SOUTH AFRICAN POULTRY ASSOCIATION

2021 INDUSTRY PROFILE

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INTRODUCTION

The poultry industry is the largest single contributor to the agricultural sector in South Africa. In 2021, some 16.6 % of the total agricultural gross value and 39.9 % of animal product gross value stemmed from poultry production. It is estimated that the industry provides direct and indirect employment to over 110 000 people; is the second largest consumer of maize in the country; and supports many peripheral businesses (including the feed industry) and those downstream in the value chain.

Both egg and broiler producers entered 2021 under sustained pressure from rising feed costs; constrained disposable income; high levels of unemployment; and reduced demand from traditional markets caused by ongoing COVID-19 lockdowns. A powerful second wave of coronavirus infections hit South Africa in December 2020, fuelled by complacent behaviour, super-spreader events and a new, highly contagious variant of the COVID-19 virus. On 28 December, the President pushed the country back into a modified Level 3 lockdown, banning alcohol sales, making mask-wearing in public compulsory, and limiting indoor and outdoor gatherings and operations in the hospitality industry. Cases exceeded those experienced in July 2020. The second wave peaked in early January 2021, with almost 22 000 new cases per day and still no vaccination programme in place.

The second COVID-19 wave ended in South Africa in March 2021, but winter brought a new wave of coronavirus infections (delta variant) from May to August. This wave was shorter lived and less deadly thanks to the roll out of the mass vaccination programme, which began with health care workers in 1Q 2021. Over-60's and teachers were vaccinated in June, and the over-50's from mid-July. In September, vaccination was opened to everyone over 18 and under-12's were able to participate in the programme before the end of 2021. Even so, less than 40 % of eligible people were vaccinated by the end of the year because of vaccine hesitancy and some logistical challenges. The country moved to adjusted Level 1 lockdown regulations from 1 October, with a shorter curfew, more relaxed alcohol sales and larger gatherings allowed. In late November, South African scientists were the first to identify a new and highly contagious variant (omicron) and the world rewarded this announcement with over 70 travel bans. The South African tourism industry faced a second summer season with almost no overseas visitors and a loss to the fiscus of around R26 million/day. South Africa's fourth COVID-19 wave, powered by the omicron variant, took off in early December. By the end of 2021, South Africa had reported a total of more than 3.458 million cases of COVID-19 and 96 670 deaths.

With lockdowns enforced all over the world, global trade in feed ingredients was severely disrupted which inflated the price of both maize and soya beans during all of 2021. This dashed hopes of a post-2020 recovery in the profit margins of poultry farmers. China has been steadily rebuilding its pig herd after an epidemic of African swine fever and the expansion of both the Chinese pig and poultry industries coincided with a flood-reduced Asian maize crop. Global maize stocks dwindled because of increased Chinese imports and unfavourable weather in the production areas of the US. The inevitable price increases for feed ingredients were tempered very little by bumper local harvests. Even in good years, the domestic maize

price may stay stubbornly close to export parity, if supported by strong global and sub-Saharan demand for grain.

On the upside for broiler producers, a combination of global freight bottlenecks; a surge in highly pathogenic avian influenza (HPAI) outbreaks across Europe; and the 2020 ITAC-approved tariff increases on bone-in and boneless portions resulted in a downward trend in poultry imports. Over 17 000 t/month of bone-in imports were imported in 1Q 2020, before the COVID-19 pandemic but, in 2021, volumes averaged 11 200 t/month. The EU EPA safeguard on bone-in imports dropped to just 15 % in March 2021, but AI-related trade bans were in place against most of the licensed EU exporting nations and these kept imports in check. Broiler imports in 2021 were 20.7 % lower than the 5-year average (2016 – 2020), and local broiler meat production increased by 1.8 % (on top of a 3.6 % increase in 2020). Only Spain and Ireland were able to export significant quantities of broiler products to South Africa in 2021.

The Poultry Sector Master Plan and the dedication of Ebrahim Patel (Minister of the Department of Trade, Industry and Competition (DTIC)) to finding solutions to the stubborn problems that have plagued domestic production have breathed new life into the broiler industry. By mid-2021 an additional 388 employment opportunities had been added on top of the 980 new jobs created in 2020. The capacity to produce cooked chicken increased from 65 to 140 tonnes a week. The industry reported growth in turnover of R4.7 billion since 2019 and the grain value chain benefited as well. By the end of the year, the industry had achieved all but one of its master plan milestones. In total, R1.14 billion of the R1.5 billion pledged had been invested, with R570 million being spent on farm infrastructure. Black producers are now farming with 16 million birds and an additional 172 black farmers received training during the year. Progress has been made in labelling of imported product and work is ongoing on strategies to prevent fraudulent importation and movement of poultry products. A much stronger partnership between the industry and government in the past few years is something to be celebrated.

One of the most important pillars of the Poultry Master Plan is the introduction and use of appropriate trade measures to protect the local industry from unfair trade practices. In this regard there were two welcome developments in 2021. In August, existing anti-dumping duties against the Netherlands, the UK and Germany were extended for a five-year period, and it now looks likely that the International Trade Administration Commission (ITAC) will decide in favour of new anti-dumping duties against imports of bone-in portions from Brazil, Denmark, Poland, Spain and Ireland. Although most European exporters are currently barred from the South African market because of HPAI-related trade bans, anti-dumping duties against Brazilian bone-in products would be welcomed by all broiler producers.

Revenue from egg production came under pressure in 2021 even though the supply and demand balance improved in the second half of 2020. South African per capita consumption of eggs reached the highest level ever during the first year of the pandemic (159 eggs per person) but sustaining this increase has proved hard in the face of escalating feed prices which have to be passed on to consumers. The layer feed price index in 4Q 2021 was 12.0 % higher than in 4Q 2020, while farm gate pricing remains low relative to the price paid by consumers at retail level.

Tighter biosecurity measures worked through the 2019 and 2020 winter seasons to safeguard South African flocks from highly pathogenic avian influenza (HPAI) infections, but it was almost inevitable that migrating birds would eventually bring the disease into the country from infected European nations. In March, an outbreak of H5N1 HPAI on a farm in Gauteng quickly spread to other provinces. By the end of the year, 134 cases in South Africa had been reported and almost 2.39 million laying hens and 801 000 broilers and breeders had been culled. Egg producers in the Western Cape were hardest hit, losing an estimated 21.5 % of their laying flock, with little expectation of receiving compensation from government.

On 4 March 2020, Minister Dlamini-Zuma declared the ongoing drought a national state of disaster. She was able to lift this measure in July 2020, after good winter rains in the Cape. Hopes that the El Niño-Southern Oscillation (ENSO) was in a strengthening La Niña state were realised and this supported above-average rainfall in the summer rainfall areas of South Africa through much of the year. In January 2021, a Category 2 tropical cyclone (Eloise) hit the eastern seaboard, causing extensive flooding and damage to infrastructure and crops in Limpopo, Mpumalanga and KwaZulu-Natal. The National Disaster Management Centre (NDMC) eventually classified the damage as a national disaster; a legal designation that unlocks financial and humanitarian aid. Later in the year, spring and early summer rains were drenching. Nationally, dam levels averaged 89 % capacity in late December 2021, compared to 65 % at the same time in 2020. The Eastern Cape remains water-stressed in parts. The Kouga Dam (in the Nelson Mandela Bay catchment) had risen to almost 16 % capacity by 22 December 2021 (from less than 4 % in June) and dams supplying Nelson Mandela Bay were still below 20 % capacity overall. The 2020/2021 maize crop increased, year on year, by 6.6 % (16.315 million tonnes) and the domestic soybean harvest was up by 52.3 % at 1.897 million tonnes.

The unprecedented riots and looting that took place in KwaZulu-Natal and Gauteng in July 2021 caused millions of rands of loss to the South African poultry industry, with damaged and destroyed infrastructure and crops, large-scale theft and looting, and massive interruptions to supply chains. Over 300 lives were lost. There were fears of a national food crisis as warehouses, cold storage facilities and transport systems were shut down for 10 days. Further challenges were experienced through the year with electricity load-shedding and failing municipal infrastructure and water supply. These issues continue to plague the ability of local poultry producers to remain globally competitive and, in the absence of court action, very little is done to support local businesses suffering under these conditions. The poultry industry is an important contributor to the agricultural segment of the gross domestic product (GDP) of the country and local government failings and inefficiency are serious risks to the sustainability of local businesses, especially those in outlying rural areas where jobs are desperately needed.

In 2020, South Africa's economy contracted by 6.4 % (World Economic Forum); the biggest annual fall in economic activity since 1946. In 2021, South Africa's GDP rebounded by 4.9 % but from a low base – so that the economy has regressed to a level last seen in 3Q 2017. Growth has been weighed down by vaccine hesitancy, policy uncertainty, rising inflation, weaker commodity prices and fragile investor confidence. Globally, growth averaged 5.9 % in 2021. Domestic agriculture had a roller coaster of a year in 2021, sliding in the first and third quarters but recovering from market shocks in both the second and fourth quarters. The 3Q

2021 drop in agricultural GDP (- 13.6 %) stems from the looting and subsequent storage and freight disruptions experienced in KwaZulu-Natal and Gauteng in July 2021.

South Africa's official unemployment rate in 4Q 2021 was 35.3 %, up from 32.5 % in 4Q 2020. The expanded unemployment rate, which includes discouraged work-seekers, increased from 42.6 % in 4Q 2020 to 46.2 % in 4Q 2021. The percentage of young people (15 – 34 years of age) not in employment, education or training was 44.7 % in 4Q 2021, compared to 41.8 % in 4Q 2020. In total, 7.921 million people were unemployed in South Africa in late 2021, up from 7.233 million the previous year (+ 9.5 %). Inevitably, disposable income is constrained by this level of unemployment and the economic recovery remains too fragile to add many jobs to the market.

Electricity load-shedding reached record levels in 2021, totalling 1169 hours (up from 859 hours in 2020). Analysts suggest that loadshedding cost the country 400 000 potential jobs in 2021 and 3.1 % points in GDP growth. Eskom CEO, Andre de Ruyter, warned South Africans to expect another five years of energy deficit. In March 2021, Karpowership-SA (a subsidiary of a Turkish energy consortium) was selected to provide 1 220 MW of electricity from liquefied natural gas – on three ships parked off the South African coast. The deal would have tied South Africa to electricity generation from fossil fuels for twenty years. In June, the Department of Forestry, Fisheries and the Environment refused to grant the necessary environmental permissions, sending the consortium back to the drawing board. In August 2021, the Minister for Natural Resources and Energy, Gwede Mantashe, gazetted amendments to the Electricity Act, raising the electricity generation threshold for private companies from 10 megawatts to 100 megawatts. In November 2021, a South African delegation attended COP 26 in Glasgow. South Africa is a major greenhouse gas emitter and is being encouraged by an $8.5 billion dollar "green deal" to transition away from coal-fired electricity production. Almost 200 signatories at the conference pledged to take the steps necessary to keep global warming below the critical 1.5 °C threshold.

Global demand for energy dropped so much in 2020 that, in April, US crude oil prices dropped below zero for the first time ever. Brent crude prices averaged $64 a barrel in 2019 and just $41.69 a barrel in 2020 (EIA). Faltering restarts to the global economy in 2021 helped oil recover to an average of $70.50/barrel, against an EIA forecast of $52/barrel. South African petrol and diesel prices decreased by 10.5 % and 14.8 %, respectively, during 2020 but then tracked steadily upwards through 2021. In December 2021, the petrol price was up 36.5 % over January 2021, and the diesel price was up 44.5 %. Even taking into account COVID lockdowns, these prices were up 25.6 % and 22.6 % compared to the petrol and diesel price in January 2020.

Lockdowns caused investors to flee emerging currencies, and, in addition, the rand suffered through two credit rating downgrades in swift succession in March 2020. The currency slumped in response but staged a robust recovery through 2021 and ended the year some 3.7 % below the rand value on 3 January 2020. This year was a year of two halves for the rand. In 1H 2021, the rand made inexorable progress against the US dollar to reach just $13.43 : $1 in early June, supported by strong commodity prices. It was all downhill from there, and by December 2021, the rand had slipped back to a level of R15.87 : $1.

In the February budget speech, the Minister of Finance, Tito Mboweni, announced a budget deficit amounting to 14 % of GDP; a shortfall in tax collection of R213 billion; and gross national debt expected to rise to 87.3 % GDP within 3 years. Against this economic backdrop, the SARB held the lending rate at 3.5 % until its November 2021 meeting, at which it voted for a 25 basis points increase (to 3.75 %).

World food prices hit a ten-year high in 2021 (FAO). Strong demand was pitted against high input and transportation costs, global trade disruptions, climatic challenges and labour shortages. Domestic food inflation climbed to an average of 6.5 % in 2021 from 4.5 % in 2020 (SARB), compared to a global average increase of 23 % (FAO).

In autumn 2020, all three major credit rating agencies downgraded South Africa to below investment grade and Moody's and Fitch's pushed the country deeper into "junk status" in November 2020. An unreliable electricity supply, rigid labour market, challenging levels of debt and underperforming state-owned enterprises informed their decision to downgrade. Despite all the economic headwinds faced by South African businesses in 2021 (load shedding, COVID-19 related trade disruptions, looting, flooding, the regulatory environment), there is a glimmer of hope. On 15 December 2021, credit agent Fitch upgraded the outlook on South Africa's BB- rating to stable, from negative. It is not much, but this is the first positive movement on the country's credit rating, from any agency, in over a decade. Fitch cited "faster than expected economic recovery, the surprisingly strong fiscal performance this year and significant improvements to key GDP-based credit metrics following the re-basing of national accounts" in their reasoning.

