2023 and does not include the recent outbreak in the Western Cape. There has been a decline in outbreaks of the disease in the US this year, and a rise in bird flu cases in South America.

No cases have been reported yet from Brazil. This could change and when it does there will be major ripple effects across the world markets.

A few cases have been reported in Africa, recently in Gambia and neighbouring Senegal.

Underreporting across Africa remains a serious concern. The first case of AI H5 in South Africa was reported on 21 April 2023. It does not appear on this map.

The AI report shows that, since the current outbreak started in 2021, South Africa has reported 168 cases of bird flu – 74 in wild birds and 94 on poultry farms. Just under 3.8 million birds have been culled since April 2021, nearly 2.5% of SA's chicken population. Egg producers have been particularly badly hit.

The good news is that progress

is being made towards approval of a bird-flu vaccine, which could end the mass culls that have been used to prevent the spread of the disease.

"It is anticipated that South Africa will develop a position on HPAI vaccination as well as guidelines for HPAI vaccine approval in coming months. Actual vaccination against HPAI is still a way off but coming closer," SAPA says in the report. [f](#)




161 million chickens on SA farms

South African poultry producers have just under 161 million chickens on more than 1 000 broiler and layer farms, according to statistics compiled by the SA Poultry Association (SAPA).

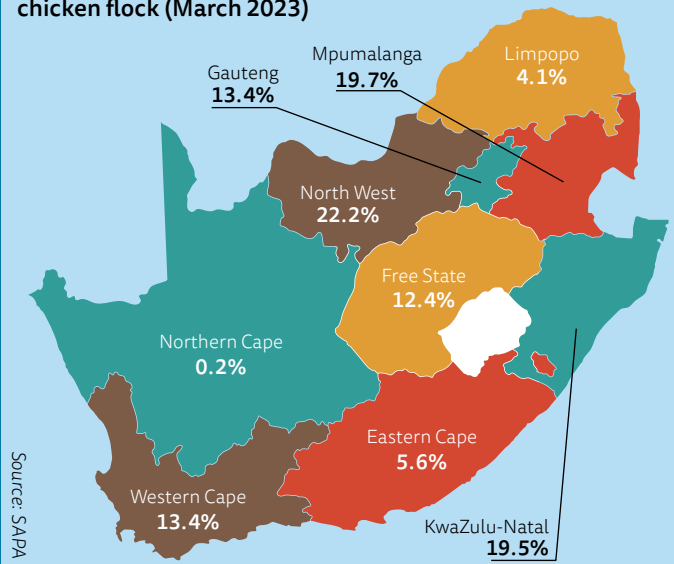
The report details the distribution and size of poultry-producing operations.

In the first quarter of this year, the national flock comprised 128.1 million chickens in the broiler industry and 32.8 million in the egg industry – a total of 160.9 million birds.

North West province is the country's leading chicken producer, with 35.7 million birds, or 22.2% of the national total. Mpumalanga is second with 19.7%, and Gauteng and the Western Cape are joint third on 13.4%.

Of the 725 broiler farms on SAPA's database, 89 are subsistence farms, 104 are small commercial farms and 532 are large commercial operations. The 278 egg producers comprise 14 subsistence farms, 114 small commercial farms and 150 large commercial producers. 

Provincial distribution of the national chicken flock (March 2023)



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MEMBERS' NOTICEBOARD


Chicken prices down in January

Average producer prices for chicken dropped slightly in January this year, according to SAPA's monthly producer price report.

The average producer price for January was R30.79/kg, down from R31.39/kg in December 2023. The decline was caused by a 3% drop to R29.25/kg in the producer price of frozen chicken, which made up 85% of the total. Fresh chicken prices rose by 3.6% in the month to R39.36/kg.

Individually quick frozen (IQF) portions rose 0.8% on a monthly basis to R30.41/kg.

All prices were well ahead of those in January 2022. The total average price was up 10% over the year, with fresh chicken up 11.9%, and frozen and IQF portions both up 8.8%. Nearly half (44.5%) of the chicken produced in the fourth quarter of 2022 went into IQF portions. The next biggest segment by volume was frozen cuts (17.6%).

Market share was almost equally divided between retail (40.4%) and wholesale (38.2%). Food services took 17.6% of production. 



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Cull trade thrives, but care is needed

Nearly 1.2 million live chickens were sold into informal markets by South African poultry producers in the first quarter of 2023. The trade in live birds, known as the cull trade, involves sales to cull traders at municipal depots and directly from broiler and layer farms.

The trade is regulated, and traders and sales are registered, because of the risk that the movement of live birds could facilitate the spread of avian influenza. Farmers require a

health permit before live birds can be moved off the farm.

“South African poultry farmers are fortunate to have a ready market for their cull birds,” SAPA said in its latest quarterly report on the cull trade.

“Laying hens and broiler breeders that reach the end of their production cycles are sold live off the poultry farms into the informal economy. These transactions create many jobs in townships and rural areas and also contribute significantly

to food security.”

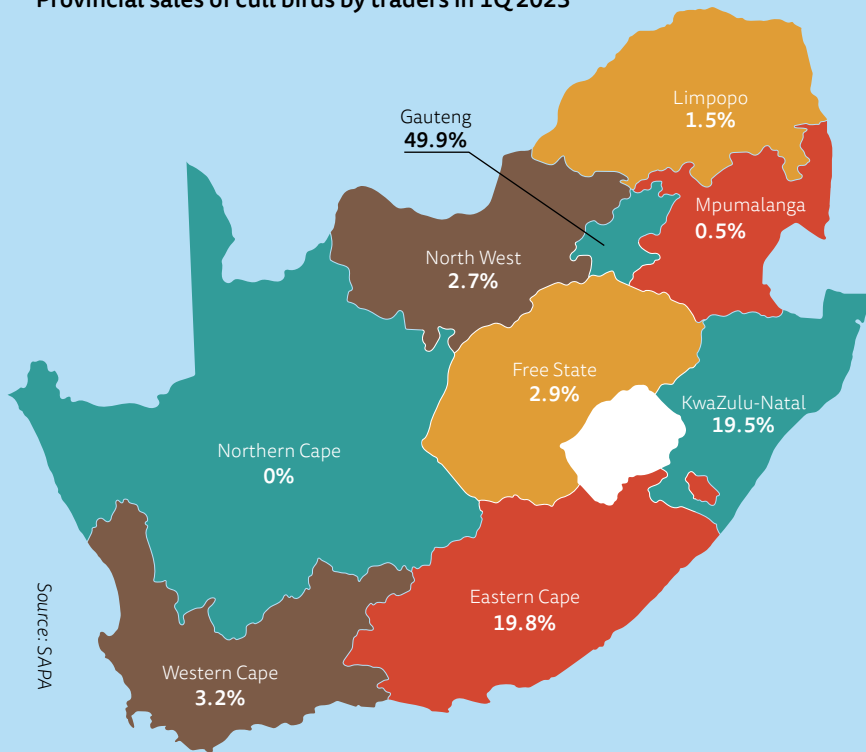
According to trader statistics, nearly half of the live birds were sold in Gauteng (603 000), followed by the Eastern Cape (239 000) and KwaZulu-Natal (236 000).

SAPA is continually trying to increase participation in the cull-trader monitoring system and in the flow of information about trades. This is part of the national effort to limit the spread of viruses and to effectively contain outbreaks of avian influenza. The cull-trader database can help traceability in the event of a disease outbreak.

“SAPA encourages all poultry producers and cull traders to comply with the protocols regulating the movement of live birds, particularly those in the provinces of Free State, Mpumalanga, North West and Western Cape because of their large poultry populations,” the report said.

“The recent confirmation of the first winter outbreak of H5 in the Western Cape should galvanise all participants into action.”

Provincial sales of cull birds by traders in 1Q 2023



Source: SAPA

The cull trade creates many jobs in rural areas and townships and also contributes significantly to food security



MEMBERS' NOTICEBOARD

Production up, but consumption down

South Africa's chicken production has increased steadily for the past three years, resulting in local chicken taking up a bigger share of the domestic market.

These statistics, contained in the SA Poultry Association's broiler production report for January 2023, illustrate how production has increased since the poultry master

plan was signed in 2019.

In that year, chicken meat production stood at 1.70 million tons. This increased to 1.76 million tons the following year, 1.80 million tons in 2021 and 1.83 million tons last year.

Consumption of chicken, however, has dropped. National consumption (which is calculated by adding production plus imports minus

exports) has declined from 2.18 million tons in 2020 to 2.16 million tons in 2021 and then 2.15 million tons in 2022.

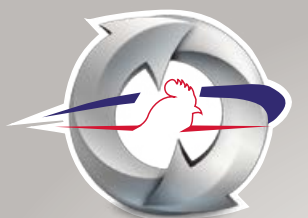
As this happened, the share of the local market taken by imports also dropped. It was at a 23.6% high in 2019 and has declined every year since then. It was down to 16.8% in 2022. 📊

Chicken meat production, consumption and imports (ton)

Year	Production	% change	Consumption*	% change	Imports	% of production	% of consumption
2019	1 704 195		2 165 282		511 317	30.0	23.6
2020	1 768 744	3.8	2 179 353	0.6	460 708	26.0	21.1
2021	1 801 237	1.8	2 159 066	-0.9	406 826	22.6	18.8
2022	1 838 945	2.1	2 149 110	-0.5	360 252	19.6	16.8
Jan 2023	162 239		195 291		36 919	22.8	18.9

*Consumption = production (incl. culls) + imports - exports

Source: SAPA



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Vitamin B2	5 000		mg/kg
Vitamin B6	2 000		mg/kg
Folic acid	500		mg/kg
Calpan	10 000		mg/kg
Nicotinamide	2 500		mg/kg
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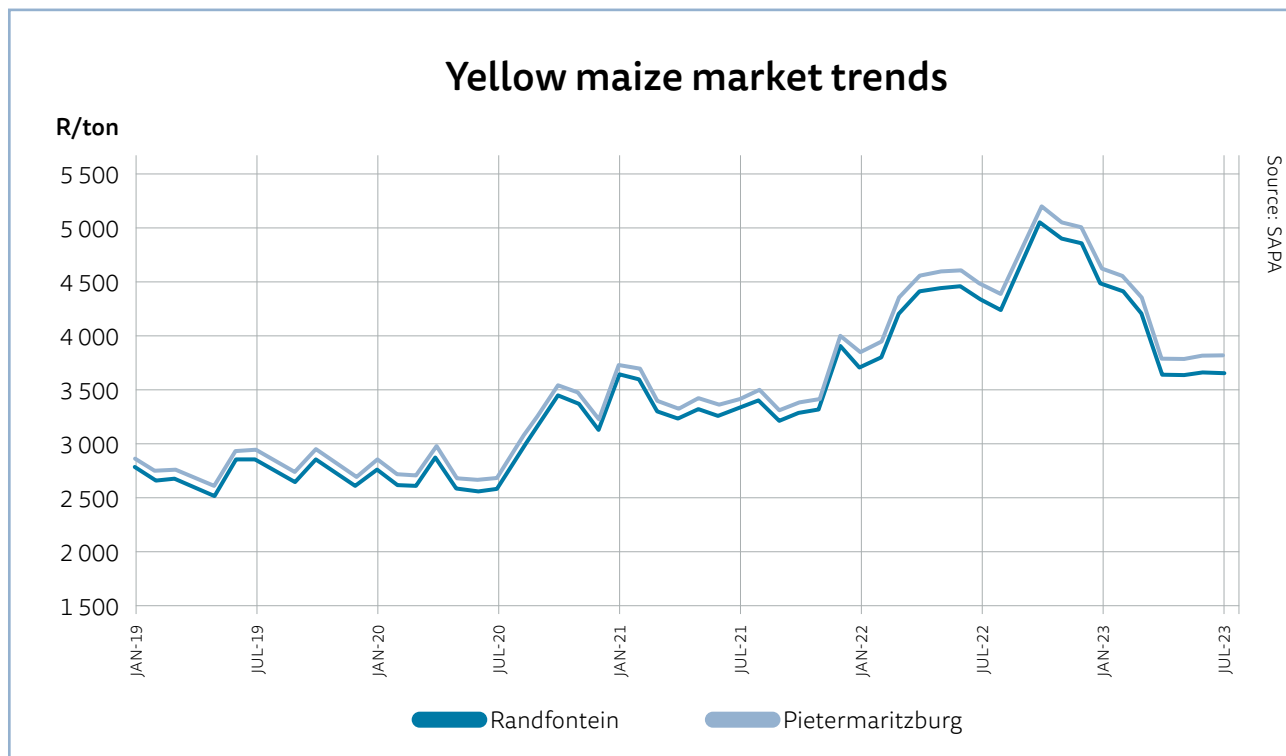


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Feed gets cheaper as grain prices drop



Good news for poultry farmers

is that maize and soya prices are dropping because of bumper crops, with the result that feed is likely to get a bit more affordable.