Avian influenza continued to be one of the biggest challenges facing poultry producers in 2021. The European winter brought a rash of fresh outbreaks of HPAI in the EU region. By December, Spain was the only European exporter to remain HPAI-free and permitted to trade with South Africa in raw poultry products. On 29 July 2021, the Dutch declared the country to be HPAI-free to the OIE but freedom from avian influenza was short-lived, with two new events opened in August 2021 (wild birds) and three further events opened in late October and early November. One event, comprising 8 outbreaks, was in commercial flocks. In Great Britain, an Avian Influenza Prevention Zone (AIPZ) was declared on 3 November 2021 and extended, to include Northern Ireland, on 17 November. Nevertheless, from 26 October 2021, the UK Government confirmed 41 outbreaks of H5N1 HPAI in poultry in England, along with 4 cases in Scotland, 3 in Wales and 2 in Northern Ireland. Over 650 000 birds had been culled by year end, and a further 50 000 birds died from the virus itself (OIE). The Germans opened 18 new H5N1 HPAI events with the OIE in the new season, beginning 13 October 2021. Seven of these events were in poultry operations or backyard flocks. Almost 180 000 birds were culled in these 7 events, on 20 different farms.

The Irish have had very few HPAI cases over the last few years but on 29 October 2021, a new event in wild birds was opened with the OIE (H5N1 HPAI; 43 cases in 17 locations; a new variant for Ireland) and, on 19 November 2021, a new event in commercial poultry was opened (H5N1 HPAI). This event expanded to four outbreaks, in which almost 148 000 birds were culled. In early September 2021, the French Minister of Agriculture declared the country HPAI-free but this declaration was premature. There were cases in captive birds in August and September and, from 8 November 2021, the French reported 256 cases of H5N1 HPAI in wild

birds, in Bretagne, Grand Est and Auvergne-Rhones-Alpes. On 21 November, H5N1 HPAI was identified in a flock of laying hens suffering high mortality levels in the Haut-de-France region, near the Belgian border. The Belgians declared themselves HPAI free on 29 May April 2021. However, a new outbreak was recorded in mid-July 2021 in captive birds (East Flanders) and three further outbreaks were logged with the OIE under a new event in late August. In December 2021, a new event was declared from the Vlaanderen district, with almost 64 000 birds culled on two farms (H5N1 HPAI).

The Danish declared themselves HPAI-free to the OIE on 9 August 2021. However, in the 4Q 2021, they opened 2 new events with the OIE; one in wild birds, and one in a holding of 27 600 turkeys (30 October 2021). This event was declared resolved on 6 December 2021. A further outbreak in a backyard flock was reported by the Danish agricultural ministry from the same municipality (3 November 2021). Hungary is another country which declared itself free from HPAI in poultry flocks in summer 2021. From 4 November 2021, Hungary opened 7 new events with the OIE (all H5N1 HPAI). Five of these events were in poultry (20 outbreaks). Over 615 000 birds had been culled by year end.

Poland was HPAI-free in commercial poultry from 10 August 2021 to 1 November 2021. From then, 26 outbreaks were reported by the Polish authorities before the end of the year, under 3 new events declared with the OIE. All involved H5N1 HPAI. Over 987 000 birds were culled between November and December 2021.

The year 2021 has thus been a tale of two viral pandemics: COVID-19 and H5N1 HPAI. Although the world seems to be getting to grips with the COVID-19 pandemic, global trade in feed ingredients and poultry products is likely to be disrupted for some time to come. South African poultry producers will be hoping for calmer waters in 2022: softer input prices, more stable markets, continued support from the Poultry Sector Master Plan and lower import volumes. If feed prices were to drop as markets restabilise, there would much to be optimistic about in the year ahead.

THE SOUTH AFRICAN POULTRY ASSOCIATION

1.1 History

One of South Africa's oldest agricultural organisations, the South African Poultry Association (SAPA) started off in Kimberley in 1904 as a body of poultry hobbyists. The Association catered to the needs of the various poultry clubs by regulating the rules and appointing judges for the popular poultry shows and egg laying tests staged at the time.

Over the years, the poultry industry evolved from what was essentially a backyard industry, with thousands of people keeping small flocks and only a few large producers, to the mature, efficient and highly productive commercial operations we see today.

Responding to the needs of its members, SAPA served as the industry's collective voice to the public and to government. Strengthening its authority, credibility and legitimacy, a South African Poultry Breeders Register was established in 1926, and ten years later, government gave the assurance that it recognised SAPA as the official representative organisation of the country's poultry industry.

As the industry has changed, so too has SAPA adapted to meet the industry's changing needs. The Association is involved in a continuous process of identifying issues affecting the industry and taking positive steps to deal with these.

1.2 SAPA's mission

For years, SAPA has represented small scale, emerging and larger commercial poultry farmers in the following sectors: the broiler and egg industries, the breeding/day-old chick supply industry, and smallholder and developing farmers. From mid-2015, producers from the Chick Producers and the Developing Poultry Farmers Organisations were absorbed into their respective product value chains, falling under either the Broiler or Egg Organisation.

With renewed commitment from many broiler and egg producers in the wake of the 2017 avian influenza outbreak, SAPA was provided an opportunity to become a stronger representative body for the industry. The Egg and Broiler Organisations met early in 2018 and the result was a new organisational structure, with revised collection models (Chapter 9).

SAPA now consists of two independent organisations, each with its own board and general manager. The Broiler and Egg boards take full responsibility for their administrative functions and their general managers report to the board of directors.

The SAPA Board retains the governance and fiduciary responsibilities of SAPA. Technical committees (consisting of two work groups and two sub-committees) address issues of poultry health and welfare, food compliance, training, and research. The work groups and committees involve key stakeholders such as producer personnel, the Departments of Health (DoH) and Agriculture, Land Reform and Rural Development (DALRRD), the Consumer Goods Council of South Africa, the South African Veterinary Association, academics and consultants.

The objectives of the streamlined South African Poultry Organisation are as follows:

To establish and maintain national divisions of the Association in South Africa and enable members to co-operate effectively for the development of the broader poultry industry;

To co-ordinate the views, aims and efforts of the national Organisations in the interests of the broiler poultry industry in South Africa;

To advance and improve the broader poultry industry in South Africa by embracing and co-ordinating the objectives of the national Organisations and particularly by:

- Protecting the broader poultry industry from adverse legislation and any other aggression and by initiating, promoting and assisting with the promulgation of legislation and regulations which are beneficial to the broader poultry industry;
- Encouraging poultry education, conducting and/or assisting in investigational work of a practical and scientific nature and the organisation of seminars and courses;
- Facilitating and providing guidance in respect of the transformation of the broader poultry industry in line with applicable government policies, objectives and legislation;
- Forming public private partnerships with government bodies and other public bodies as may be required from time to time;
- Representing the Broader Poultry Industry on appropriate international bodies and forums for purposes of developing global regulatory and trade frameworks which are to the benefit of the Broader Poultry Industry;
- Publishing literature, journals, pamphlets, and circulars dealing with all matters pertaining to the broader poultry industry; and conducting communications on behalf of the industry;
- Establishing Codes of Practice in relation to the broader poultry industry;
- Promoting the consumption of poultry products in South Africa;
- Assisting in the opening up and maintaining of export markets for South African egg and poultry meat products;
- procuring the compilation of statistics using information received from Members and the broader poultry industry, for purposes of maintaining suitable databases for use in the furtherance of the aims of the Association;
- acting as arbitrator in the settlement of any dispute between Members which may arise in any matter pertaining to the broader poultry industry, in accordance with and subject to the rules;
- dealing with any matter which may be in the interests of the broader poultry industry, the Association and/or its Members.

1.3 The Broiler Organisation

The SAPA Broiler Organisation represents commercial broiler producers and associated breeder farmers and hatchery operations with the intention to serve the interests of the broiler industry on a national basis. The Broiler Organisation is funded by a voluntary levy.

The general manager of the Broiler Organisation is Izaak Breitenbach.

1.4 The Egg Organisation

The Egg Organisation operates as an independent subsidiary of the South African Poultry Association. The purpose of the Egg Organisation (and its committee) is to improve the egg industry and promote it at a national level. This entails a critical evaluation of the methodology of control structures, achieving a higher level of operational input, liaising with government on crucial matters, liaising with consumer bodies, and striving to build a stronger image for the egg industry on an ongoing basis. Progress in the industry can be measured by an increase in egg consumption per capita in South Africa.

Membership of the Egg Organisation had declined over a number of years, and it became clear that the only way to fund the organisation would be through a statutory levy. An application was made to the National Agricultural Marketing Council (NAMC) and supported by the producers of more than 66 % of the country's eggs. The application was successful and a statutory levy on table eggs was gazetted in mid-2018, coming into force from 27 July 2018. All egg producers and packing stations contribute 1.5 c/dozen eggs traded. An application for a new egg and egg product statutory levy was finalised in August 2021 and submitted to NAMC for comments from directly affected groups and final approval by DALRRD Minister Thoko Didiza. The new levy was approved on 14 December 2021 and will be gazetted in early 2022.

The levy is collected by the Red Meat Levy Administrator. The administrator can be contacted on (012) 348 2160. The levy is spent on the administrative functions of the Egg Organisation, along with transformation initiatives, statistics, training, marketing and consumer education and awareness projects. Dr Abongile Balarane became the general manager of the Egg Organisation in May 2021.

1.5 Representation of the industry

The membership of SAPA's two organisations increased by 13.4 % in 2021:

Broilers	128 (up from 89 in 2020)
Eggs	143 (90 individual producers and 53 members of co-operatives)

Please note that these figures include the former members of the DPFO and CPO.

SAPA introduced a new category of membership in 2020 for organisations in allied industries. There are now 23 associate members, and the aim is to grow this membership further. These members pay monthly contributions in return for access to poultry statistics and other benefits, such as preferential advertising opportunities.

Broiler pricing reports, distributed by SAPA's statistics team every month, were generated from data submitted by 63.9 % of the broiler industry (on the basis of kilogrammes of edible broiler meat and products sold (1.25 million tonnes recorded from total annual commercial production of 1.96 million tonnes)).

SAPA communicates with its members via its website, bulk emails and the bi-monthly *Poultry Bulletin*, edited by Melinda Shaw. Information on SAPA's website is available to both members and non-members.

1.6 Developing poultry farmers

Small, medium and micro enterprises represent an important vehicle to address the challenges of job creation, economic growth and equity in our country. From 2003, the Developing Poultry Farmers Organisation (DPFO) catered for the needs of smallholder and emerging farmers by addressing issues affecting this growing sector of the poultry industry. The organisation also fulfilled a dynamic capacity building and advocacy role, empowering provincial structures and developing partnerships with the state over time. Unfortunately, funding of the organisation became problematic and, from 2015, the organisation was absorbed into the Broiler and Egg Organisations as part of SAPA's strategic restructuring. However, industry transformation remains a priority for SAPA (see Chapter 9.1).

1.7 Engagement with stakeholders

It is through partnerships with the Department of Agriculture, Land Reform and Rural Development (DALRRD), the Department of Trade, Industry and Competition (DTIC), and the Department of Health that the industry can solidify its position in the local marketplace, defend itself against imports, and expand export markets. SAPA hopes to continue working closely with these departments, provincial and local government, and the media.

After successfully petitioning the International Trade Administration Commission of South Africa (ITAC) to raise the *ad valorem* tariff on bone-in and boneless chicken portions in 2020, SAPA again approached ITAC in 2021, to explore anti-dumping duties on imports of bone-in portions from Brazil, Denmark, Poland, Spain and Ireland. The Commission is expected to find in favour of local broiler producers and recommend the levying of anti-dumping duties against these five countries. An announcement is expected in early 2022. In a sunset review of existing anti-dumping duties against three other European countries (the Netherlands, the UK and Germany), ITAC were persuaded that dumping could still be demonstrated and these anti-dumping duties will remain in force for a further five years.

DALRRD began rolling out the Agricultural Policy Action Plan in 2016/2017. The poultry value chain, the feed industry, and the maize and soya industries were part of the plan and were therefore beneficiaries. The plan aligned DALRRD and other government funding with national strategic objectives. Transformation was one of the objectives. In November 2019, the Minister of Agriculture, Land Reform and Rural Development, Thoko Didiza and Minister of Trade and Industry, Ebrahim Patel, witnessed the signing of the long-awaited Poultry Sector Master Plan. The Master Plan is a joint initiative between poultry producers, meat importers (AMIE),

organised labour, and government. This joint vision aims to support growth and transformation in the local industry (Chapter 6).

SAPA continues to engage with the South African Bureau of Standards (SABS) to develop local standards for the welfare of laying hens (see Chapter 8.3).

SAPA partnered with the Department of Trade, Industry and Competition (DTIC) in the development of a master plan for the egg sector value chain, which would provide strategic intervention areas for the egg industry. The further development of this plan now falls under DALRRD.

SAPA participates in global organisations such as the International Poultry Council, the International Egg Commission and the Animal Welfare Working Group of the World Organisation for Animal Health. SAPA also promoted collaboration with the National Agricultural Marketing Council (NAMC), Proudly South African, the National Animal Health Forum (NAHF) and other agricultural commodity organisations.

1.8 Supply of information to the industry

As part of its service to the industry, the South African Poultry Association regularly distributes statistical information to its members and makes this information available to non-members through its website.

Leading Edge Poultry Software and Silverpath Consulting have provided statistical services to SAPA since February 2015.

The reports circulated are listed below. In addition, the SAPA team produce a bi-annual report for subsistence and small-scale commercial farmers, and an annual Industry Profile.

Monthly

- Broiler pricing report
- Egg pricing report
- Broiler trade report (tariff lines and country)
- Source data spreadsheets for eggs and broilers
- Broiler production report
- Egg production report
- Egg packaging report

Quarterly

- Key market signals report for eggs and broilers (trade and pricing)
- Avian influenza surveillance monitor
- Cull traders report
- Feed ingredient report

Members and non-members are encouraged to submit monthly production figures to SAPA. The data collected includes the total volume and value of fresh and frozen broiler products and of individual broiler "portions" sold, such as whole birds, bone-in portions, offal, etc. The number of day-old broiler parents placed, and the number of broiler chicks hatched are also recorded. On the egg producers' side, information is collected on the number of day-old pullets placed, egg production volumes and average prices for eggs, feed and cull hens.

The confidentiality of this process is ensured through the involvement of a team of auditors who deal with the raw data. Thus, any or all information, data, know-how, documentation, materials and other communications, written or oral, which are disclosed or provided to SAPA or its designees by a producer are regarded as confidential information belonging to that producer and cannot be disclosed to any other producer, individual or organisation.

Many local and international businesses and organisations, banks, researchers and government departments request the poultry statistics contained in this, and other, SAPA reports. The data are used in decision-making processes, in prioritising investments, in research projects, annual reports and trade applications, etc. Accurate statistical information is of benefit to all role players, so an appeal is made to producers (whether SAPA members or not) to help increase the sampling pool. Please email cynthia@silverpath.co.za to find out more.

2. THE POULTRY INDUSTRY IN SOUTH AFRICA

Approximately 74 % of the birds in the South African poultry industry are used for meat production, while the remaining 26 % are used in the egg industry. The South African broiler industry went through a period of substantial growth between 2004 and 2008, averaging more than 7 % per annum. Based on tonnes of meat produced (including spent birds and non-commercial production), growth in the industry slowed down markedly (to below 1 % per annum) from 2009 to 2014. In the 11 years from 2011 to 2021, growth has averaged around 1.3 % per annum. To put these numbers in perspective, annual population growth between 2004 and 2008 was 1.4 %; and between 2011 and 2021 was around 1.54 % per annum.

The growth period to 2008 was associated with increased demand for product and well-contained input costs. During the past ten years, production costs have increased, disposable income of consumers has declined and the importation of poultry meat products at low prices has eroded the demand for locally produced broiler products. Whilst importers point to the growth from 2018 through 2021 as evidence of a healthy domestic industry, they are not looking at the longer-term picture. In the 5 years from 2013 to 2018, growth in the industry averaged only 0.3 % a year. It has taken the Poultry Master Plan and trade measures against unfair trade to push the annual growth up to around 3 % per annum in the last three years. In the egg industry, growth (in terms of the number of laying hens and egg production) has averaged approximately 1.1 % and 1.6 % per annum, respectively, since 2011.

2.1 Gross value

The gross value of primary agricultural production from poultry meat for 2021, as recorded by DALRRD, was 50.96 billion (+ 2.8 % on 2020 levels). The gross value of egg production was recorded at R11.44 billion (+ 0.9 %). Combined, the gross poultry farm income for 2021 was R62.39 billion, showing a yearly increase of 2.5 %. According to DALRRD estimates for 2021, total production of poultry meat, including spent hens from the broiler and layer sectors, was 1.915 million tonnes. The total production of shell eggs in 2021 was 0.549 million tonnes (DALRRD).

Broiler and egg producers are, in rand value, the largest sector of South African agriculture at 16.6 % of all agricultural production (down from 18.4 % in 2020) and 39.9 % of all animal products (down from 41.9 %). The 16.6 % contribution from poultry products breaks down into 13.6 % from poultry meat and 3.05 % from eggs. Our nearest competitor, the beef industry, contributed 11.5 % to turnover of all agricultural production and 27.5 % of animal products.

The total gross value of animal products was R156.51 billion and the total gross value of agricultural products was R374.81 billion in 2021. Total animal products contributed 41.8 % to the gross value of total agricultural products. The gross value of ostrich feathers and products was R0.57 billion in 2021 (down from R0.70 billion in 2020); this is 0.2 % of agricultural production and 0.4 % of total animal products.

2.2 Feeding the nation

The poultry industry prides itself on the fact that it feeds the nation, as more poultry products are consumed every year than all other animal protein sources combined. The South African poultry industry dominates the animal products sector, providing 65.0 % (up from 66.1 % in 2020) of locally produced animal protein consumed in the country (excluding milk; DALRRD).

The per capita consumption of poultry meat and eggs in 2020 was 38.0 kg and 8.6 kg, respectively, with a combined per capita consumption of 48.22 kg (including backyard consumption; DALRRD).

Per capita consumption of beef, pork, and mutton and goat were 16.9 kg, 5.5 kg, and 2.8 kg respectively (source: DALRRD). Per capita milk consumption was 37.1 kg per person.

The consumption of poultry meat and eggs and of other types of meat is shown in Figure 1.

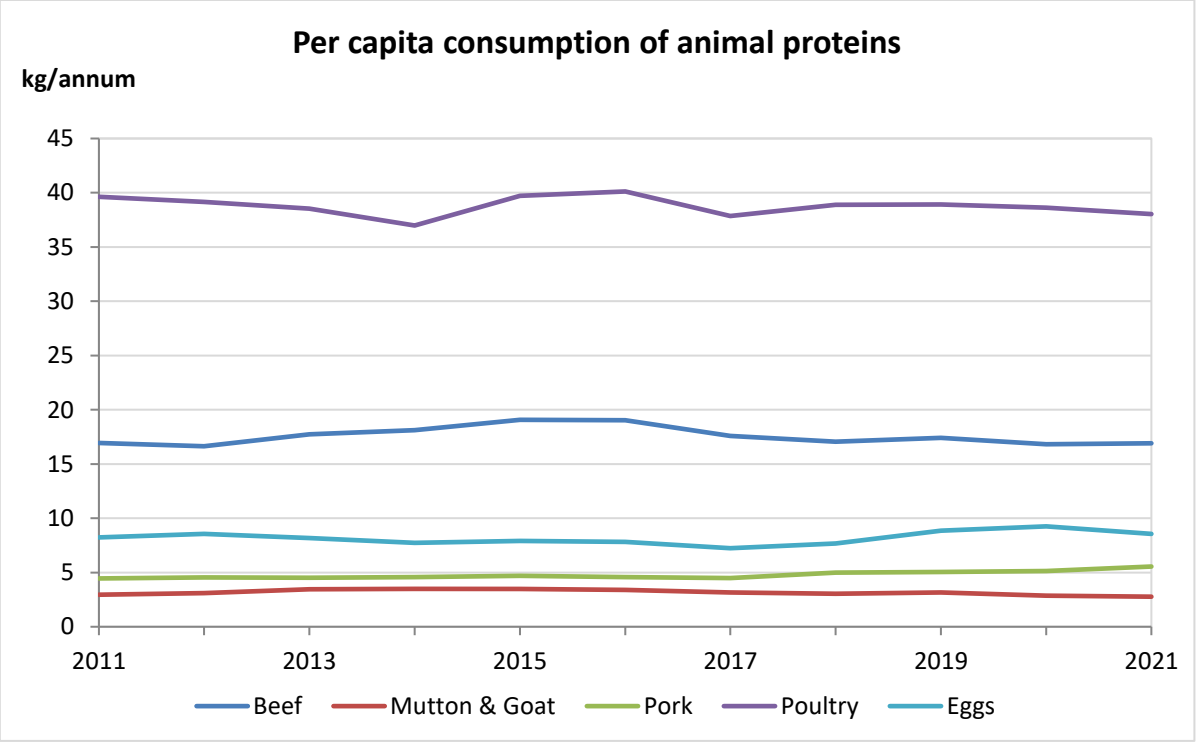


Figure 1. *Per capita consumption of protein sources from 2011 to 2021 (DALRRD)*

During 2021, the total consumption of poultry meat and eggs (according to DALRRD) was 2.85 million tonnes; 86 % more than the combined 1.532 million tonnes of beef, pork, mutton and goat consumed over the same period. Of this, 2.307 million tonnes were poultry meat products (including imports), and 0.542 million tonnes were eggs and egg product.

2.3 Price comparison of protein sources

On a rand per kilogramme basis, broiler meat and eggs remain the most affordable of animal protein sources, with the exception of milk.

The average beef producer price at the abattoir (carcass price, excluding the fifth quarter) for class A2 / A3 was R53.29 per kg in 2021 (+ 10.7 % on 2020), while the abattoir selling price for class C2/C3 beef was R46.23 (+ 10.0 % on 2020). The average price for pork (all classes) was R28.34 per kg in 2021 (+ 12.4 %).

The total realisation producer price for broilers (less all discounts, rebates and secondary distribution) was R26.18 per kg in 2021 (+ 11.3 %; SAPA; note COVID-19 lockdowns in 2Q 2020). It should be noted that the broiler price is for finished product, whilst the other meat prices are ex-abattoir.

The average producer price of eggs in 2021 was R22.75 per kg (R16.68 per dozen; all sizes; SAPA). The egg producer price increased by 14.1 % compared to the 2020 price (R19.93).

The average 2018 to 2021 prices of animal proteins are given in Figure 2 and monthly prices from 2017 are shown in Figure 3.

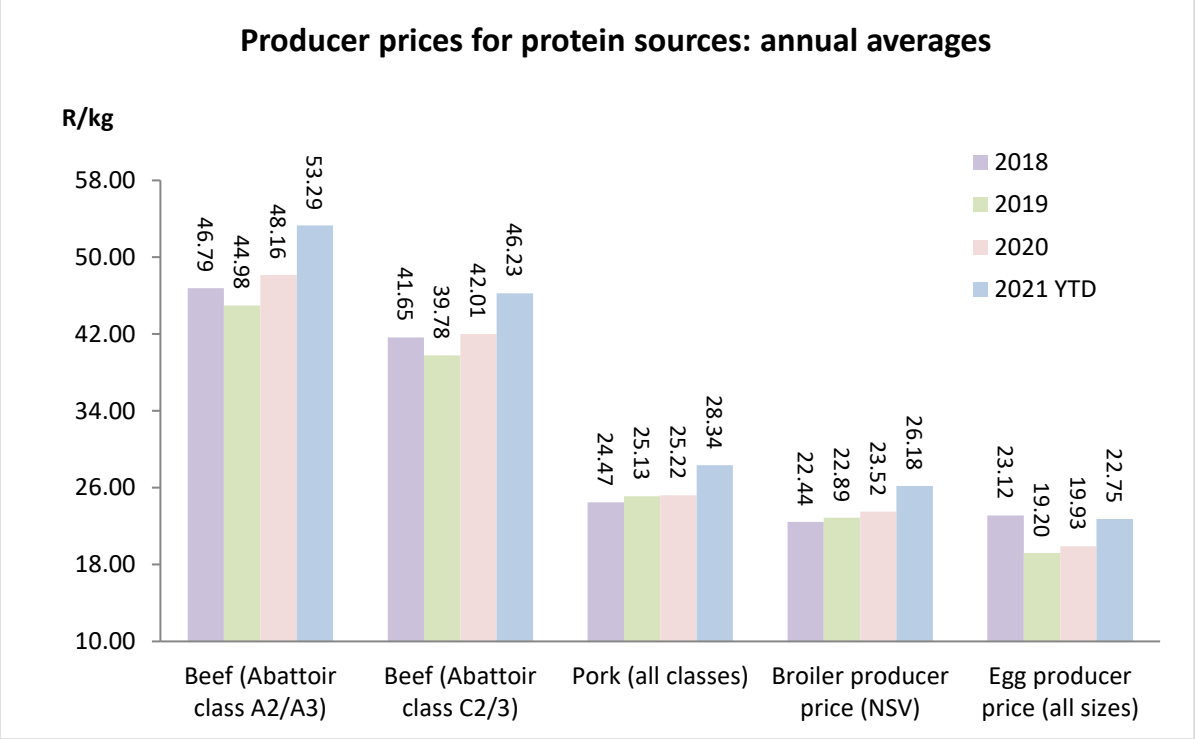


Figure 2. *Average annual producer prices for different protein sources between 2018 and 2021 (Stats SA; SAPA)*

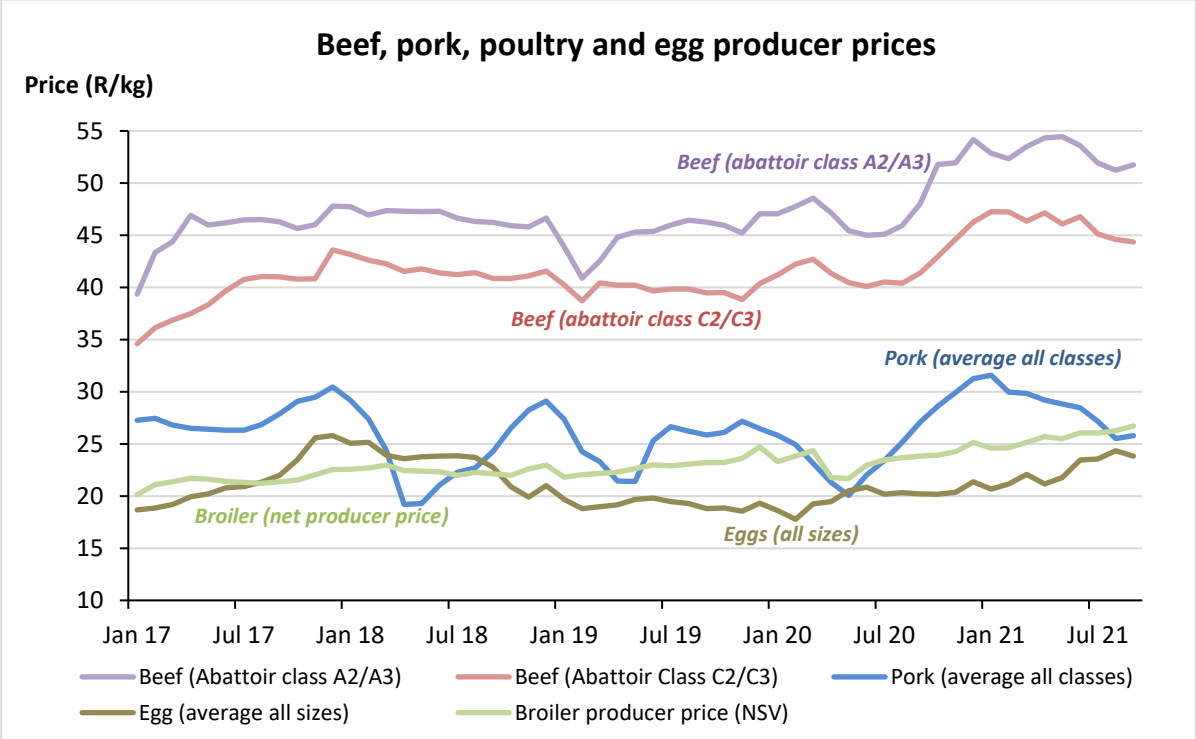


Figure 3. *Monthly beef, pork, broiler and egg producer prices (source: AMT, SAPA)*

Changing views on cholesterol and the increasing popularity of high protein/high fat diets have fuelled a resurgence in the consumption of eggs in the developed world. South African consumers lag in recognising the cost-effectiveness of eggs as a high-quality protein source.