Maize and soya are the main ingredients in poultry feed, which makes up nearly 70% of input costs.

SAPA's feed ingredient report for the first quarter of 2023 notes that a maize crop of nearly 16 million tons is expected. Soya production has grown to the extent that the country is self-sufficient in soya and, instead of importing, now has excess volumes to export.

Increased production of maize

and soya, with the aim of reducing feed prices, is the first action point in the 2019 poultry master plan. Soya production has increased rapidly since then.

"South Africa's projected harvest will be its biggest soya-bean crop yet at well over 2.7 million tons. The country is now self-sufficient and we need exports of at least 600 000 to 800 000 million tons to work away surplus soya-bean stocks," the report states.

The result has been significant price drops for both soya beans and soya meal. Soya meal was trading at R9 000/t and less, down from

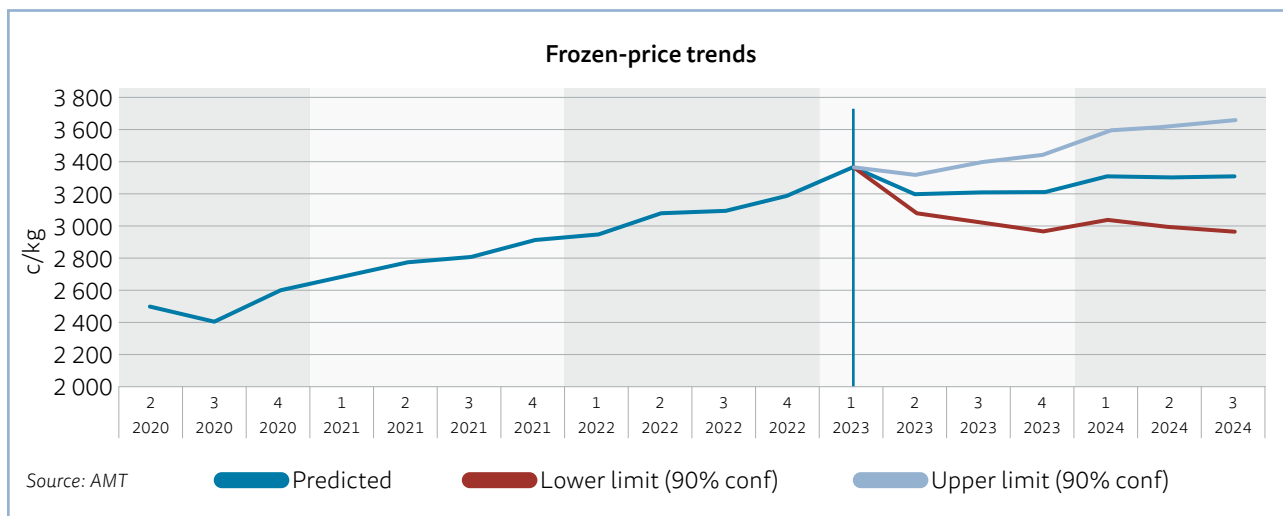
R11 300/t last December, with crushers offering high discounts. Soya beans were trading at R7 500/t and lower on SAFEX for May 2023 and below R7 600/t for July 2023.

Maize prices were also down, because of the good crop and a decline in international prices. Maize was trading at R3 652/t on SAFEX for YM May 23 futures, significantly down from December 2022 when the price was at an all-time high of R5 200/t.

"We have seen a big move back to white maize usage in the feed industry due to white maize being less expensive and more available than yellow maize," the report said. 📄



AMT forecasts meat prices for Q2



The producer prices for various meat products are expected to rise during the second quarter of 2023. So say agricultural trend-analysis company AMT, in its quarterly livestock report for April, which compares data based on historic trends to forecast market movements. It is of the opinion that pork, beef and mutton will become more expensive in the coming quarter compared to the first quarter while chicken prices might decline.

AMT reported that, in the first quarter of 2023, the average producer price for frozen chicken was R33.67/kg. Fresh chicken fetched 33.78/kg at producer level and individually quick frozen (IQF) portions R32.15.

AMT's forecast is that in all three chicken categories the price might trend downward over the coming quarter. Mutton, pork and most beef categories are forecast to trend upwards.

Pork became hugely more expensive in 2022. While chicken producer prices had increased by between 10% and 15% over the past year, pork prices were up by between 32% and 35% over the same period, AMT said.

It noted that any forward-looking statements reflect AMT's views as of April with respect to future events and are not a guarantee of market performance or developments. 📌

NOTICES

All aboard, it's AVI Africa!

We hope you are reading this while at the first AVI Africa congress in four years, taking place in Joburg from 6-8 June. Themed "A new tomorrow", the congress promises a packed schedule of interesting talks, panel discussions and the opportunity to network with the who's who in the poultry industry.

And don't forget the massive exhibition area with 188 stands where you'll be able to learn more about the latest technologies that can take your business to the next level. You'll find anything and everything relating to poultry, from animal health to infrastructure, storage to cleaning, energy saving to packaging, and more. 📌



Chicken imports on the rise



Chicken imports are rising, and 2023 may see a reversal of the steady decline of import volumes since a peak in 2018.

The increase started in November last year, and has continued every month since then. Broiler import volumes for the first quarter of 2023 were 5.6% higher than for the first three months of 2022.

Monthly volumes are still below the previous year. SAPA's import reports for March 2023 show that poultry imports that month were 6.6% above February, but 13.9% below March 2022. Similarly, broiler imports in March were 7.1% above February but 14.8% lower than March last year.

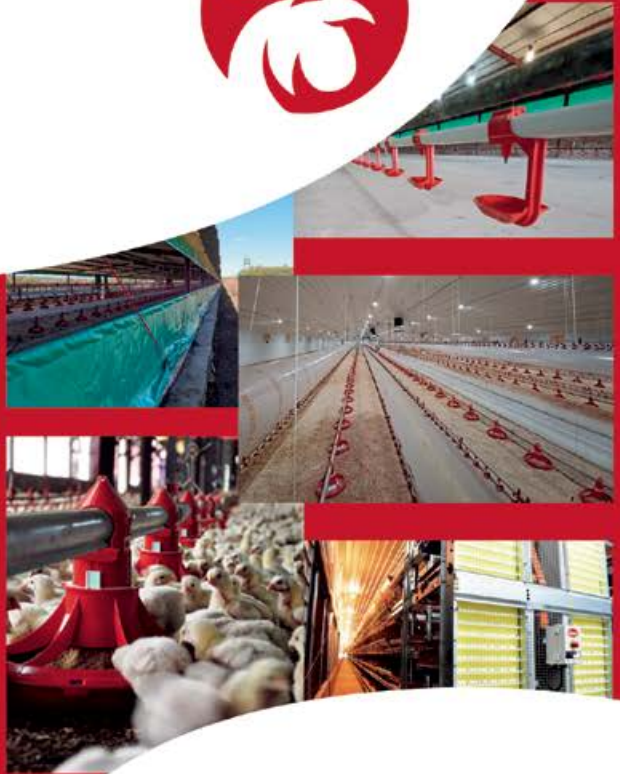
Bone-in imports, which compete with local individually frozen (IQF) packs, have climbed steeply this year, increasing by 31% in January, 81.4% in February and 37.7% in March.

Brazil remains the leading source of SA poultry imports (70.5%), most of it MDM. The United States was second (16.2%), most of it in the form of bone-in portions, while Argentina was third on 11.1%

Argentinian imports are now blocked by a bird-flu ban, while Ireland may once again send poultry to South Africa. 📧

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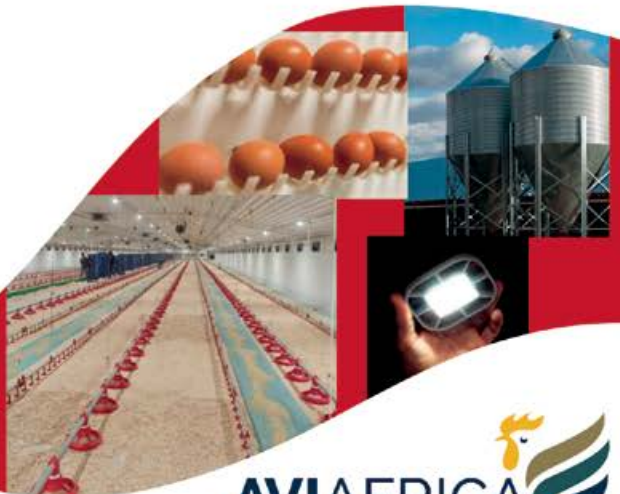


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¹ European Public Assessment Report - Collective Gumboro Vaccination Vaxxitek HVT + IBD - EU products characteristics: 2006. ² Alonso Castro M, Merino Cabría D, Fernandez Garcia D, Torribia Diaz J, Herrerias Viejo R, Fernandez Revuelta J, Mateo Oyague J, Carvajal Uruena A. Evaluation of the effects of vaccination with a HVT-IBD vector vaccine on bursa Fabricii, production parameters and meat properties in broilers. Abstract. XVIIIth Congress of the World Veterinary Poultry Association, Nantes, France, 2013. ³ Tang Shun F, He Shi J, Li Wan M & Lemiere S. Field experience of vaccination at day-old of Broiler chickens with a Herpesvirus Turkey - Infectious Bursal Disease (HVT-IBD) vector vaccine in different systems of chicken production across China. Article. XVIIIth Congress of the World Veterinary Poultry Association, Cancun, Mexico, 2011. ⁴ Zhou X, Wang D, Xiong J, Zhang P, Li Y and She R. 2010. Protection of chickens, with or without maternal antibodies, against IBDV infection by a recombinant IBDV-VP2 protein. Vaccine. 28:3990-3996. ⁵ Lemiere S, Rojo R, He S, Tang S, Li W, Herrmann A, Prandini F. Benefits of the Herpesvirus of Turkey vector vaccine of Infectious Bursal Disease in control of immune-depression in broilers and decrease of use of antibiotic medication. Abstract. XVIIIth Congress of the World Veterinary Poultry Association, Nantes, France, 2013. ⁶ Roh J-H, Kang M, Wei B, Yoon R-H, Seo H-S, Bahng J-Y, Kwon J-T, Cha S-Y and Jang H-K. Efficacy of HVT-IBD vector vaccine compared to attenuated live vaccine using in-ovo vaccination against a Korean very virulent IBDV in commercial broiler chickens. Poultry Science 95, 2016, 1020-1024. ⁷ Garrity AT. The effect of vectored HVT+IBD (Vaxxitek® HVT + IBD) vaccination on body weights, uniformity and virus shedding in commercial broilers. Abstract. International Poultry Scientific Forum, Atlanta, 2011; p31. ⁸ Tritel A, Herin J-B, Devaud I, Pagot E, Adamczyk E, Voisin F.; Comparison of two IBDV vaccinations in laying hens: benefit on growth, homogeneity of vaccination and production performances; Revue Méd. Vét., 2014, 165, 3-4, 68-76. ⁹ Morton DB. Vaccines and animal welfare. Rev Sci Tech. 2007;26:157-163.