For decades, doctors, scientists and government agencies warned against diets high in cholesterol. However, since a 2015 revision of the recommendations of the US Dietary Guidelines Advisory Committee (DGAC), cholesterol is no longer considered "a nutrient of concern for over-consumption". For most people, dietary cholesterol has a much smaller effect on blood levels of total cholesterol and harmful LDL cholesterol, than does the 'mix of fats' in the food eaten. Research shows that an egg a day does not increase heart disease in healthy individuals. In fact, the anti-oxidant selenium found in eggs, along with the easily digestible, high-quality protein and vitamins (A, B_{12}, D, riboflavin and folate), may lower the risk of heart problems.

In 2018, eggs found themselves in the medical news again when a study by Northwestern University in the US seemed to suggest that the intake of eggs was associated with an increased risk of heart disease and stroke. The study, published in the Journal of the American Medical Association, looked at the diet and medical history of almost 30 000 people and concluded that eating a single egg a day would increase cholesterol levels and the risk of stroke death by 17 %. However, critics dismantled the paper, citing problems with the methodology and the conclusions drawn. In particular, if the overall cholesterol intake is taken into account, the significance of eggs as a contributor to death drops out of the analysis. The author has conceded that total cholesterol intake is what people should really focus on, along with healthy lifestyle choices and cutting out cigarettes.

2.4 Poultry feed: maize consumption

Following drought-affected harvests from 2014 to 2016, South Africa regained its status as a net exporter of maize in the 2016/2017 season. In the 2017/18 season, the maize crop dropped 25.3 % to 12.51 million tonnes and there was a further 9.9 % reduction in output in the 2018/2019 season (11.275 million tonnes). The drop in production in these two seasons is largely a reflection of reduced plantings in 2017/18 and late rains which delayed planting in 2018/19. The 2020/2021 maize crop, at 16.315 million tonnes (revised February 2022), was 6.6 % higher than the 2019/2020 crop. White maize was recorded at 8.60 million tonnes (52.7 %) and yellow maize at 7.715 million tonnes (47.2 %; Crops Estimate Committee).

The 2021/22 harvest is expected to be about 5.7 % below last year's crop (Crops Estimate Committee).

The total South African consumption of maize for 2020/21 was 11.2 million tonnes, of which 6.41 million tonnes was white maize and 4.79 million tonnes was yellow maize. The South African poultry industry is the biggest non-human consumer of locally produced maize (AFMA) and, in 2021, maize contributed R55.8 billion to the gross value of agricultural products, compared to R37.9 billion in the previous year (source: DALRRD).

2.5 Poultry feed: sales of complete feed

According to AFMA estimates, a total of 6.98 million tonnes of animal feed was manufactured by its members in 2021.

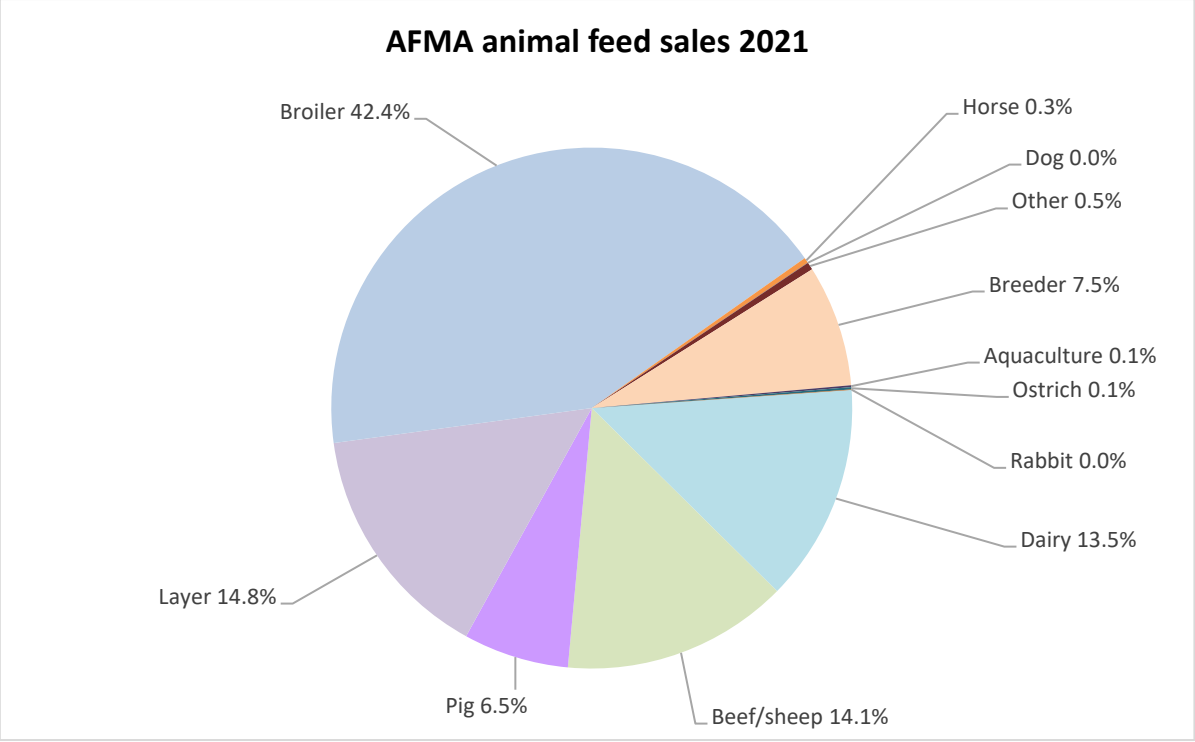


Figure 4. *Animal feed sales by AFMA members in 2021*

The poultry industry consumed 4.51 million tonnes, of which 2.947 million tonnes were broiler feed, 1.032 million t layer feed, 0.525 million t breeder feed and 0.010 million t ostrich feed. In total, a massive 65 % of AFMA's animal feed sales went to the poultry industry (Figure 4, above).

National feed production during 2020/21 (April to March) was 11.993 million tonnes, a 0.27 % year-on-year increase in feed sales. AFMA sales represent 57.7 % of the national feed produced (AFMA).

2.6 International price competitiveness

Broiler imports, mostly from the Americas and the EU, increased by 180 % in the ten years from 2008, to a peak of 539 000 tonnes in 2018. Importers have argued that imports meet a demand which local producers simply cannot meet; while local producers counter that imports drive small producers out of business, kill investment and prevent bigger businesses from making full use of their production capacity. The EU repeatedly attacks the South African industry as inefficient and uncompetitive. So, how competitive *is* the South African broiler industry internationally?

There is little doubt that South African producers compare favourably with global competitors in terms of production efficiencies. The University of Wageningen has demonstrated this over several years. It is production *costs*, particularly feed costs, which reduce our competitiveness. Feed costs account for between 65 and 73 % of total live broiler production costs in most countries. Because of the country's relatively high levels of protein imports and a free market for maize exports, any increases in global maize and soya prices impact South African feed costs. Increases in feed prices are often not matched with increased prices for local broiler products. High feed costs keep the domestic broiler price above import parity price even for non-dumped tariff lines and render South African producers vulnerable to imports. When global feed prices are high, or the local maize crop fails, even a depreciating rand cannot protect the local market from cheap poultry imports.

Whilst in a year of good harvests, South African poultry producers may also enjoy export parity prices for maize, soya prices have tended towards import parity. This situation may change as South Africa's domestic soybean production increases.

As is the case with the EU, transport, storage and other costs push up the price of protein-rich raw materials in South Africa. In addition, higher feed costs result in higher day-old chick prices. Therefore, South African poultry farmers have not been technically inefficient producers; there has simply been an insufficient supply of locally grown, affordable feed inputs. Amongst our competitors, Brazil, Argentina and the US are net exporters of both maize and soybeans. Figures from the Bureau for Food and Agricultural Policy's "Competitiveness of the South African Poultry Industry" report (2019) suggest that, in 2017, the € cost per kilogramme live weight was approximately 18 % higher in South Africa than Brazil (increased from 13 % in 2015). It is safe to label differences in feed costs as the major contributor to higher broiler production costs in this country. However, feed costs in South Africa, when the maize harvest

is good, *are* lower than in Europe (BFAP). Here, structural differences in the market for broiler meat also come into play (see below).

In a study on the competitiveness of the EU poultry sector (LEI Wageningen UR, 2019), EU *feed-related* production costs in 2017 were 15, 16 and 3.5 % higher than feed-related production costs in the US, Brazil and Argentina, respectively. Total production costs in the EU were higher than those in the US, Brazil and Argentina by 28, 31 and 13 %, respectively (2017). Compared to South Africa, the US and Argentina enjoyed production costs around 7 % and 2 % (respectively) below those incurred by South African producers in 2017. Brazilian and Ukrainian producers were able to produce chicken for 15 % and 10 % less than their South African counterparts, respectively.

Compounding the effect of feed price on the local cost of broiler production and our vulnerability to imports are the global differences in consumer preferences for chicken meat. Production costs in the EU ranged from 6 % above South African levels (Poland) to 23 % in Denmark. Respectively, the Netherlands, France, Germany and the United Kingdom produce chicken at 17 %, 22 %, 15 % and 19 % above South African production costs (2017 data; BFAP/Wageningen). Despite this, the EU nations were, before the 2020/2021 avian influenza outbreaks, able to export hundreds of thousands of tonnes of broiler meat to South Africa every year. Whilst the local market prefers “brown meat” (bone-in portions, such as leg quarters, drumsticks, wings, thighs, etc.), the EU and US consumer has a strong preference for “white meat” (largely breast meat) and boneless portions. Chickens, of course, grow as a single bird, with a leg and a wing to match each portion of breast meat. This means that, if the premium earned for white meat is sufficiently high in an exporting nation, the remainder of the carcass can be disposed of into receptive export markets, at reduced prices. The premium earned on the breast meat helps to cover the costs of production so that the “waste” cuts can be sold below the production cost per kilogramme of a whole bird. Imports of “below cost” or “at cost” portions into a country put downward pressure on local prices, effectively removing any premiums which might be available for preferred cuts in that country. South African producers should be able to realise higher prices for dark meat cuts but are unable to do so in the face of large volumes of imported cuts from the EU and, more recently, from the US and Brazil.

Figure 5 below illustrates how the amount of bone-in chicken imports, as a proportion of total poultry imports, has changed over the past 10 years.

It can be seen that broiler imports into South Africa comprise mostly bone-in portions and mechanically deboned meat (MDM). The proportion of whole frozen birds (82 % tariff) in the imports decreased in recent years, to 2015, and then increased slightly between 2016 and 2021. The proportion of boneless chicken portions decreased to 2016 but increased between 2017 and 2019. An increase in the general tariff on boneless portions in March 2020 (12 % up to 42 %) reduced imports of boneless portions by almost 60 % in 2020 from 2019, but there has been a slight recovery in 2021 (1.7 % of total imports, to 2.4 %). The proportion of bone-in portions (37 % tariff; except for EU) steadily increased over more than a decade to 2018 and exceeded 40 % of total imports from 2012 to 2019. Even with outbreaks of avian influenza disrupting trade in European poultry products, bone-in portions still accounted for over 44 % of total imports in both 2016 and 2017, 53 % in 2018, and 44.0 % in 2019. The dip in 2019 may

be attributed to European HPAI outbreaks and the EPA safeguard duty (30 %). In 2020 and 2021, the increase in the general tariff from 37 % to 62 %, HPAI related trade bans, and COVID-19 cargo disruptions reduced imports of frozen bone-in portions to 35.5 % of total broiler imports in 2020 and 33.0 % in 2021.