*Marek's Disease, Infectious Bursal Disease

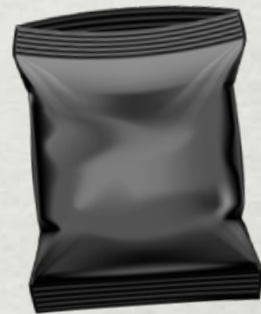
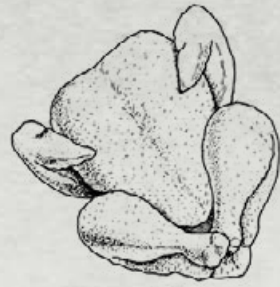
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LONG-LIFE CHICKEN: MYTH OR MIRACLE?

Chicken that keeps on the shelf for a year? Cooked? You must be joking, everyone has ever said. But now a Gauteng couple has developed and patented a unique process that does exactly that. **Melinda Shaw** did a taste test



INNOVATIONS



Stanley and Heather Micallef are hoping to find poultry partners who can help them scale their clever invention to reach all South Africans



They're an unlikely pair of culinary innovators, but Stanley and Heather Micallef of Benoni have always liked a challenge, and this time, they may have struck gold. The septuagenarian couple has developed a proprietary process for preserving cooked chicken portions in plastic single-serving pouches, creating a tasty protein product with a shelf life of a year that needs no refrigeration.

Imagine a camping trip where you don't have to worry about keeping the chicken frozen until you can braai it, where you don't even need the

big old cooler box and can enjoy a juicy thigh or drumstick two weeks into your holiday. Simply tear open a pouch (you don't even need scissors or an opener), and serve as is, or drop the sealed pouch in boiling water if you prefer it warm. It could not be simpler, and once you really consider the possibilities of a product that makes South Africa's most popular protein available without cold-chain concerns, a whole world of opportunity opens up.

Says Stanley Micallef, "Small country stores



and spaza shops can get stock delivered in boxes via courier, because the pouches are light and flexible and take up much less space than heavy bulky tins, which is how preserved meat products are typically packaged. The box is light enough for a person to carry and it can live under the counter, no cold room necessary, no worries about unreliable power supply causing food to go off... no food-safety worries at all, just convenience."

What's in the pouch is only the chicken – no chemicals are used in the cooking or preservation process. But what does it taste like? "We add no salt or flavourants during the cooking process, so it is just the taste of chicken," Micallef warns me as he opens a pouch with a flourish, and slides out a pale chicken thigh covered in the kind of jelly that settles around cooked chicken when it cools in its juices. This way, you can add whatever flavour you like yourself, Heather explains, whether it is a sprinkling of salt or herbs and spices, mustard or mayonnaise. The meat is pale because no frying occurred, and again, if you want colour, a quick whirl in a hot pan or on a braai is easy enough, she notes.

And indeed, a cautious mouthful delivers a simple taste of freshly cooked chicken, a bit bland for lack of salt, but tender, juicy and chicken-y. They show me the production date, stamped on the pouch – six months before. My head spins as it tries to get around that fact.

The idea for long-life chicken came to the



Micallef's long-life chicken is pale straight from the packet, but tastes juicy and chicken-y

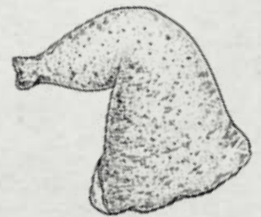
The couple started farming snails to provide the restaurant industry with an alternative to expensive imports



Micallefs, former Zimbabweans both of Maltese heritage, via the distinctly unromantic path of, well, snails. Back in 2012 the couple started Stanley's Snails on their property in Benoni, after a chef friend complained how expensive imported escargot had become. They were looking for a way to supplement their retirement income and decided to invest their nest egg in snail farming.

From Greece they imported breeders of what is essentially the common garden snail, and with selective breeding and their own secret feed formula for optimal growth, ended up with a meatier snail, which has proved very popular among their customer base of chefs. They also started selling cooked, spiced and vacuum-packed snails at weekend food markets.

When the Covid pandemic hit and people were confined to their homes, the Micallefs like so



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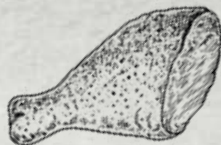
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many other small businesses worldwide found their regular income sources drying up. But instead of moping around, they put their thinking caps on, and out of this period came the idea of using the same pouches that they sold escargot in, for some other food source.

"I don't need to explain why chicken, the cheapest and most popular meat, was what we eventually decided we wanted for this next project," says Micallef. "But chicken is known to have a limited shelf life when fresh, and can harbour various bacteria and other pathogens that need to be destroyed in the cooking process. Even frozen its shelf life is limited, and is very dependent on freezing temperatures being maintained. That was the big hurdle."

But they had the time and some savings to invest, and two years of trial and error ensued as Stanley and Heather tried various recipes and cooking processes in their home kitchen, involving a food scientist friend along the way to help them with research and development. "And there were many errors. I still remember an entire wheelie bin full of sealed pouches blown up to bursting, showing that the



bacteria had won that round!"

But eventually, one day in 2022, they hit on just the right combination of elements, and it was bacteria 0, Micallefs 1. What exactly those miraculous elements were, Stanley and Heather are not saying, as their process patent is now pending. Along the way their chicken portion packs have passed various stringent laboratory tests, which they are happy to share, and which declared the product safe and free of pathogens.

"We feel that our process has proved to be successful, and the end product of a fully cooked chicken portion, ready to eat, would be an asset to the market for meat protein," says Micallef. "Being able to transport the packs anywhere with no cold chain or refrigeration required is a huge bonus, especially seeing that chicken is very susceptible to bacterial infection if the cold chain

is broken. Our process and packing give a form of good food security."

Where to from here? The couple explains that they have their sights set on finding a reputable poultry-producing partner who can take their brilliant idea and scale it to the full potential that they dream about. Says Micallef, "As a mom-and-pop shop our capacity to grow our idea and

'The end product of our process - a ready-to-eat chicken portion - would be an asset to the market'



Poultry Bulletin's test kitchen gives a verdict

Poultry Bulletin's recipe maestro Diane McCarthy used sample packs of Micallefs Long-Life Chicken Thighs kindly provided by Stanley and Heather, to develop the recipe in this issue, and gave it two thumbs up. She enthused, "Yummm, this chicken is perfect for the stew!" See the recipe on page **76**.





INNOVATIONS



what could become of it is limited. For example, we have been buying the chicken to develop the product from our local Spar, at retail prices!

“This should really be part of an integrated poultry business, where the meat comes from chickens raised and slaughtered by the same company, to go into its own processing plant, and become the star of its existing line of convenience products, for wide distribution to a large market across South Africa.”

There has been some interest from potential partners of the right kind, and the couple are currently exploring a number of options. As great ideas go, Micallefs Long-Life Chicken will be hard to beat, and one can only hope for a savvy investor and that we'll soon see this proudly South African product in the supermarkets, where consumers can reap the benefits of the enterprising snail farmers' genius. 🦖

To find out more about Micallefs Long-Life Chicken, contact Stanley Micallef on 082 457 2951 or email dragon@dragonglass.cc



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RETAIL: HOW CHICKEN RULES THE ROOST

The art and science of retail is an interesting subject in general, but the strategic role that chicken plays in the battle for consumers' hearts and wallets, is truly fascinating

By **Charmain Lines**

Photographs: Sunshine Seeds / Shutterstock.com; Grobler du Preez / Shutterstock.com



'CHICKEN ON SPECIAL'



A well-stocked chicken section is a key element of any modern-day supermarket

Where do you buy your grocery staples? Given that chicken is South Africans' favourite source of animal protein, chances are that as for many others, the price and availability of your preferred chicken cuts play a role in the supermarket you choose.

This wasn't always the case. Broilers are very much a post-WWII development. Before the war, chicken was a luxury and poultry farming was by and large something farmers' wives did as a side-line. In South Africa, commercial chicken production was driven from the 1960s onwards by the chicken-on-every-table vision of Stanley Methven, the founder of Rainbow, plus the arrival and growth of supermarket chains and the rapid advances in frozen-food technology.

Interestingly, however, the poultry industry not only benefitted from the rise of the likes of PicknPay and Shoprite; it also shaped retail strategy in this country. The story of



Rainbow founder Stanley Methven wanted to realise the vision of a chicken on every South African table

frozen chicken's strategic role in the ascendancy of Shoprite provides an intriguing peek into this history.

Shoprite is, today, the single biggest buyer and seller of frozen chicken in South Africa, with more than 60% of this commodity passing through its stores. This is a state of play few would have predicted in the early 1980s when Shoprite first appeared on the local retail scene – and even fewer a decade or so earlier when supermarket chains were a unknown phenomenon in this country.

Just how unknown and unpredictable a phenomenon is illustrated by an anecdote that at the 1972 SAPA congress, the chairman at the time voiced serious doubts about the desirability of chain stores. Captured in *The History of the South African Poultry Association*, the story goes that Piet Serfontein regarded the tendency of supermarket chains to prescribe prices and other conditions of sale "a rather ▶

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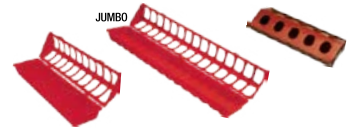
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WITH HANDLE



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WATER FOUNT



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WATER FOUNT



8l & 12l WATER FOUNT
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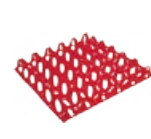
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'CHICKEN ON SPECIAL'

unhealthy development". He went as far as to ask producers to cooperate with each other and with consumers "as a counter to this trend".

Ironically, at that point, Rainbow Chicken Farms under the custodianship of founder Stanley Methven had the retailers dancing to its tune. According to SAPA figures, Rainbow's weekly output in 1969 amounted to 250 000 birds; its closest competitor, a company called Sunnyside, produced only 120 000. A decade later, Rainbow's production had ramped up to 750 000 birds per week. Sunnyside, still in second place, was delivering 200 000. In addition, its distribution agreement with Irvin & Johnson (I&J) gave Rainbow nationwide reach into supermarkets. Little wonder then that Rainbow could call the shots.