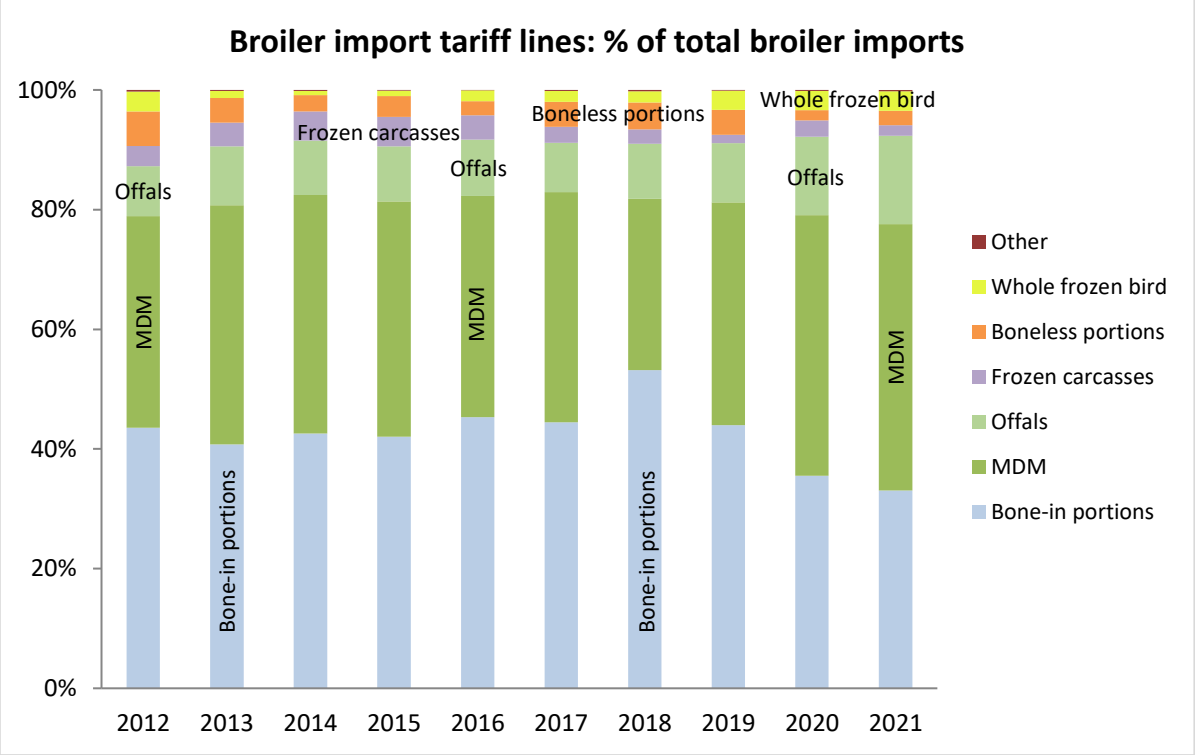


Figure 5. *Annual broiler imports according to tariff line, expressed as a percentage of total broiler imports*

With anti-dumping legislation in place against the US on tariff lines 0207.1491 to 1499 (frozen bone-in chicken imports), almost all these bone-in imports originated from the EU until 2016. However, under the terms of the African Growth and Opportunities Act (AGOA), a unilateral trade concession between the US and Africa which was renewed in 2015, South Africa was forced to allow 65 000 tonnes/annum of US frozen bone-in chicken portions into the country from January 2016. This quota is free from the R9.40/kg anti-dumping duty payable on US bone-in imports and looks set to increase to 71 290 tonnes from April 2021. South Africa now applies a tariff of 62 % to imports of frozen bone-in portion to all exporters except the EU, EFTA and SADC nations (so the US continues to pay this, even on the AGOA quota tonnes).

The EU enjoyed duty-free access to the South African poultry market under the Trade, Development and Co-operation Agreement (TDCA), until February 2015 when anti-dumping duties (on bone-in portions) were imposed on several companies based in the UK, the Netherlands and Germany. The International Trade Administration Commission (ITAC) accepted that imports of frozen bone-in portions from these three countries were causing downward pressure on domestic prices and that these imports were essentially being dumped. The Commission determined that the local industry has been unable to pass-on increases in

input costs (feed and electricity) to consumers because of competition from dumped imports. These duties have been renewed for a further 5 years, to 2025 (Chapter.

When these measures did nothing to stem the flow of bone-in imports, SAPA applied to ITAC again and, in December 2016, an interim anti-dumping tariff of 13.9 % was introduced on bone-in portions from all EU exporters. This was increased to 35.3 % in September 2018 for 4Q 2018 and 1Q 2019. This duty was reduced to 30 % from March 2019, 25 % from March 2020, and 15 % from March 2021. The anti-dumping tariff against the EU and post-Brexit UK will fall away completely in March 2022.

Given that the South African industry struggles to remain globally competitive at the whole bird level because of feed ingredient imports, it is clear that it is not possible to compete against imports of what are, in fact, by-products from the US and EU.

The chicken to maize price ratio is an important indicator of profitability in the poultry industry. A favourable chicken to maize price ratio and more effective measures to counter dumping would support expansion in the local industry. This ratio reached record lows in South Africa in 2012 (when the US drought pushed feed prices up) but stabilised through 2013 and became favourable through much of 2014. In 2015, the chicken:maize price ratio declined steadily through the year because of drought conditions and a weakening rand; dropping below 2012 lows as the drought continued into 2016. The record-breaking maize harvest in 2017 improved the chicken to maize price ratio (although still 40 % below the level seen in 2004/5), and this spurred renewed expansion in the industry (BFAP). The chicken to maize price ratio has decreased off these 2017 - 2018 levels by almost 40 % through to 2021, as feed prices climbed. Although the chicken:maize price has become less favourable, the weak rand and potential additional measures in place against US, EU and Brazilian exports, may still support growth in the local poultry industry, at least in the short term. BFAP forecast that the chicken:maize price ratio will reach an equilibrium over the period 2023 – 2028, somewhere between the unfavourable levels of 2012 – 2016 and the favourable ratio experienced in 2017. In their 2021 report, BFAP suggested long-term production growth of 1.7 % over the next 10 years if the chicken:maize price ratio stabilises; up from an estimate of 1.6 % in the 2020 Baseline Report. The increase in *ad valorem* tariffs on imported chicken portions and additional trade-related commitments resulting from the Poultry Master Plan have pushed their latest estimate higher.

The University of Wageningen and BFAP reports on the competitiveness of the EU and South African poultry industries can be found at:

> *https://www.avec-poultry.eu/wp-content/uploads/2018/12/WUR-report-2018-116-Competitiveness-EU-poultry-meat-PvanHorne_def.pdf*
>
> *http://www.bfap.co.za/wp-content/uploads/2018/08/BFAPBaseline-2018.pdf*
>
> *https://www.bfap.co.za/wp-content/uploads/2020/04/Final-Baseline-2019.pdf*

While cheap imports may benefit consumers if the cheap import prices are passed onto consumers, (which does not always seem to be the case), they also adversely affect the ability

of domestic producers to earn profits commensurate with acceptable rates of return. Thus, these producers cannot sustain the investment required to grow their operations.

Lack of growth in a sector which is a large employer in the country contributes to high unemployment levels. If returns on investment are inadequate over a number of years, this will result in either the closure of the business or an under-usage of existing capacity. While the poultry industry has the capacity to significantly increase employment opportunities in South Africa, import companies do not employ many staff. The Bureau for Food and Agricultural Policy's 2021 Baseline report estimates that poultry imports will account for about 21 % of domestic chicken consumption by 2030; down from a projection of 25 % in the 2020 Baseline report.

For a compelling read on the effect of predatory imports on a country's industry, read *www.biznews.com/sponsored/2017/02/14/eu-dumping-sa-chicken-industry/.* Paul Dillon, of the Fair Play Movement, explains how dumpers price their products just below those of local producers but considerably above the imported price. This effectively prevents local producers from reacting (by raising prices) to input cost drivers such as escalating feed costs during drought years.

The role of the retailer in allowing this predatory behaviour is also outlined and emphasised. Unlike predatory pricing campaigns between brands, this undercutting can go on indefinitely because the cost of the imports is so low that the profits made by the retailers and dumpers will always be high and sustainable. Inevitably, smaller local operations will cease trading and employing; consolidation will occur; and, eventually, even highly efficient, large-scale operations will begin cutting production and retrenching labour.

Import protection aside, the obvious approach to improving the price competitiveness of the South African broiler industry is to develop the country's capacity for growing and processing soybeans and maintaining a strategic stock of maize to limit price progression towards import parity levels. Both the Bureau for Food and Agricultural Policy and the Department of Agriculture, Land Reform and Rural Development have alluded to the soybean development strategy in their Baseline reports and Agricultural Policy Action Plan (2015 – 2019), respectively, and this capacity has steadily increased since APAP was introduced. In the 2021 season, South African soybean farmers continued to make big strides towards national self-sufficiency in soybean production, with the crop estimated at 1.897 million tonnes (up 52.3 % from the 2020 crop; Crops Estimate Committee). Soybean meal imports are expected to drop from contributing over 80 percent to local consumption a decade ago, to contributing less than 25 % percent to local consumption in the 2021/22 season (FAS USDA).

3. SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) OVERVIEW

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY
TOWARDS A COMMON FUTURE

The SADC member states are Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, eSwatini (Swaziland), Tanzania, Zambia and Zimbabwe (Figure 6). The SADC Secretariat has its headquarters in Gaborone, Botswana.

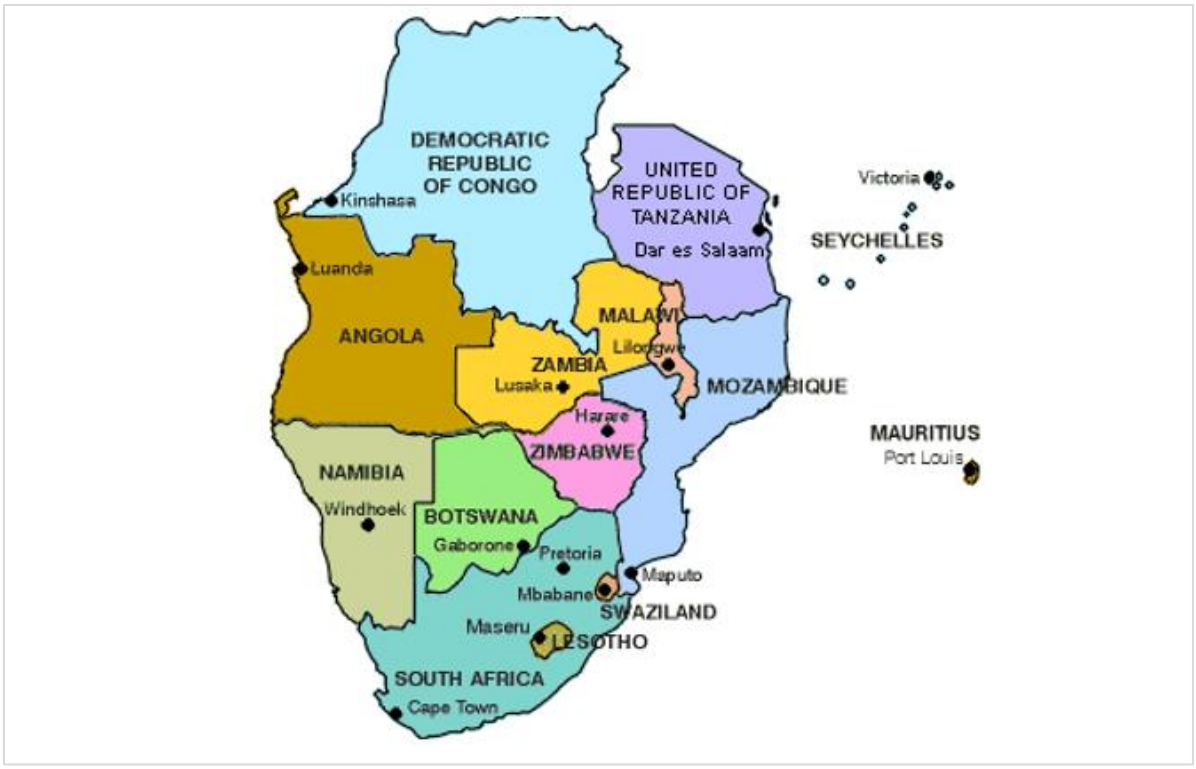


Figure 6. *The Southern African Development Community countries*

The **SADC Vision** charts the direction for the development of the region. A declaration, "Towards the Southern African Development Community", adopted in Windhoek, Namibia on 17 August 1992 by Heads of State or Government, called upon all countries and people of Southern Africa to develop a vision of a shared future, a future within a regional community.

The SADC Vision is to build a region in which there will be a high degree of harmony and rationalisation, to enable the pooling of resources to achieve collective self-reliance and improve the living standards of the people of the region. The main objectives of the Southern African Development Community (SADC) are to achieve economic development, growth,

peace and security; to alleviate poverty; enhance the standard and quality of life of the peoples of Southern Africa, and to support the socially disadvantaged.

These objectives are to be achieved through increased regional integration, built on democratic principles, and equitable and sustainable development.

3.1 SADC and poultry production

Reliable access to adequate food is a fundamental human right and essential for well-being. SADC member states face challenges ranging from scarce or unpredictable food supply to situations of over-supply. Factors such as weather and climate, labour intensive or dated agricultural methods, and health issues which affect agricultural productivity all impact on the region's ability to be self-sustaining in terms of food production. SADC member states address these serious obstacles to food security through the Livestock Unit of the Food, Agriculture and Natural Resources Directorate (FANRD). The FANR Directorate is one of five directorates grouped together under Regional Integration, along with Trade, Industry and Finance; Infrastructure and Services; Social and Human Development and Policy Planning and Resource Mobilisation.

The Food, Agriculture and Natural Resources *Priority Areas* include food availability, access to food, promotion of improved safety and nutritional value of food, and institutional framework strengthening and capacity building.

The Food, Agriculture and Natural Resources Directorate's key functions include:

- Development, promotion and facilitation of agricultural policy harmonisation, including collection of data to monitor progress;
- Ensuring sustainable food security policies and programmes;
- Development, promotion and harmonisation of phytosanitary, sanitary, and animal husbandry methods and policies;
- Promotion of trade in agricultural products.

The Livestock Technical Committee, made up of the Directors of National Livestock and Veterinary Services, meets annually to discuss issues of regional co-operation and integration. Its policies and directives are coordinated by the Livestock Unit, which also works on addressing sanitary and phytosanitary (SPS) issues in relation to trade.

One of the most important SADC projects from a poultry production perspective is the Trans-boundary Animal Diseases (TADs) project. This project, which was implemented in five SADC Member States (Angola, Malawi, Mozambique, Tanzania and Zambia), is designed to strengthen regional institutions in order to identify, diagnose and control the serious socio-economic impacts of trans-boundary animal diseases and to make livestock a tradable commodity. The project is also addressing management of trans-boundary animal diseases, including Newcastle Disease and Avian Influenza.

Concerted regional efforts are required to control and manage animal diseases in the SADC region as SADC subscribes to the OIE principles of zoning and compartmentalisation, in order

to enhance regional and international trade in livestock and livestock products. SADC aims to make significant progress towards the goal of managing, controlling and (where possible) of eradicating trans-boundary animal diseases, through improved capacity for detection, identification, monitoring and surveillance of the diseases.

SAPA is the secretariat for the SADC Poultry Liaison Forum which meets at least twice per annum in a member country to share issues relevant to the region. The purposes of the Liaison Forum are:

- to allow SADC countries to get to know each other so that difficult issues can be discussed, and a middle ground found on technical and trade-related matters;
- to share common issues relating to the poultry industry, so that members may benefit from information shared;
- to develop a combined view that will allow all members, via the Forum, to work with the SADC Secretariat in Botswana when necessary - and especially the Joint Technical Committee.

Issues regularly discussed at these Forums include the effect of imports on local industries; illegal movement of poultry products across SADC borders; raw material prices and infrastructure issues (e.g. erratic electricity supplies); government regulation of poultry and subsidiary industries; and disease control.

Antimicrobial Resistance (AMR) Control Strategy

In December 2019, the Southern Africa Development Community (SADC) joint technical committee, with support from the WHO, OIE and FAO, validated a Regional AMR Strategy that is aligned to the global AMR action plan. The Control strategy was set to be implemented once ratified by Ministers from all member states in 2021.

Antimicrobial resistance is seen as not just a global health and security threat but also in terms of potential disruption to the food supply chain and reversal of GDP gains made over several decades in the SADC region. The SADC AMR strategy will ensure that SADC member states co-ordinate and leverage with each other in effectively addressing AMR.

3.2 The SA poultry industry's contribution to regional poultry production

Commodity: chicken meat (FAO)

The total production of chicken meat in the SADC countries during 2020 was 2.49 million tonnes (Table 1; latest available dataset on FAOstats); up from 2.38 million tonnes in 2019. While the accuracy of these figures may be questionable, they do offer an insight into regional production trends over the last decade.

There was substantial growth in broiler production levels in Angola, Malawi and Mozambique in the 10 years to 2020, and good growth in Lesotho, Madagascar, South Africa, eSwatini

(Swaziland), Tanzania, Zimbabwe and Zambia. However, with the exception of South Africa, this growth stemmed from a very low base, coupled with low per capita consumption. There thus remains huge scope for increasing both regional production of broiler meat and per capita consumption of the product.

The 2020 table illustrates that South Africa has been losing market share in the region, as neighbouring countries develop their industries. However, South Africa still dominated regional production of chicken meat in 2020, accounting for 75.3 % of total production in the SADC bloc (FAOstats). Malawi, Mozambique and Tanzania were the next biggest producers, but each accounted for less than 5 % of the total regional production of broiler meat.

Contraction of the industry occurred in Botswana, the Democratic Republic of Congo, Namibia and the Seychelles over the decade 2010 to 2020.

Table 1: *The production of chicken meat in the SADC member countries in 2020* (FAOstats).

	Production		% Growth	% Total production		Population
SADC Country	**2010**	**2020**	**(10 yr)**	**2010**	**2020**	**2020**
Unit	Tonnes	Tonnes	%			M
Angola	19 080	52 216	173.7	1.0	2.1	33.4
Botswana	6 000	3 696	-38.4	0.3	0.1	2.5
Dem. Republic Congo	10 796	10 406	-3.6	0.6	0.4	92.9
eSwatini (Swaziland)	5 600	6 024	7.6	0.3	0.2	1.2
Lesotho	1 600	1 902	18.9	0.1	0.1	2.3
Madagascar	37 760	51 440	36.2	2.0	2.1	28.2
Malawi	23 831	109 186	358.2	1.3	4.4	19.4
Mauritius	46 600	47 500	1.9	2.5	1.9	1.3
Mozambique	39 736	115 027	189.5	2.1	4.6	31.2
Namibia	11 600	11 121	-4.1	0.6	0.4	2.5
Seychelles	802	494	-38.4	0.0	0.0	0.1
South Africa	1 471 567	1 873 238	27.3	79.1	75.3	58.8
United Rep. of Tanzania	80 916	86 626	7.1	4.3	3.5	61.7
Zambia	42 500	51 573	21.3	2.3	2.1	18.9
Zimbabwe	62 100	67 211	8.2	3.3	2.7	15.7
Total for SADC	**1 860 488**	**2 487 660**				**370.0**

It is not easy to calculate per capita chicken meat consumption in the SADC region because of limited statistics on production and trade. However, based on FAO trade and production statistics for 2019 (the most recent trade estimates), total production of “chicken meat” in the region at that time was 2 402 690 tonnes, total imports amounted to 809 866 t, and exports to 78 055 t. Using a 2019 population estimate of 360.38 million people, per capita consumption of chicken meat is approximately 8.70 kg (2019); down from 9.74 kg in 2018.

However, it is likely that some of the imports moved internally within the region, for example ex-South Africa. Based on local production figures alone (ignoring trade), as collated by the FAO, per capita consumption would be approximately 6.8 kg (2019) and 6.7 kg (2020).

Commodity: hen eggs (FAO)

The total production of hen eggs in the SADC region was 899 569 tonnes during 2020 (the latest year available from FAOstats; Table 2). Based on these figures, ignoring any imports/exports and given an average egg size of 58 g, the average per capita consumption of hen eggs in shell was 41.9 eggs per annum in 2020; up from 41.7 eggs in 2019.

Per capita consumption ranged from approximately 2 eggs per person per annum in the Democratic Republic of the Congo to approximately 190 eggs per year in the Seychelles and 174 eggs in South Africa, if production figures are accepted.

Table 2: *The production of chicken eggs in the SADC member countries in 2020* (FAOstats).

	Production		% Growth	% Total production		Population
SADC Country	**2010**	**2020**	**(10 yr)**	**2010**	**2020**	**2020**
Unit	Tonnes	Tonnes	%			M
Angola	4 950	5 150	4.0	0.7	0.6	33.4
Botswana	4 500	3 400	-24.4	0.7	0.4	2.5
Dem. Republic Congo	8 900	8 859	-0.5	1.3	1.0	92.9
eSwatini (Swaziland)	1 160	1 344	15.9	0.2	0.1	1.2
Lesotho	1 700	1 396	-17.9	0.3	0.2	2.3
Madagascar	16 297	17 661	8.4	2.4	2.0	28.2
Malawi	20 650	23 146	12.1	3.1	2.6	19.4
Mauritius	10 200	12 435	21.9	1.5	1.4	1.3
Mozambique	27 138	48 333	78.1	4.0	5.4	31.2
Namibia	3 360	2 647	-21.2	0.5	0.3	2.5
Seychelles	1 135	1 163	2.5	0.2	0.1	0.1
South Africa	413 000	593 526	43.7	61.1	66.0	58.8
United Rep. of Tanzania	83 384	89 967	7.9	12.3	10.0	61.7
Zambia	49 500	66 222	33.8	7.3	7.4	18.9
Zimbabwe	29 760	24 320	-18.3	4.4	2.7	15.7
Total for SADC	**675 634**	**899 569**				**370.0**

With per capita consumption in countries such as the US, Russia, Mexico, Japan and China exceeding 220 eggs per annum and, in some cases, approaching an egg a day, there is considerable scope in the SADC region to increase local per capita consumption. The egg continues to be a cheap source of high quality protein when compared to other animal proteins.

As with broiler production, South Africa dominated the egg industry in the SADC region in 2019; accounting for 66.0 % of total production (FAOstats). Mozambique increased its capacity by 78 % in the 10 years to 2020. Angola, eSwatini, Madagascar, Malawi, Mauritius, the Seychelles, Tanzania and Zambia also grew their egg industries over the ten years to 2020 without reducing South Africa's share of the overall market.

4. DAY-OLD CHICK SUPPLY INDUSTRY

4.1 Overview

The day-old chick industry supplies inputs to both egg and broiler businesses. Pure lines are imported at great-grandparent or grandparent level. Most imports are at grandparent level, with some parent level imports. No commercial level day-old chicks or fertile eggs may be imported under normal circumstances.

The broiler industry in South Africa predominantly makes use of three breeds: Ross 308, Cobb 500 and Arbor Acres. The Indian River breed was introduced in 2021. The international breed companies for each of these breeds have granted the distribution rights to the parent stock to only three companies in South Africa. These companies supply parent stock to integrated and non-integrated broiler breeder operations, where the parent birds are reared until they are ready to start producing fertilised eggs. These fertile eggs are then transferred to hatcheries where the eggs are hatched to produce day-old broiler chicks, which are sold to independent broiler growers or are used in-house by fully integrated companies.

Since it requires a significant capital investment and specialised knowledge to start up and run a day-old chick business, the industry consists mostly of large producers. Only a few of the broiler day-old chick producers are not integrated businesses.

The day-old broiler chick industry can be profitable but is exposed to the same risks as the rest of the poultry industry: high feed costs, market-related risks and disease outbreaks put pressure on margins.

A small percentage of the day-old chicks produced are exported to neighbouring African countries. There is a reasonably large export market for hatching eggs and most of the exports are done via a local company that is well connected to export markets.

The industry is spread over the whole of South Africa with higher concentrations of producers in Gauteng, the Cape, KwaZulu-Natal and North West regions.

The commercial layer industry makes use of the following breeds: Dekalb Brown, Amberlink, Hy-Line (Silver Brown and Brown), H&N Silver Nick and Lohmann Brown (Lite). Producers use the Hyline W36, a Leghorn-type bird, to produces white shelled eggs for a limited, niche market.

The major suppliers of day-old pullets to large and small egg producers are independent operations. Some form part of an integrated business. Day-old layer pullets and fertilised eggs are also exported to other parts of Africa. The majority of the day-old layer chick suppliers are currently situated in Gauteng, North West and the Western Cape.

As with the broiler day-old chick suppliers, entry-level costs of this sector of the poultry industry are high, requiring substantial inputs of capital and skill to start such a business. This industry can be profitable but is also very vulnerable and profitability is highly dependent on feed price levels and the absence of disease challenges.

The following factors influence the day-old chick industry:

- It is a time-consuming process, due to the lag time in expansion of commercial chick numbers: at least 18 months are required from pure lines and six months from parent stock.
- The Livestock Improvement Act stipulates pure line imports.
- A quarantine period of eight weeks from day-old applies to all imported live chicks.
- During the whole rearing period, it is critical to control the mass of parent females, especially between 18 and 24 weeks of age. If birds are not fed according to breed standards, the number of fertile eggs and overall profitability will be lower.

Figure 7 illustrates the poultry meat process from breeding stock being imported to the first commercial product produced:

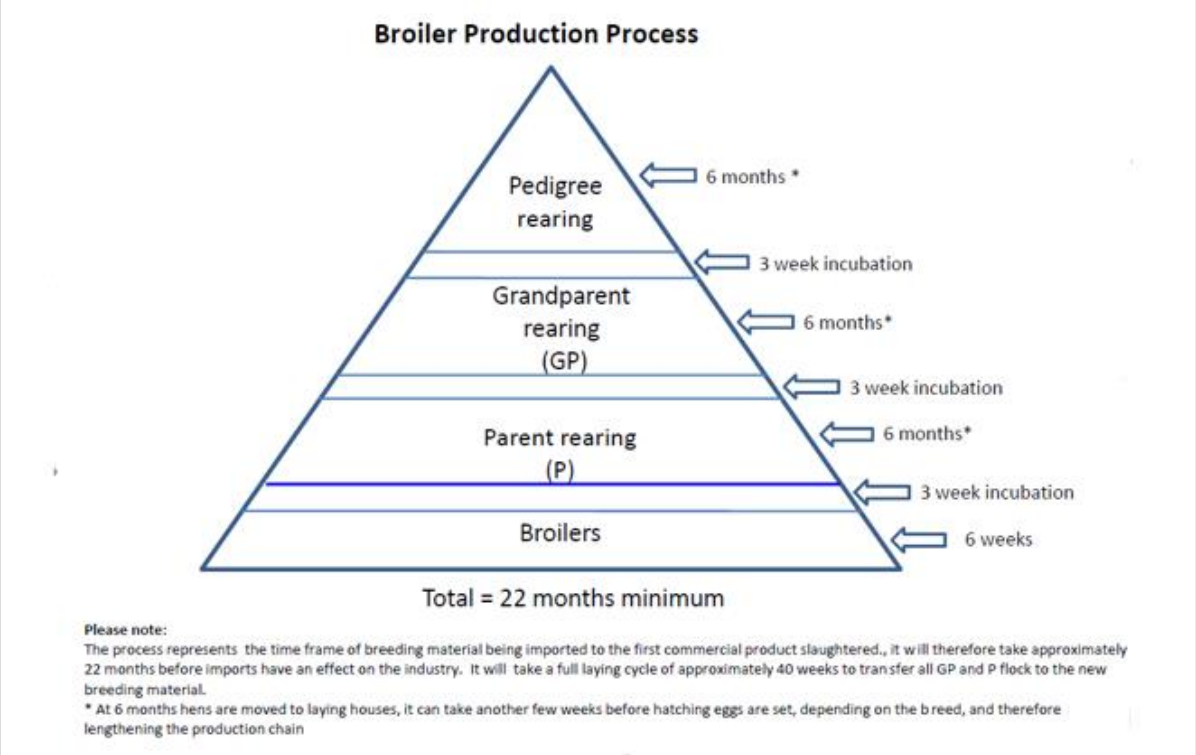


Figure 7. *The broiler production process, from importation of breeding stock to slaughter*

Figure 8 illustrates the egg production process until the first descendant starts laying eggs. The egg industry does not import and rear pedigree layers. Grandparents are imported.