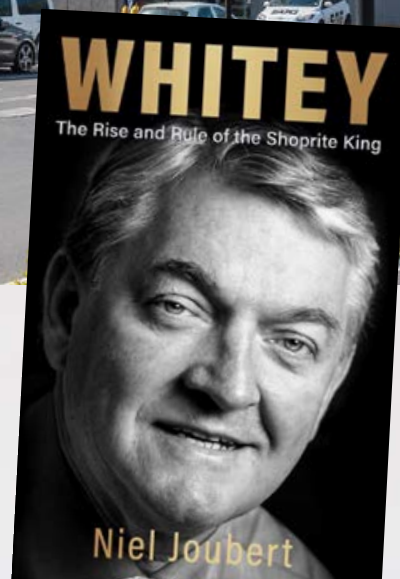
Once a week, at 6pm on a Thursday, Rainbow set its prices for the following week and announced them via ticker tape to the retailers. The retailers rushed to place their orders and then calculated their own prices for the next seven days. All the other chicken producers kept largely to the prices Rainbow called.

"They controlled the price because they had so much chicken," says

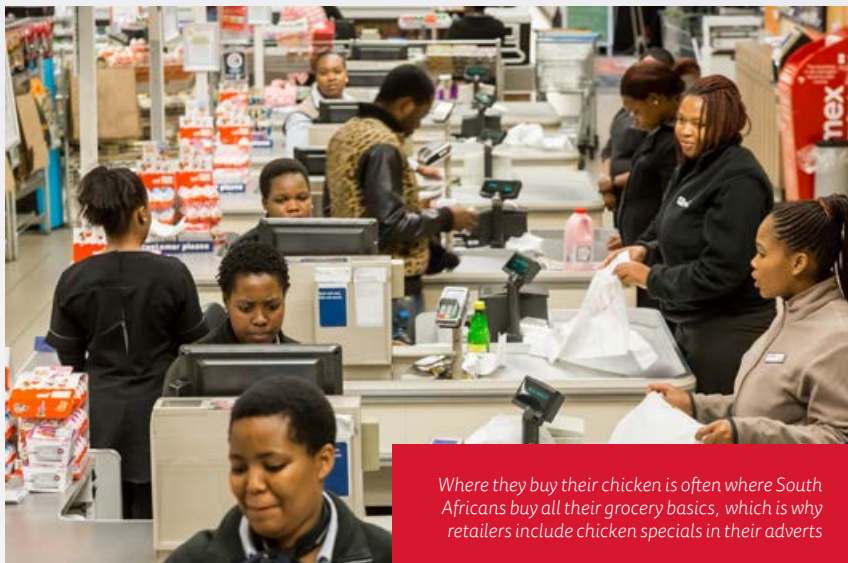


Whitey Basson, the legendary businessman who turned Checkers and Shoprite into retail giants, in the biography written by Niel Joubert, *The Rise and Rule of the Shoprite King*. "If they had too much, Stan [Methven] would dump stock and the prices came down; if they had too little, the prices would go up."

The retailers presumably went along with this because chicken was such an important product to have



Whitey Basson's biography gives a fascinating insight into the role that chicken has played in the retail sector



Where they buy their chicken is often where South Africans buy all their grocery basics, which is why retailers include chicken specials in their adverts

on the shelves. Basson specifically saw it as central to his strategy to grow Shoprite's brand and market share among middle- to low-income households in South Africa. "Chicken was very strategic for us," he is quoted as saying. "If you wanted to take a customer from Grand Bazaars, you had to be cheaper on chicken. And we were always the cheapest on chicken."

Being at Rainbow's mercy was an uncomfortable place for Basson to be, hence he started collaborating with Laura Kotze, owner of Golden Grove, a relatively small chicken producer. Shoprite became Kotze's biggest customer and she supplied

'CHICKEN ON SPECIAL'



Fresh, frozen or value-added in the deli, retailers know that chicken draws shoppers

Basson with chicken at prices that supported his strategy. Together the two businesses prospered.

In Basson's opinion running out of chicken during the trading day was an unpardonable sin. "If I looked at the Bellville shop's figures and they were not what we expected, then I knew we had run out of chicken by 11 that morning," he says.

"In those days we didn't have cell phones, but we would immediately send Johnny with a truckload of chicken. He was always ready to deliver and never further than 20 minutes away from any Shoprite. He was also in contact with Laura [Kotze] via walkie-talkie."

The imperative to always have chicken on the shelves motivated Basson to develop the centralised distribution network that would, over time, become one of Shoprite's biggest competitive advantages.

Basson furthermore understood how his customers thought about affordability. "Our customers don't look at price per kilogram but whether or not the full price is within their budget," he explained. "That's why people dig around in the freezers, searching for the chicken they can

afford. They don't mind that the per kilo price might be more expensive – all they want is a price they can afford to pay." Therefore, for some outlets, retailers want smaller birds or portions because the average customer can only afford "cheaper" chicken; in other outlets customers are far less price sensitive or more attuned to the price per kilogram.

Basson also regarded chicken as one of the products that retail customers used to gauge the value

they get in a store. When a shop is the cheapest on those specific items, the perception of all-round value is created and it becomes easier to retain the customers who attach value to that basket of products.

Chicken's status as a perceived-value product persists in the modern retail environment, says SAPA's Izaak Breitenbach. "South Africans love chicken and it is well known that retailers often use it as a key product to drive traffic into their stores with promotions like buy-one-get-one-free deals, discounts for a limited time or the inclusion of chicken products as part of a bundle deal. One only has to look at advertising inserts in printed newspapers or the offers on retailers' websites and in emailers they send out to their database to see how much of a drawcard chicken remains for retailers across the board, be it in fresh, frozen or value-added form."

What started as one man's mission to transform chicken from a luxury item to a commodity in South Africa has resulted in such demand that retailers continue to build pricing strategies around ways to use this much-loved and valued product to woo customers. 📺

For some shops retailers want smaller birds or portions, to be able to offer price-sensitive consumers 'cheaper' chicken

VetAssure™ surface ATP: Your on-farm biosecurity verification solution

By Anné Calitz, business development manager sub-Saharan Africa, BioChek

With an increased focus on biosecurity due to disease transmission risks and severe disease outbreaks, producers and production companies need a tool to help verify and track the successful implementation of hygiene and sanitation protocols as part of their biosecurity plan.

The VetAssure™ biosecurity verification solution helps veterinarians and producers to verify cleanliness and biosecurity procedures for facilities, personnel, deliveries and livestock trailers. The VetAssure™ surface ATP test uses bioluminescence technology to identify and measure adenosine triphosphate, commonly known as ATP. This measurement helps producers to objectively determine from a microbiological level if a surface has been cleaned properly, or if it requires a corrective action such as a recleaning.

This all-in-one test contains a pre-wetted swab bud for optimal sample recovery. A unique, liquid-stable reagent provides superior reproducibility and robustness of the ATP measurements.

What is ATP?

ATP is an energy molecule found in all living cells that allows cellular metabolism to take place. All organic matter contains ATP. Therefore, the detection of ATP on a surface after cleaning is an indication of cleaning efficacy.

What is bioluminescence?

BioChek's VetAssure™ ATP tests contain the enzyme luciferase, which produces a bioluminescence (light-producing) reaction when it comes into contact with ATP. The light emitted from the reaction is measured and quantified in the luminometer. The unit of measurement for the emitted light is relative light units (RLU).

The quantity of light generated by the bioluminescence reaction is directly

proportional to the amount of ATP present in the sample (higher contamination = higher RLU). The reaction is immediate, allowing results to be processed in ten seconds. Results are expressed numerically on the screen in RLU.

Studies have shown that the ATP bioluminescence method is useful and efficient in evaluating the cleanliness of various surfaces in farm environments.

Potential uses include:

- Determine the cleanliness of surfaces such as floors, feeders, enrichment material, nipple drinkers, and walls from farms and animal transports.
- Highly accurate and cost-efficient alternative to microbiological methods for rapid on-farm/on-trailer assessments.
- Useful to identify critical areas for subsequent further washing and disinfection.
- A simple and reliable method to test showering/handwashing compliance.

How are test results tracked?

Test results can be tracked on the luminometer and software by location, plan and user. This information allows users to clearly associate results with the specific location or group of locations tested, as well as who performed the tests. This enables users to track biosecurity performance over time and look for continual improvement.

Results of pilot projects in SA

Pilot studies were conducted in South Africa in 2021 at three piggeries to measure the impact of the use of ATP verification on farm biosecurity. All farm managers reported that using ATP testing increases awareness of biosecurity practices on their farms.



The EnSURE™ Touch luminometer and swab.

It also identified employees who required additional training on specific biosecurity protocols. After that training, a significant improvement could be tracked in the data collected by the luminometer.

One of the producers stated: "The ATP tests provided the evidence needed to understand the non-conformances of the biosecurity audit." All three producers highlighted that the use of ATP increased awareness on the farms regarding biosecurity procedures.

For more information, contact
Natasha Swanepoel, sales manager
veterinary: sub-Saharan Africa,
on 082 457 2300 or
natashaswanepoel@biochek.com.

POULTRY ACROSS THE GLOBE



Thandi Favard's family developed the uniquely Zambian ISA Jumbo breed

STORY OF AN AFRICAN (QUAIL) FARM

A family farm on the outskirts of the Zambian capital is quietly going about its business, chasing the dream to become the biggest quail producer in Africa

By **Melinda Shaw**

While chicken is still the most widely eaten poultry in Zambia, its smaller cousin the quail has been carving a niche for itself in this south-central African country. That is in no small part thanks to the efforts of the Favard family, who some two decades ago started a farm on the outskirts of the capital Lusaka with just 50 imported French quails. Their research having shown that Zambians have a taste for the delicate meat of these little fowl, Francis and Moddirean Favard were to start selectively breeding for bigger birds.

Today, Bien Donne Farms are the sole producers of a proudly Zambian breed, the ISA Jumbo quail, and are considered the biggest producers of quail in Southern Africa, currently turning around 50 000 birds every month. Thandi Shinka Favard has taken over the running of the business from her parents, and has made it

her mission to increase awareness of quails as a good source of protein and the eggs as a rich source of nutrients.

Even though she grew up around the quails it was never Favard's plan to become a farmer. "I'd wanted to study medicine, and as a teenager you want to run away from your roots, so the farm was furthest from my mind. But that changed with time, and I became keen to take over and put my own stamp on the business."

Before managing the farm she owned and ran a catering company targeted at corporate clients in the financial-services sector.

According to Favard the business is still recovering from the effects of the global pandemic. "Before Covid we were producing 100 000 birds monthly, then we dropped all the way to 5 000, recovered to 25 000 as the pandemic wound up, and now we're slowly coming back," she explains. "We had to scale down our workforce too – we dropped from 150 people to 18. I employ a lot of single mothers, so it was heart-breaking for me."