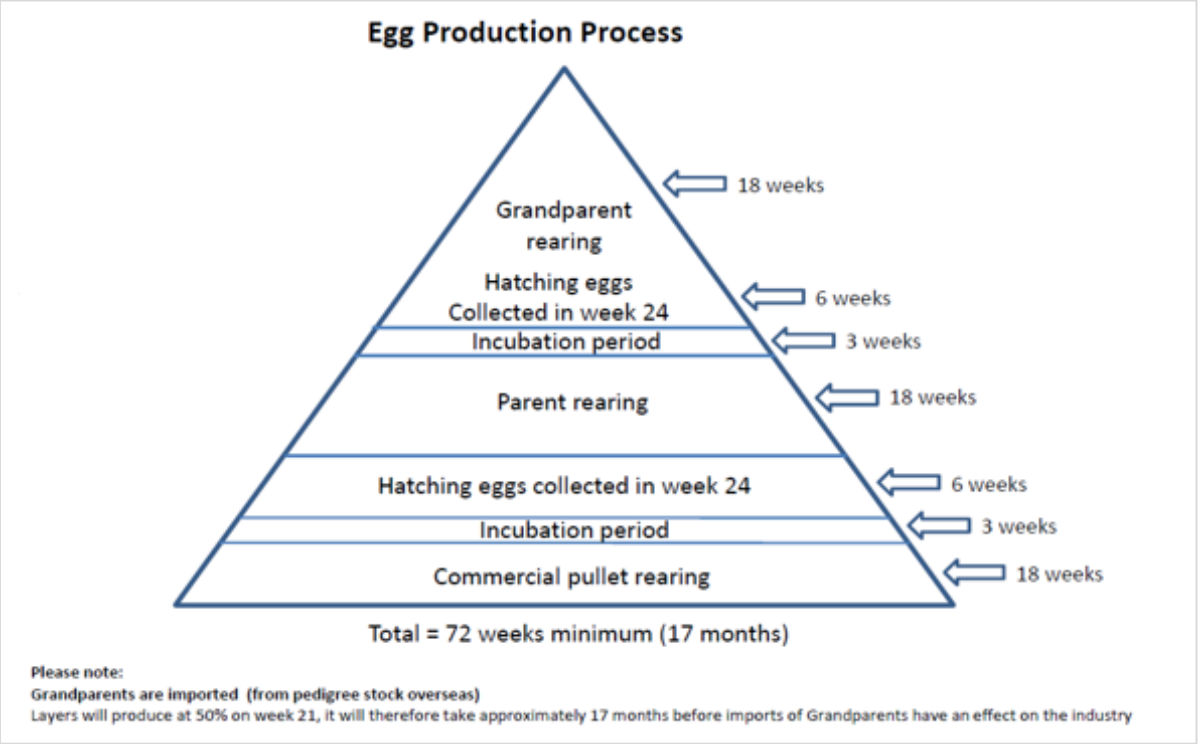


Figure 8. *The egg production process, from rearing of grandparent stock until point of lay*

4.2 Production: Chick placement numbers per annum

Layer breeders

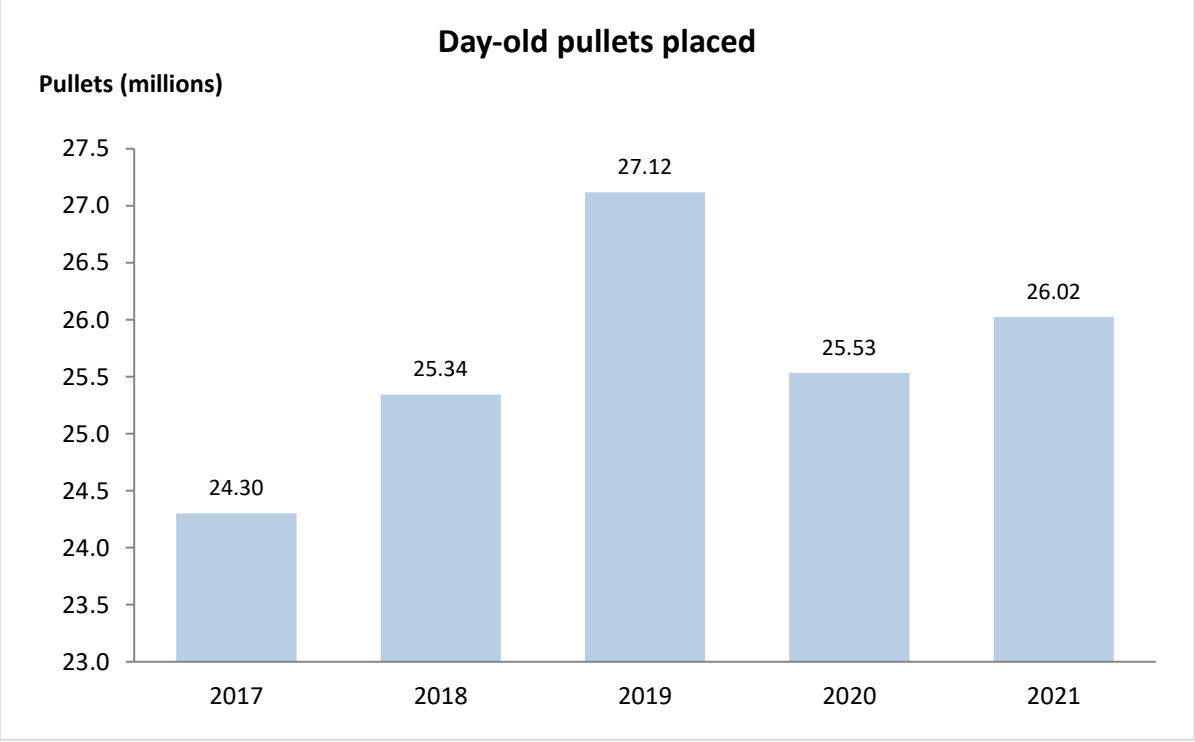


Figure 9. *The total day-old pullets produced per annum in South Africa*

In 2021, the number of layer breeding hens was estimated to be between 300 000 and 350 000 in parent operations producing layers. There are no pure lines or great-grandparents in South Africa.

From the breeding stock, 26.02 million day-old pullets were produced, an increase of 1.9 % compared to 2020 (Figure 9, above). The large growth in hatchery output seen in 2018 and 2019 occurred in response to the loss of laying hens during the highly pathogenic avian influenza (HPAI) outbreak of 2017.

In terms of feather colour, 63.9 % of the day-old pullets hatched were silver strains (down from 64.7 % in 2020) and 36.1 % were brown strains.

Broiler breeders

The average number of parent males and females in rearing during 2021 was 4.624 million per week (Table 3), from an estimated grandparent and great-grandparent stock of 377 000. This is an increase of 129 000 parent birds (+ 2.9 %) compared to 2020.

A total of 9.836 million day-old female parent pullets were placed in 2021; 94 700 (+ 1.0 %) more than in 2020. Based on the number of parent pullets placed, an average broiler breeder flock of 6.741 million hens was estimated for 2021 (Table 3; Figure 10). This showed an increase of 15 300 birds (+ 0.2 %) compared to 2020.

An average flock size of 6.954 million breeder hens was forecast for the first four months of 2022. Note in the figure below, the national flock size (green line) is the average number of birds at any point in time; whereas the blue and pink lines represent the annual placement of parent pullets and production of 20-week old parents.

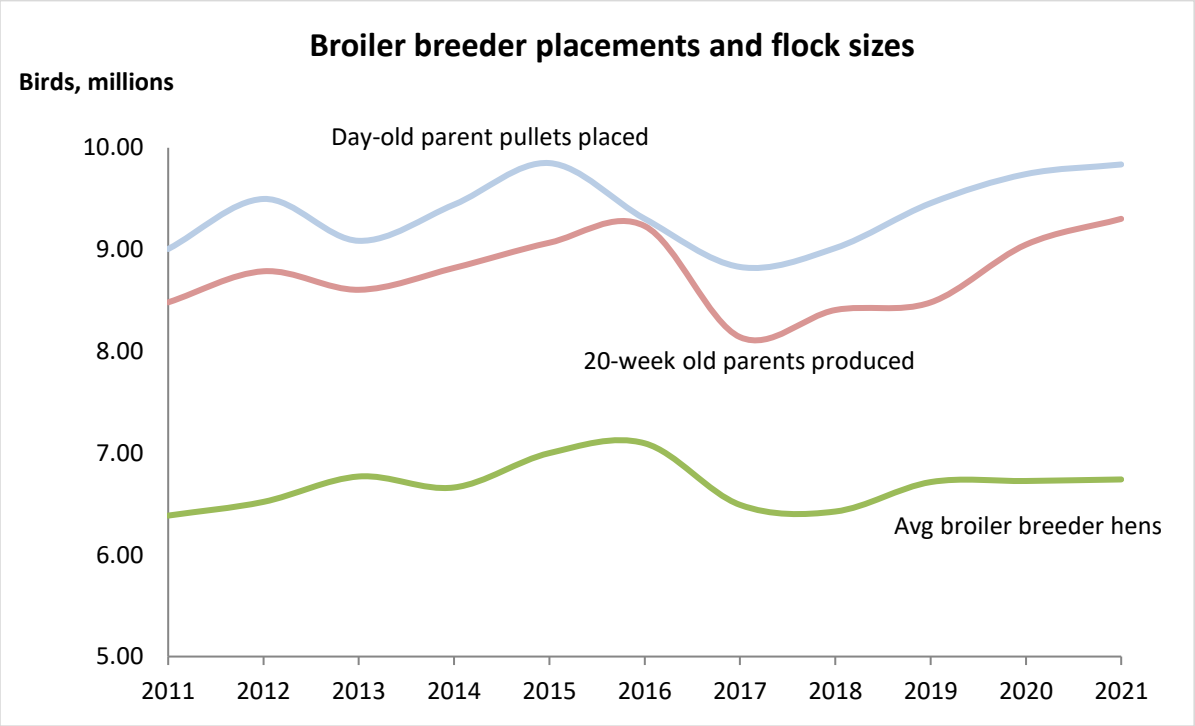


Figure 10. *Number of day old and 20-week parents placed per annum and average size of the national broiler breeder flock*

Table 3: *The broiler flock in South Africa (2021)*

Year	Av. broiler parents (m)		Breeding stock (m)	Day-old broiler chicks produced (m)	
	in rear	in lay	av. / week	av. / week	total / annum
2020	4.495	6.725	11.220	21.581	1 127
2021	4.624	6.741	11.364	21.826	1 140
% change	+ 2.9	+ 0.2	+ 1.3	+ 1.1	+ 1.2

Note: The number of breeding birds in Table 3 includes males and females; "m" = millions

In total, 1 140 million broiler chicks were placed during 2021; 13.0 million (+ 1.2 %) more than in 2020 (Figure 11).