Bien Donne Farms supply quails widely across Zambia to Shoprite, PicknPay and a variety of other stores, while also informally exporting to the Congo. Thanks to a 20-year partnership with Shoprite Africa they've had an eye on the export market for over a decade, and with 1 500 Shoprite stores across Africa, a significant market awaits. Also, the opportunity to claim the title as biggest producer of quail in the continent has been a possibility that beckons



Bien Donne Farms produce 50 000 quails per month, slowly recovering post Covid



Favard puts in the hours to promote her business at trade shows, which has led to a contract in the UAE. So far, red tape has prevented exports

ISA JUMBO QUAILS IN NUMBERS:

- 6 -7: the age in weeks when they start laying; at 9 weeks they are at 50% production
- 9 -12: the weight in grams of the average quail egg
- 28 - 30: the feed in grams per day needed per egg-laying quail
- 250 -300: the number of eggs laid per quail per year

POULTRY ACROSS THE GLOBE

like a twinkling star on the horizon. Yet government heel-dragging and seemingly insurmountable regulatory red tape have kept them from crossing the borders in any significant way, much to Favard's frustration.

"Our state labs can't certify our product for export. Shoprite Africa engaged one of the best vets to help with the certification, but the Zambian authorities are not doing their part to make it happen for us," she laments. "If only we could start exporting, we could ramp up production, and we'd soon be the biggest quail producer in Africa."

Bien Donne's Shoprite opportunity has been sitting unused for 10 years, as has a more recent contract, signed a year ago with a UAE customer. "We haven't been able to export anything, despite having customers, capacity, and the ability to create 5 000 new jobs in the process," says Favard.

Creating employment opportunities is something very close to Favard's heart, which is another reason she loves running a labour-intensive business. For every 100 000 quail they produce, she can employ 150 people, she explains. "I personally support many single mothers and mothers raising children with disabilities because I am so aware of the pressing need in this community."

After trying to do everything herself when Covid enforced scaling down, she employed a CFO in January. She had met Priscilla Mpundu while attending an empowerment programme called We-Fi (Women Entrepreneurs Finance Initiative), which was developed by the World Bank. "During Covid I reduced the team to try and cut costs, which meant I was stuck doing everything," she says. "We-Fi made me realise that I needed to get back my workforce as I couldn't be a jack of all trades. Mrs



The dream is to have Bien Donne Farms' quail in 1 500 Shoprite stores across Africa



'If only we got the government assistance we need to export we'd soon be the biggest quail producer in Africa'

Mpundu has now taken up the finances, and handles applications for funding and the day-to-day financial needs of the business, so I can once more concentrate on production. It's been an enormous help."

Gaining access to funding is an ongoing challenge, especially after the damage the pandemic inflicted on their financial situation. "Most banks and investors don't understand the cycle of quail farming – it's poultry, but it is not chicken, so even at the best of times it is not straightforward to motivate for what you need." Fortunately they recently secured financing from Zambia Industrial Bank to fund increasing production back to 100 000/month, and to take care of liabilities that they got themselves into due to Covid.

But even with financing, the delay in getting the export certification they've been hoping for is Favard's biggest frustration. A year ago when she secured the deal in the UAE she was bullish about the contract growers she would soon employ to expand production, but nothing has come of that. "Shoprite is helping, but the delay sits with our authorities and honestly, my patience is wearing thin."

She hasn't given up hope though, and keeps her eye firmly on the goal – getting the necessary certification to open up the export channels into Africa. With the help of the Zambian Development Agency (ZDA) she has been getting international exposure for the company, and it was at an expo in Dubai last year that she met the UAE distributor with whom she signed a distribution contract. This month she is heading to Johannesburg for the Africa's Big 7 conference.

In the meanwhile she is cultivating the love of quails in her three children, hoping that at least one of them will continue the legacy. "Luyando, my eldest, is 14 now – she seems interested but she also wants to be a vet, a dancer, an actress... we'll have to see! The little one, Athira, is only two and my son, Sohal, who is nine, has a genetic condition called Dravet

Syndrome, which requires ongoing medical care and which can be very demanding of my time. Luckily I have great family support and the best nanny." Her motivation to provide employment for women, particularly mothers who raise disabled children with fewer resources than she has, is a driving force.

Last August Favard was chosen to participate in the Women in Agribusiness conference in Lusaka. Sharing insights with her fellow food producers left her with a sense of positivity around Zambia's agricultural sector and the many women who play their role along the value chain.

"Agribusiness here has enormous potential, but the growth is slow, due mainly to challenges with financing and lack of technical support. Those of us who have established businesses can play an important role in mentoring others, so that more people consider entrepreneurship as an option."

She has previously collaborated with the government of Zambia to create a national database of

quail farming in the country as well as guidelines for contract-grower schemes focused on women farmers.

Her dream is that this database be revived and replicated in Central and Southern Africa to increase quail production across the continent. As poultry goes quails may be small, but the dream remains big. 📷

Follow Thandi Favard on Twitter: [@FavardThandi](https://twitter.com/FavardThandi)



Favard with her eldest, Luyando, her father, Francis, and a local radio host

'MY FAVOURITE QUAIL RECIPE'

Lemon and herb quail

- 1 fresh whole quail per person
- Lemon juice
- Parsley
- Coriander
- Black pepper
- Salt
- Paprika

Spatchcock your quail, mix together all the ingredients and marinate for two to three hours. (Never marinate quail for more than 5 hours.)
Braai.
Enjoy!



Empowering women farmers and other entrepreneurs is a passion for Favard

RAISING CHICKENS IN APPLE COUNTRY

The lush Elgin Valley in the Western Cape is where Elgin Free Range Chickens is building a business based on quality and sustainability

By **Diane McCarthy** and **Melinda Shaw**



FREE-RANGE INSIGHTS

An hour outside of Cape Town, travelling eastwards and climbing up Sir Lowry's Pass, you turn your back on the sweeping Peninsula views and find yourself in a whole new world, the lush Elgin Valley. Ask any Capetonian about Elgin and they'll say "Aah, the place where apples come from." This fertile farming region has a rich agricultural history, producing 60% of all apples grown in South Africa. More recently, its popularity among wine lovers has soared, with valley farmers diversifying, planting vineyards next to their apple orchards and making some mighty fine wine. But there's another commodity that was born in the valley. It's the home of Elgin Free Range Chickens (EFRC), the highly trusted and biggest free-range chicken supplier to scale in South Africa.

Started as a home industry in 1997, the company has grown from these small entrepreneurial beginnings to become the sole supplier of free-range



EFRC is the sole supplier of free-range chicken to Woolworths in the Western Cape



Inspecting broilers in the field: Cató Rabie and specialist poultry veterinarian Dr Frank Travis



Sales manager Carla Ingwersen

chicken to the Woolworths chain in the Western Cape. They also supply the Spar supermarket chain and various other retail groups in the region, have 10 independent factory outlets in the Western Cape, a distribution facility in George that supplies product along the Garden Route, as well as a Horeca (hotels, restaurants and catering) department through which they service various clients in the hospitality industry.

Since late 2021, a new team is in place with new investors on board and several structural changes. The company recently concluded a deal to acquire its own broiler breeder farms and hatchery to ensure more control over product quality, and so that it can implement free-range principles throughout the value chain.

Says sales manager Carla Ingwersen, "We are now involved in the total value chain, and will be able to continue growing sustainably. Our first goal is to systematically increase



capacity to reach 450 000 broilers per week, in the short term.” Longer term, the idea is to establish a base to grow into Africa, and preparing the way for exports, she confirms.

Raising broilers to fulfil the criteria for authentic free-range is a process that requires commitment, and EFRC runs its operation according to free-range farming principles (see box below) and are uncompromising about ethical farming principles.

It starts with a management team who works closely with specialist poultry consultants who have a good understanding of the science involved in the business, and along the entire value chain. According to Cató Rabie, EFRC’s technical group executive, the principles of providing the flock with more space, less stress, plenty of good nutritious food and time to relax, bring about different muscle development in the chickens which improves meat quality at the end.

“We believe in the philosophy that stimulating natural behaviours and limiting stress enhances the immunity and overall health of the chicken and leads to tender, juicy meat,” she says. “Muscle fibres, connective tissues and the lipid composition play key roles



Environmentally friendly clear PET packaging is an innovation EFRC is proud of



EFRC'S FREE-RANGE PRINCIPLES

To find out more about EFRC's farming principles, point your smartphone's camera at the QR code below:



Contact EFRC: 021 859 2795

in how meat quality is determined, and the texture is one of the most important attributes customers use to rate chicken. This is especially relevant for us because free-range chicken is generally sold fresh.”

Consumers also shop with their eyes, so the appearance is another very important quality attribute they pay attention to, Rabie explains. The creamy yellowy skin colour of EFRC chicken is no coincidence, but comes courtesy of the yellow pigment in yellow maize, which forms part of their diet. “We take great care with our feed rations,” says Rabie. “Our chickens’ feed is free from animal byproducts, fish meal, growth promoters and medication and their diet is supplemented by natural foraging outside.”

Once the stressfree life and the quality feed have worked their magic, the next step is to convert the

muscle into meat, starting with the slaughtering process. Rabie explains that meat quality is influenced by many factors including preslaughter and slaughter conditions, chilling and post-mortem processing. As a new management team at EFRC they have focused on understanding the welfare aspect and reducing stress during the process. “We are one of the first poultry abattoirs in the country to implement electrical muscle stimulation (EMS), which aids in pH management and affects the water-holding capacity of meat.”

That boils down to juicier meat, she explains, which is further aided by maturing breast fillets on the bone for six to eight hours prior to filleting. Meat tenderness testing at Stellenbosch University has verified the results of this process.

As one of Woolworths's top 25

FREE-RANGE INSIGHTS

suppliers, EFRC subscribes to the retailer's "Good business journey", implemented in 2007 to address the issue of sustainable growth within the context of the country's changing social and environmental needs.

One of the boxes they tick is recycling innovation, and according to Carla Ingwersen the company is particularly proud of being first in supplying environmentally friendly PET packaging to Woolworths. There is a global move to this totally recyclable, clear packaging which has a smaller carbon footprint than traditionally used polystyrene trays, and has the added benefit of allowing the customer a clear view to see how fresh the meat is.

Taking its environmental responsibility seriously is part of EFRC's DNA, and it has embraced the challenge to strive for economic, social and environmental sustainability. In 2022

it partnered with the specialist team from Promethium Carbon to perform a climate-change risk and vulnerability assessment, carbon-footprint calculations and target setting.

Although free-range production requires less electricity than regular broiler farms due to the natural farming practices, energy remains a major requirement, and all EFRC operations have sufficient backup power generation. Becoming totally independent from the national grid is a priority and the company started with the abattoir, where up to 17% of all power is generated via solar.

Ultimately, it is the shopper in the supermarket or the grocery store making the decision of what to buy for dinner, whom EFRC focuses on. Understanding the customer and

what she wants and expects from her chicken, is part of the company's development drive, along with supporting the free-range culture and working to constantly improve the product quality.

And while free-range meat is more expensive due to the higher input costs, EFRC has also embarked on a campaign to popularise its products among lower LSM consumers. "Through our branded EFRC outlets we have experienced first-hand that the consumer in the lower LSMs prefer chicken that has had no brine injection," says Ingwersen.

"We have identified the opportunity to market free-range chicken so that it is associated with the traditional 'village chicken' – where all parts of the chicken are fresh and available every day".

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Chicken jokes eggs-plained

Words: Neil McCarthy

Illustration: Jason Bronkhorst

Ever find yourself lightening the conversation at a dry conference meet-and-greet because you can claim to work “in chicken”? That’s because absolutely everyone has a poultry joke...

Are you tired of cheep puns about chicken farming? I know I am. As soon as someone knows you work in the poultry industry, they feel they can lay one on you. Don’t they understand we have heard them all before? Not all yolks are funny, especially not if they are crowed out by some fluffed-out bozo who thinks he has the best reason why the chicken crossed the road, or the one about the chicken with three legs that the farmer can’t catch or the hen that can’t lay because it has the “henopause”.

Cheep laughs, guys. It’s no eggs-aggeration to claim that poultry farming is central to the eggonomy of the country. We are not crowing about it, but you don’t have to be an egghead to know that you would all be shelling out a lot more in taxes if we weren’t laying it on the line.

If you are going to give me another chicken pun, I’m just going to show you the eggsit. The whole of eggs-istence would be better without your cheep laughs at our eggspence. What do you get if you cross a chicken and a ghost? A poultry-geist? You think that’s

funny? It doesn’t even make sense! It’s fowl. We are people too, with henny diverse interests. Do we spend henny time not thinking about chickens? Sure we do.

What other careers have to put up with similar amounts of cheep laughs being generated at their eggspence? From doctors to dog-catchers, folks work away at many of the careers created by the modern economy without people coming up with secret little smirks at a cross-sector cocktail party when you mention what you do. No one gets as many yolks about their jobs as we do. (In fact I don’t think “dog-catcher” is a real job. It is something people used to only do in American comics. So let’s actually forget that one.)

If you ask me, there is a plot on the go right now to create jobs that no one can make fun of. Data Wrangler comes to mind. Social Media Optimiser. Biogeneticist. What are these things? And yet I am assured they are actual jobs that are performed by serious people, all of whom, I am sure, hate

being laughed at.

Say you are standing at one of those same cross-sector cocktail parties clutching your mysterious complimentary cocktail and your branded conference fob and you join a random group of smiling people and ask the inevitable question: “What do you do?” and they turn to you and tell you they are an Agrarian Outcomes Annalist, what do you say? You cannot really ask what that is, because they say it in a way that implies that everyone, of course, knows what that is and that on top of that it is very important. So you just shut up. ▶



THE LIGHTER SIDE

The last thing you think of doing is telling them a joke about their job, because you have no idea what their job is, and if you ask you risk becoming the laughing stock of the party, and it has hardly started yet. So you smile and nod in a way that implies that you are very impressed with their job title and that you regularly use the services of such people yourself and have found it a life-altering experience. And you search your mind for a subject that will not expose how little you understand what it is this person does.

Maybe rugby? Or potholes, or the sad life that people who win the lottery seemed doomed to by the madness induced by their sudden wealth (which I can speak a lot about)... But these topics all feel a bit dangerous after the announcement of such a serious job description. And anyway, why am I having to do all the talking while that smug Agrarian Outcomes Annalist has just forced me into this position by having a job that no one understands?


And then it occurs to you that perhaps that is the point. They have created that job for the simple reason that no one can make a joke about it. They have gone into some app on their phone, one that only people who live in fear of being made fun of can download, and they typed in the request for a job title that will be impossible to joke about. Out comes this random collection of important-sounding words. Executive Ethnographic Documentarian. That is exactly what is going on here.

And you start seething with hatred for this person because they are using their job title to humiliate you and to block any option for lightening the atmosphere. It's a big fat concrete block in the middle of the conversation. So what do you do? You say, "Well, I am in the chicken



business." And you can just feel the relief. Everyone gets this little smile, and then they start. "Did you hear the one about the hen that could only lay eggs in the winter? No spring chicken!" Suddenly the party lifts off.

Sometimes we have to shy away from even mentioning our profession because once they know you are in chicken runs suddenly everyone fluffs out their tail feathers and becomes a comedien!

It's nearly as bad as making fun of people because of their bad spelling. 



Neil McCarthy has been an actor on stage and on camera (*M-Net's Legacy*), a TV presenter (*Top Billing*), a director and script-writer (*Isidingo*, *Rhythm City*), a teacher, professional mentor, a seeker for serenity and life-long learner. And now a writer of jokes about chickens.

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A learnership programme for the youth

Country Bird Holdings has partnered with the government and is a proud participant in the Yes4Youth programme, aimed at giving young South Africans a leg up into the workplace. Theunis Eloff gives the lowdown to **Melinda Shaw**



How did CBH become involved with Yes4Youth, and what are the company's aims with the programme?

Youth unemployment is at dire levels, particularly in the rural areas, where we operate, and it therefore makes sense for us to participate. The idea is to provide young people with the opportunity to get 12 months of workplace experience to make them more employable. For the company there is a BBBEE benefit, and aside from that we get to know potential new employees, around all our facilities, so everyone wins.

What are your criteria for selecting candidates for the learnerships?

We receive loads of applications every year, which just shows how big the need is.

Participants are selected from the communities surrounding our plants, depending on how many students the plant can accommodate. The programme is coordinated on our behalf by Amphi SA, a registered training provider, and we host it at all the Supreme Poultry production and processing sites across the North West and Free State.

We look for young people between

18 and 35 with matric, to ensure that they qualify for the additional learnership in which we enrol them during their 12 months with us, which provides them with a SAQA-accredited qualification in addition to the work experience.

How does the programme work in practical terms?

It runs annually from November to October and depending on the number of vacancies and resource requirements, students are absorbed into the workforce at the abattoir, farm or factory, where they receive

on-the-job training. We assign mentors/supervisors to each student and they're treated like all employees; issued with personal protective clothing and experiencing the same induction as all new workers.

Theoretical training sessions are conducted monthly, presented by a qualified facilitator from Amphi SA, and these experts are also available to the students for questions and support during the 12-month period. Each class also has a WhatsApp group to share information.

The students keep a logbook and complete practical assignments, which their supervisor signs off; everything from operating the feeding and watering systems for the birds to implementing quality assurance in the abattoir and more. At the end the documentation is submitted to the AgriSETA, and those who qualify receive an AgriSETA certificate.

What is the exact qualification that participants earn?

The course and qualification depend on the site where they're hosted. At the abattoirs we normally offer poultry processing and on the farms, poultry production; both are accredited AgriSETA courses. Those who qualify, receive national certificates in either poultry production NQF level 1, 2 and 3 or poultry processing NQF level 1, 2 and 3, which mean that they have a range of competencies that make them employable in the industry.

How many young people have come through the programme since you first started it?


Since 2019, 600 people have completed the course. We're in year four now, with 150 youngsters halfway through their year; 120 at Supreme and 30 at Nutri Feeds, across various

sites. In the Supreme class of 2023 there are 57 women and 63 men, all between the ages of 19 and 26.

Can you share a story of someone who has gone on to succeed within the company?

Many of our participants are school leavers, but some who apply have strong qualifications. Vuyo Thabete from Bultfontein was one such applicant – she was accepted to the poultry production programme at Supreme's Botshabelo abattoir with a B Com degree on her resume! She'd graduated in April 2019 from the University of the Free State and found herself at a loss finding employment, so she applied at Botshabelo. It turned out to be a stepping stone, because she was soon invited to an interview at CBH's Bloemfontein office, and ended up spending the 12 months of her learnership as a trainee admin clerk. At the end of the learnership in October 2020 she was employed on a permanent basis, and is now a valued member of our admin staff.

When is your next intake, and how can people apply?

We'll kick off the recruitment and selection process around October, and we only decide details and numbers closer to the time. When the time comes we advertise on Amphi SA's Facebook, Instagram and LinkedIn profiles, so those are the best places to reference for details. 

Opposite: *The current group of Yes4Youth participants at Supreme's Tigane processing plant*

Left: *Vuyo Thabete's B Com degree helped her get a foot in the door, and a permanent position. Here she is with her mentors, group accountant Maria Antunes and assistant accountant Denise Germishuis*



DL-Methionine for better broiler performance

Understanding methionine, the essential amino acid in poultry nutrition, as reviewed by Chantelle Fryer of Evonik Africa

Methionine, an essential amino acid in poultry and swine nutrition, plays a crucial role in commercial poultry diets. There are three main sources of methionine in these diets: dry DL-methionine (DL-met), liquid DL-met hydroxy analogue-free acid (liquid MHA-FA), and calcium salt of MHA-FA (MHA-Ca) – see Figure 1 below. Despite their differences, these sources all contribute to the overall wellbeing of chickens.

Understanding the bioavailability of methionine sources is important to determine the correct commercial

rating of these sources and has significant effects on the cost of its supplementation. In poultry, especially in broilers, it is relatively easy to measure these differences, for a few reasons.

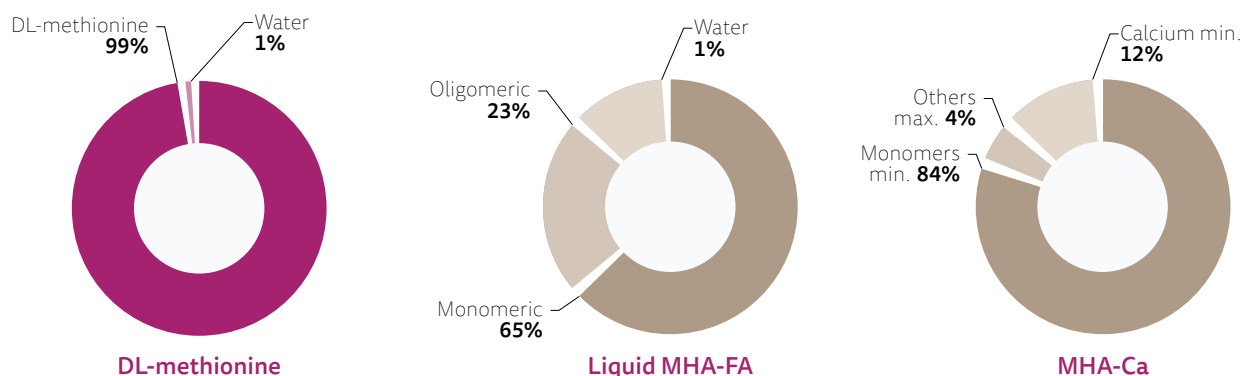
Firstly, methionine is usually the first limiting amino acid and practical supplementation levels are high while genetic variations between individual birds are low. In addition, the number of individual birds per treatment is relatively high.

Researchers can determine the bioavailability of these methionine

sources by conducting dose-response trials, where they focus on parameters that include weight gain and feed-conversion ratio (FCR). This can help to establish the dose-response relationship between the methionine supply and the various performance criteria measured.

Over the past three decades, research has shown that the bio-availability of MHA-FA and MHA-Ca is significantly lower than that of DL-met. According to a study done by Jansman et al., the average bioavailability of MHA-FA compared to DL-met is 68%

Figure 1: Composition of methionine sources



ADVERTORIAL



on a weight-to-weight basis. More recently, a meta-analysis by Sauer et al. using 40 dose-response trials with broilers from 27 peer-reviewed publications reported an average bioavailability for weight gain and gain to feed of 70% on a weight-to-weight basis. Lemme and Petri in turn conducted a literature review of 46 broiler trials that showed an average of 63% bioavailability for weight gain, FCR and breast-meat yield.

The differences in biological effectiveness between the methionine sources can be attributed to the composition of the MHA-FA molecule. About 23% of the MHA-FA molecule consists of dimers and oligomers, which have a reduced nutritional value. These oligomers are only 56% as efficient as DL-met on a molar basis.

Further research suggests that dimers and oligomers of liquid MHA-FA are less efficiently absorbed than

DL-met. The monomers in MHA-FA and MHA-Ca also show slower and less efficient absorption, even under heat-stress conditions. In addition, MHA-FA and MHA-Ca are absorbed slower than DL-met during passage through the digestive tract, making them subject to microbial degradation.

Biochemically, MHA is not an amino acid. Once absorbed, it still has to be actively transformed into L-methionine in the metabolism, a process that is not 100% efficient. It's also important to note that the absorption of both L-met and L-MHA by simple diffusion is negligible.

In conclusion, when evaluating the relative biological efficacy of MHA compared to DL-met, it is essential to consider the following:

- Dose-response trials should be based on a mathematical model that has been validated through

numerous experiments.

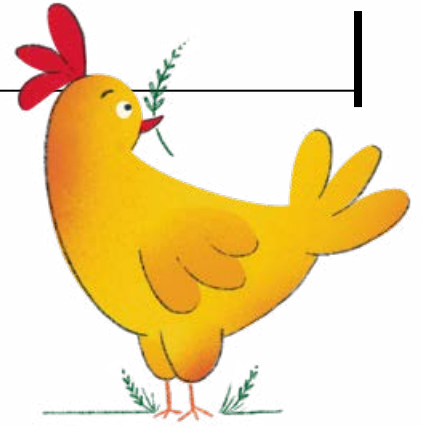
- Literature provides many peer-reviewed studies confirming the relative bioavailability of 65% for MHA-Ca and MHA-FA compared to DL-met.
- Differences in the relative effectiveness of methionine sources can be explained through research into animal physiology and biochemistry.

By understanding the nuances of methionine sources, poultry farmers can make informed decisions about the right sources and supplementation levels to ensure the health and productivity of their flocks. [📄](#)

All references are available upon request. For more information, contact Chantelle Fryer, chantelle.fryer@evonik.com.



ASK THE EXPERTS



Keeping predators out of your coop

Steps to take when something is killing your chicks.

Pierre Olivier advises

"I found most of my day-old chicks with their heads ripped off. I don't know what kind of predator it was – the housing is open at the top with wire on the sides. What should I do to keep my birds safe?" – Bofihla Molapo, Klipview Farm, Midvaal

The first thing you need to do is a proper investigation, to find out what animal is attacking the chicks. It could be wild cats, feral house cats or mongoose; and don't rule out small monkeys as the culprits.

Cats would normally eat the entire chick. If the chicks' heads can fit through the wire, they could snatch them off. But in terms of what we've seen previously, it could be a number of predators. If rodents are the attackers, you would normally see bite marks on the chicks, and they wouldn't just eat the heads off.

Start by ensuring that the housing for the chicks is entirely closed as far as possible; top, bottom and sides, so there isn't any entry point for anything that should not be in there, including rodents. They are always going after the feed, not necessarily the chicks themselves, but the chicks could end up being collateral damage. If cats are to blame, they could get in, attack the chicks and harm them, even eat them. So it's best that they cannot get near the chicks.

If you do have feral cats in the area, then you can put out live traps to catch them. You should contact the SPCA, which will come and remove the cats.



If you suspect serval cats, a rare wild breed found in parts of South Africa, there are a number of institutions dealing with nature conservation that would be able to assist and then remove and relocate the wild animals.

Many parts of our country experience invasions by wildlife due to the increase of construction and development. As humans encroach on and destroy the natural habitats of many creatures, wildlife needs to find food and shelter elsewhere. We are based in Kempton Park in Gauteng, and

we see a lot of feral cats, and even wild animals, moving around in our suburbs.

The best solution would be to start right at the beginning and see if you can find any tracks, droppings, or other indication of what animal it might be. Once we understand what it is, then we can give more detailed guidelines on how to proceed. 📧

Pierre Olivier is branch manager in the northern region for Ecowise Pest Control and Hygiene, pierre.fourie@ecowize.co.za.

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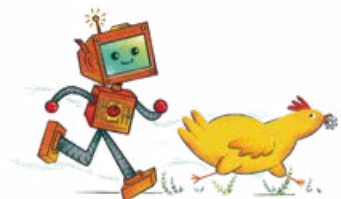
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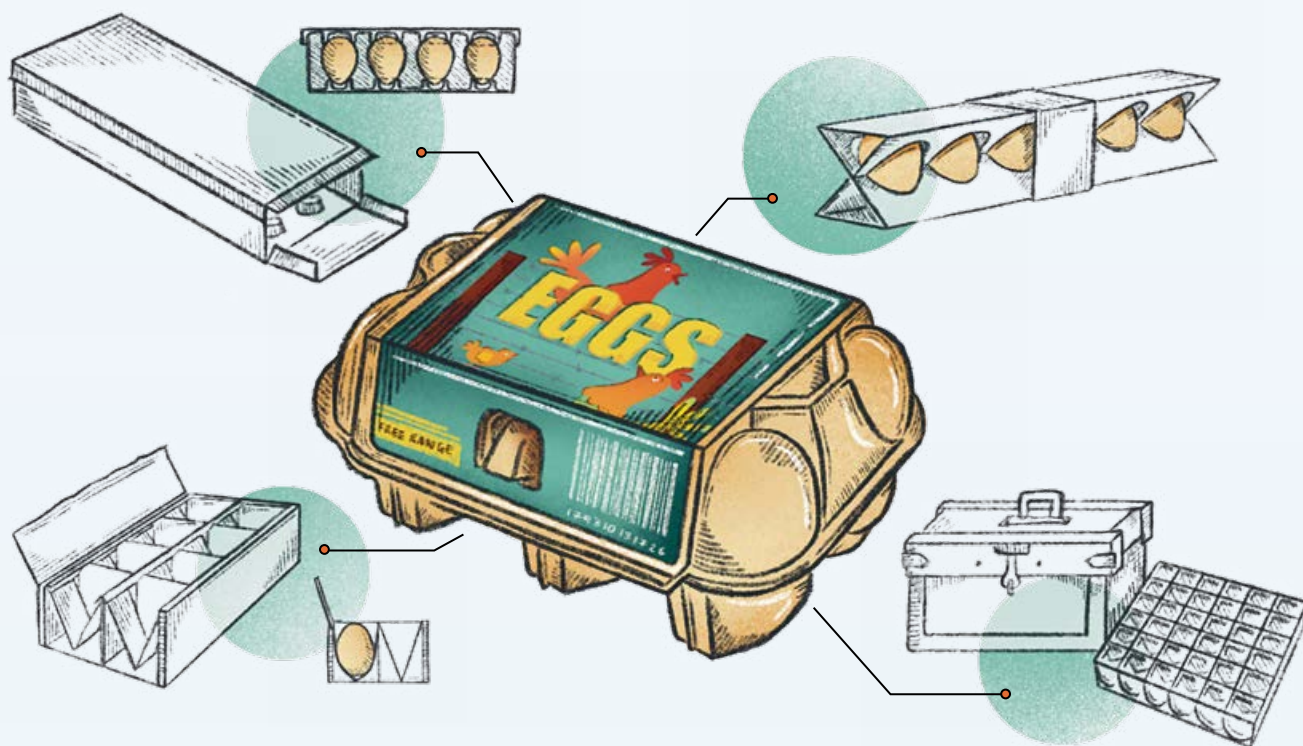
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It's all in the box

Getting eggs into retail undamaged relies on packaging that hasn't changed much over the years. By **Laura Tyrer**



Each day, the South African poultry sector packs and distributes 21 million eggs to retailers. That these awkwardly shaped and most fragile of commodities are able to reach their final destinations intact is thanks to a packaging design that has not changed significantly in more than 100 years.

Before the invention of custom-designed packaging, eggs sold in bulk were packed in baskets or crates, which made them difficult to transport and store without breakage. Then in 1911, in an effort to resolve a dispute

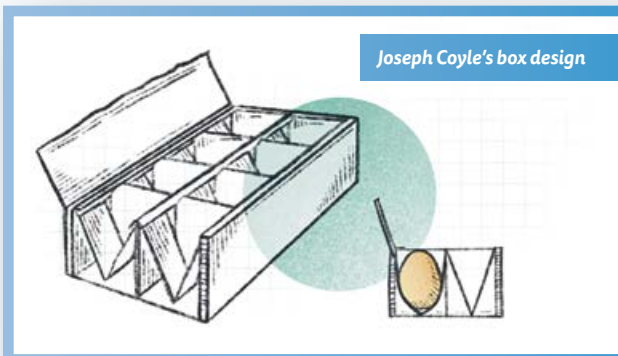
between a hotel owner and the farmer who supplied the hotel with, often broken, eggs, Canadian newspaper editor Joseph Coyle invented a moulded paper pulp container that could securely hold a dozen eggs.

The design he patented became popular in Canada and the United States. Between the 1920s and 1930s manufacturers experimented with alternative, more durable materials such as metal or plastic to make egg boxes. They also considered alternative designs, such as the Morris

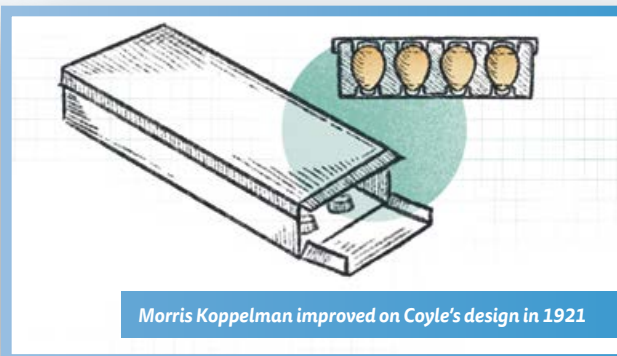
Koppelman egg carton that was made from cut, folded and glued cardboard which was able to fold flat after use.

Post World War II, egg boxes were standardised for shape and size, with many countries adopting a standard size of 12 eggs per box for retail purposes.

Today, egg boxes, cartons and trays are made from a variety of materials, including moulded foam, plastic and polystyrene, with moulded paper pulp or fibre remaining the most popular material on account of its



Joseph Coyle's box design



Morris Koppelman improved on Coyle's design in 1921

simplicity, low cost and environmental sustainability.

Recycled or virgin paper is pulped to a fine consistency, then formed to the required shape on pulp moulds using vacuum pumps and air compressors. The pulp shapes are dried, either naturally or by mechanical means, delivering packaging that meets the necessary standards in terms of strength, durability, space efficiency and the absence of any odour or flavour that might be absorbed by the product.

Branding and labelling are added to the boxes or their outer wrapping according to legislated requirements.

Despite being made of inexpensive materials, egg-box packaging, particularly the branded and labelled packaging required for the retail market,


remains one of the stumbling blocks facing smaller producers who hope to grow their operations into commercial retail. Without the economies of scale necessary to bulk purchase and store individually branded packaging that complies with legislation, these smaller producers may find themselves limited to the informal market and second-tier consumers.

Creative and unusual packaging has always had an important role to play in distinguishing niche products at the high end of the retail market. However, perhaps there is also a case to be made for reinventing egg-packaging options with the goal of reducing the barriers of entry for smaller producers. Key to this would be to identify less expensive but equally efficient ways to brand the

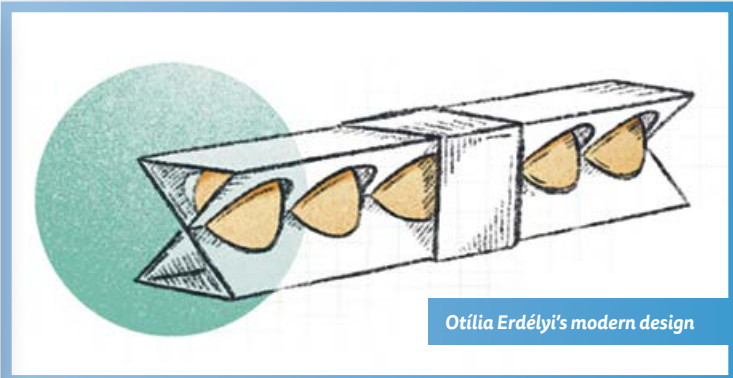
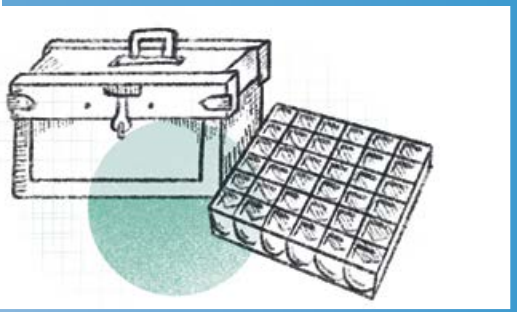
final product.

Just because something works well, doesn't mean it couldn't be simpler, cheaper or more sustainable. This is why design students are so frequently set the challenge of redesigning packaging for eggs, sometimes with ingenious results.

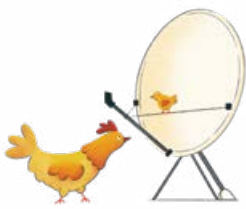
The egg packaging design proposal by Hungarian designer Otília Andrea Erdélyi is just one example of how intelligent design can simplify packaging. Her stackable egg container is made from a single piece of cardboard that uses minimal material, takes very little space and is easy to brand.

Progress always involves change and small improvements can make a big difference, even to something as simple as the humble egg box. 

The Raylite Egg Box invented in 1906 was made of wood



Otília Erdélyi's modern design



ON THE WIRES

Egg delicacies in German retail, global avian flu news, fruit for chicks, and more

Compiled by **Charmain Lines**

Fun eggs sold in German stores

Let's vaccinate the humans too



Photographs: Shutterstock; Sergey Kohl/Shutterstock.com; Stock for you/Shutterstock.com; Karen Cousins

Brightly coloured eggs are a feature of supermarkets in Germany and some other countries in Europe – and not only at Easter. Known as *brozeit eier*, these hard-boiled eggs are meant to be eaten for lunch or dinner with bread and cold cuts.

Far from just being decorative, the thick colouring contains a natural resin that forms a protective coating around the hard-boiled egg, preserving it for up to three months, which explains why this popular grocery item requires no refrigeration.

Another fun egg fact from Germany is that Berlin's shortest street is called

Eiergasse (or Egg Alley). Its 16 metres length roughly equals 266 eggs and this dates back to the 12th Century. The original *Eiergasse* was 50metres long, but fell victim to the air raids of World War II and vanished from the city plan.

In 1984, when the area was completed renovated in preparation for the 750-year anniversary of Berlin, Egg Alley was rediscovered. Due to the redesign of the city centre, however, it ended up being significantly shorter than before.

Who ever said the Germans were, um, boring? 🇩🇪

While the global poultry industry is seriously contemplating changing its stance on HPAI vaccination, the likes of GSK Plc, Moderna Inc and CSL Seqirus are developing avian flu vaccines for humans – just in case.

Human cases of avian flu and the risk of human-to-human transmission are low, but the fact that this year's avian flu outbreak has resulted in a few human cases was enough to galvanise the world's vaccine manufacturers into action.

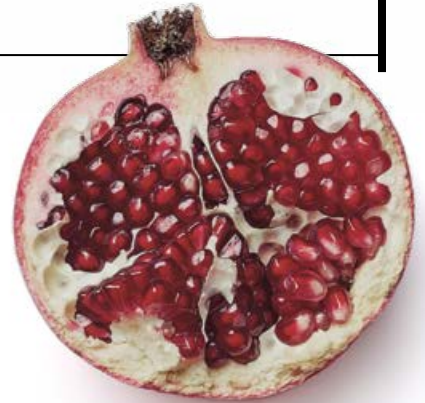
Most global health officials agree that an avian flu outbreak in humans is unlikely right now but after Covid, a virus that also originated from animals, no one wants to take any chances.

According to the World Health Organisation, the H5N1 HPAI strain has a 56% mortality rate in humans since it infects the lower respiratory tract, which causes more severe illness. However, for avian flu to become easily transmissible between humans, it would likely need to mutate to infect the upper respiratory tract, which is much less severe. 🇩🇪

New items on broilers' menu

A study recently carried out in Greece concluded that adding pomegranate and onion to broiler chicks' diet could boost their performance and welfare status, and improve the chemical composition and oxidative stability of their meat.


The secret, according to the authors of the study, lies in the power of different phytobiotics that are found in foods like pomegranates and onion. Both of these plants have well-known antioxidant and antimicrobial properties that are proven to exert positive effects on animals' health performance, stress response and



productivity, all of which contribute to a better-quality final product.

The study entailed 120 day-old male chicks receiving feed that included a mixture of pomegranate and onion aqueous and cyclodextrin extracts at the level of 0.1% of the feed. The chicks in the control group were fed typical commercial rations

of maize and soya meal. Tissue samples were collected and analysed 35 days later.

The most notable results were that the meat of the experimental broilers contained more protein and less fat overall, while the thigh meat also contained more omega-3 and omega-6 fatty acids. 



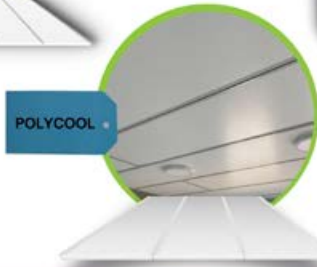
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All UK birds might have to be on the books



As part of its efforts to control avian influenza, the UK is considering requiring all keepers of birds to register their birds with the Animal and Plant Health Agency. Currently, only those who keep more than 50 birds are required to do so.


Not only would registration be required, but birdkeepers would also have to provide updated information annually. With these measures, the agency wants to ensure that keepers

receive important notifications, such as any local avian influenza outbreaks and information on biosecurity rules.

In a joint statement, the chief veterinary officers from England, Scotland and Wales said: "These proposals will enable us to have a full picture of the number and location of birds kept across Great Britain and make it easier to track and manage the spread of avian disease. This information will also help inform

future risk assessments and maintain our commitment to continually building our extensive avian-influenza research portfolio."

Among other details, birdkeepers would need to provide their contact details, the species and number of birds they keep, where they are kept and for what purpose.

The consultation period of 12 weeks on the proposal ended on 31 May 2023. 

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HPAI creates disposal problem in Japan

Japan is struggling to cope with its worst-ever outbreak of highly pathogenic avian influenza. Not only are egg prices soaring on the back of 9% of the country's layer flock having been culled, but now the small island country is running out of space to bury the dead birds.

Safely disposing of 17 million infected and potentially infected birds is a big problem for a country with limited land. NHK, Japan's national broadcaster, reported that farmers and authorities usually develop pre-incident plans to effectively manage all forms of waste generated during a bird-flu outbreak, including carcasses, manure and personal protective equipment. However the number of chickens to be disposed of has increased beyond their expectations.

Some regions are burning the dead chickens if they can get access to incineration facilities.



Since the nation's first cases of HPAI were confirmed at the end of October 2022, its veterinary authority had registered 82 different outbreaks with the World Organisation for

Animal Health (WOAH) up to the end of March this year.

Japan's challenge highlights the need for a different global approach to HPAI. 📌

Brighter future for Ghana's poultry industry



With nearly 600 000 tons of frozen chicken, valued at US\$600 million, flooding its market every year, the Ghanaian poultry industry is being crushed. Now, in an effort to improve self-sufficiency and food security, the government has announced that it will invest some US\$541 million to save Ghana's poultry industry.

The investment aims to expand domestic production from the current 50 000 tons per year to an envisaged 450 000 tons, and to increase the domestic poultry sector's value from US\$62 million to US\$562 million.

The investment's focus areas are:

- US\$20 million on technical-assistance programmes in animal husbandry and health.
- US\$69 million to expand and upgrade feed mills.
- US\$438 million to enhance access to finance and secure private investment in hatcheries and production expansion.
- US\$14.8 million to expand SME participation in slaughtering and packaging. 📌



FARMERS' WISDOM

Interested in getting a contract to produce broilers or eggs for a commercial producer? SAPA's **Christopher Mason** shares some invaluable pointers

The ins and outs of contract farming



As businesses grow, farmers naturally look for ways to expand, and contract growing for a large company is an attractive option. We get many calls from farmers asking how to secure such a contract, and while SAPA doesn't get involved in specifics, we can advise on the general requirements.

To be considered for a contract you have to be able to convince the company that you have the facilities and capability to produce large volumes of birds, in compliance with the criteria set out for their growers.

Some of the criteria for a winning application include:

- You have the land, with electricity and sufficient water.
- Your farm is accessible to large trucks and situated within the company's catchment zone.
- You have an environmental impact assessment (EIA) and water licence in place, plus a viable business plan.
- You have proof of capital to start the proposed expansion, or access to financing through a reputable financial institution.
- You have the necessary skills to manage increased production, and the necessary financial controls and administration in place to allow you to manage a commercial entity.



When it comes to the size of the property required for production, each company will have its own criteria. A reasonable example would be 20ha of land and sufficient space to accommodate the poultry houses required for the production.

The farm shouldn't be too close to another poultry operation for reasons of biosecurity and airborne diseases. Well-maintained biosecurity measures should be in place and the focus must be on production – multifaceted operations which, for instance, have an abattoir and hatchery on the same site are not acceptable.

Adequate fencing and an access-control system need to be in place, as well as suitable facilities to cater for mortalities, such as a refrigeration unit, and also appropriate storm-water drainage to prevent flooding.

As far as personnel requirements go,

each site needs ablution facilities and an office complex, and should include a dining area, laundry and housing for the farm manager.

In calculating water and electricity requirements, you need 2.6l of water/bird over a 12-hour period, suitable for human consumption and tested regularly. A backup water supply that can last for four days is advisable. The site should have a standby generator with the same KVA capacity as the Eskom supply transformer in case of power cuts, and there should be enough diesel on site to run for three days on end.

There are more requirements, but the above should guide you when you consider applying to the company you are interested in. Also bear in mind that companies often have waiting lists, and very specific requirements that might differ from what we've set out.

Having said that, contract growers

are a key element to the success of the poultry industry and your efforts will contribute to this. 🇿🇦



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