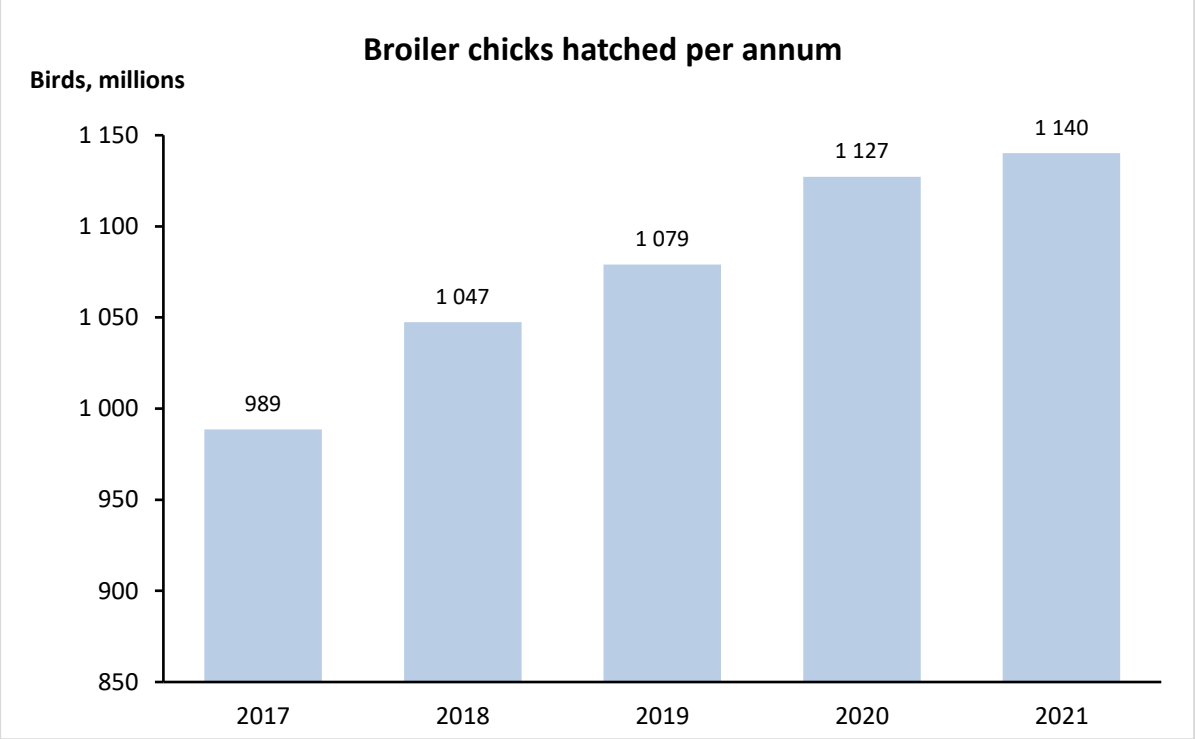


Figure 11. *Broiler chicks hatched per annum.*

4.3 Breed standards

The performance standards for the laying hen and broiler strains used in South Africa are demonstrated in Table 4.

To put the laying hen standards in perspective, back in 2013, the feed conversion ratio (kg feed/kg eggs) was as high as 2.3. The age at depopulation was 72 to 74 weeks, compared with 90 weeks in 2021. Similarly, with broilers, back in 2004, birds reached only 1.82 kg over a 38-day production cycle.

Table 4: *Breed standards in **a)** laying hens:*

Trait (cumulative)		Amberlink	Hy-Line Silver	Hy-Line Brown	Lohmann Brown	Dekalb Brown	**Weighted average**
Eggs/hen housed		428.6	422.5	424.6	407.1	428.2	**421.0**
Feed conversion	kg/doz	1.53	1.47	1.52	1.54	1.57	**1.5**
Feed conversion	kg/kg	2.17	2.08	2.06	2.13	2.20	**2.1**
% hen-day prod	%	86.3	85.5	85.2	83.2	86.9	**85.2**
Age at depop.	weeks	90.0	90.0	90.0	90.0	90.0	**90.0**
Egg mass	kg	26.0	25.7	26.8	25.8	26.4	**25.9**
Feed intake	kg	56.4	53.5	55.2	54.7	58.1	**55.1**
		% of silver birds		***% of brown birds***			
		53.5	46.5	18.9	71.2	9.8	
% of total national flock		34.2	29.7	6.8	25.7	3.5	

b) *broilers (to 35 days of age):*

Trait	Arbor Acres Plus	Cobb 500	Indian River	Ross 308
Body weight (kg)	2.29	2.52	2.30	2.30
Average daily gain (g/d)	64	70.8	64	64
Cumulative FI (kg)	3.24	3.64	3.24	3.21
FCR	1.44	1.41	1.40	1.42

4.4 Feed usage (broiler breeders)

In terms of feed usage, broiler breeding stock consumed 527 186 tonnes during 2021 (Table 5).

Table 5: *Feed usage (tonnes) in parent and breeding operations*

Year	Parent rearing	Parent laying	Total broiler breeding stock	
	t/yr	t/yr	t/yr	t/week
2020	104 423	421 604	526 027	10 061
2021	107 168	420 019	527 186	10 110
Change	+ 2 744	- 1 585	+ 1 159	+ 50
% Change	+ 2.6	- 0.4	+ 0.2	+ 0.5

5. EGG INDUSTRY IN SOUTH AFRICA

5.1 Overview

In 2019, egg producers were dogged by an imbalance between supply and demand. Correction of this imbalance was a perhaps surprising outcome of the global COVID-19 pandemic and associated lockdowns, which boosted domestic demand for eggs in 2020 by 4.4 %, and firmed egg prices for much of the year. Per capita consumption of eggs increased to a record high in 2020. Almost inevitably, demand began to dip as lockdown restrictions eased and egg prices softened (year-on-year) from January to April 2021; this despite soaring increases in feed prices beginning in September 2020. There remains an alarming gap between what the producer and the retailer receive for a dozen eggs. The retail mark-up on producer prices has increased from 62.8 % in 2018 to 120 % in 2021. Feed prices increased by a staggering 18.8 % through the year, putting margins under enormous pressure. Farm gate egg prices increased by only 8.1 % in the face of the escalating feed price.

Three years have passed since the 2017 H5N8 HPAI outbreaks. South African producers invested in biosecurity and, even in the face of surging cases in Europe and Asia, there was no resurgence of the virus in winter 2019 or 2020. However, the first case of H5N1 HPAI in South Africa was reported in Gauteng in March 2021 and, for all the efforts to contain the virus, the outbreak spread to other provinces. The Western Cape was particularly hard hit. The egg industry suffered more than the broiler industry, losing almost 2.39 million laying hens and pullets (see Chapter 8.2). As a result of the H5N1 outbreak, and despite the 1.9 % increase in day-old pullet production, the laying flock shrunk by an estimated 6.4 % in 2021. Egg production dropped in line with hen numbers; once again resulting in a balancing of supply and demand and at least keeping price increases in positive territory year-on-year.

In August, DALRRD confirmed that no compensation would be paid by government for the destruction of “healthy but at-risk” commercial chickens – even if the official directive to cull came from a state veterinarian. Compensation can only be claimed for sick birds culled. The World Organisation of Animal Health (OIE) recognises that farmers play a key role in the early detection of HPAI, and this decision not to award compensation must be considered short-sighted and likely to hamper efforts to control the spread of the virus. The economic losses suffered were especially hard for small commercial egg producers.

In July, a 10-day spree of rioting and looting caused untold damage to the economies of KwaZulu-Natal and Gauteng. Several poultry farms were attacked and subjected to vandalism and theft. Many egg producers suffered as a consequence of the wanton destruction of shopping malls and smaller wholesale and retail outlets: orders were cancelled, and accounts could not be paid by customers. While under threat during the period of lawlessness, shops in affected areas remained closed and farmers resorted to selling produce directly to consumers. Interestingly, as producers earned more and consumers paid less for eggs, the cost of doing business with the retail sector was brought into sharp focus. It is a story all too familiar to egg producers around the world: when feed prices are increasing exponentially, the gap between producer and retail pricing of eggs renders production unsustainable.

South Africa is self-sufficient in table egg production and even with the 2021 HPAI outbreaks, there was no need to import shell eggs. Imports of egg products (*Gallus gallus domesticus*), such as albumins and dried yolks, increased by 63.4 % as borders reopened to trade, but exports (which included table eggs) decreased by 53.5 % (because of HPAI-related trade bans). Exports now represent less than 1 % of local egg production.

In terms of per capita consumption of eggs, South Africa ranked 33 out of 38 countries which submitted data to the International Egg Commission (IEC) in 2021. Per capita consumption has already dropped off the high of 159 eggs/person per year which was reached in 2020. The Egg Organisation continued with the generic egg marketing campaign which commenced a year ago. The objective of the campaign is to promote egg consumption among South African consumers by educating them about the versatility and health benefits of eggs. Monthly media releases and snippets, which include recipes and photography, were distributed to relevant outlets, resulting in extensive publicity in various print and online publications. In addition, a number of educational advertorials, comprising health information and egg recipes, were published in *Heita My Friends* magazine. This publication is distributed free of charge to 40 000 commuters at the 10 biggest taxi ranks in Gauteng.

The EGGcellent Food Facebook page (*https://www.facebook.com/EGGcellentFood/*) has been active for two years and has grown to 1 600 followers while the EGGcellent Food SA Instagram page (*https://www.instagram.com/eggcellentfoodsa/*) has been active for just under a year with 312 followers. These pages serve up informative and entertaining posts, as well as egg recipes and tips. The 194 posts on each of these pages during 2021 enjoyed a 9 % engagement rate, with over 5 000 post likes. An engagement rate above 3 % indicates that an audience is very engaged.

Development of the Egg Sector Master Plan moved forward in 2021 (see Chapter 5.9, below). Aimed at transforming the industry and growing employment in the agricultural sector, the master plan now falls under DALRRD, as part of the larger Agriculture and Agro-processing Master Plan (AAMP).

The year 2021 saw the launch of the Egg Organisation's new transformation model, entitled Amakip-kip, which aims to bring about measurable change by drawing historically disadvantaged small egg farmers into the mainstream economy. In line with NAMC's transformation guidelines, beneficiaries with 5 000 hens or less will be identified annually and funded intensively, via the provision of soft loans (part of which are non-refundable grants; Chapter 9.1). All egg farmers need support through challenging economic conditions, but this is especially so for emerging farmers.

5.2 Turnover

With a gross turnover of R11.44 billion at producer level, eggs retain their position as the fourth largest animal product sector in agriculture in South Africa, after poultry meat (R50.96 billion), beef (R43.01 billion) and milk (R21.17 billion) (source: Department of Agriculture, Land Reform and Rural Development (DALRRD)). The turnover increased by 0.9 % compared to 2020, after an annual increase of 2.4 % the previous year. Eggs' share of the gross value of animal

products was 7.3 % and of all agricultural production 3.1 %, down from 7.8 % and 3.4 %, respectively, the previous year.

The total value at retail level was estimated to be R24.03 billion for 2021. About 707 million dozen eggs were sold during the year through various channels.

5.3 Production

Laying flock

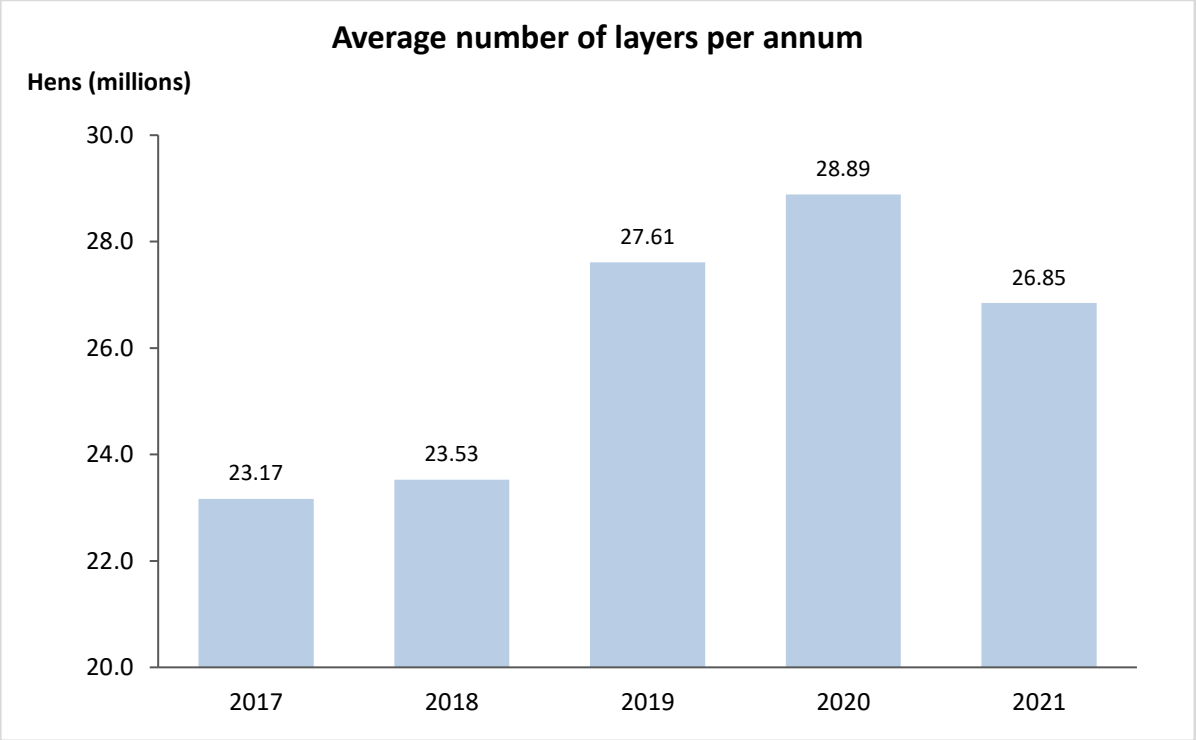


Figure 12. *The national layer flock since 2017 (millions)*

The forecasting model used to predict bird numbers and egg volumes was adjusted in 2019. The laying cycle was extended from 74 to 78 weeks of age and new breed standards were applied to the model. These changes resulted in an increase in the estimated size of the national laying flock, the number of cases of eggs produced, and the mean egg weight.

The national laying flock decreased by 7.1 % in 2021, from 28.89 to 26.85 million hens (Figure 12, above). This was due to the culling of over 2 million laying hens during the HPAI outbreak. The large growth in bird numbers in 2019 was due to changes in the forecasting model and an increase in actual day-old pullet production. The abnormally high egg producer price in 2018 played a role in driving the stocking of layer farms to capacity plus the expansion of facilities.

Egg production

There was a dramatic drop in egg production in the second half of 2017 because of HPAI-related culls in a number of large flocks (Figure 13). In 2018, as farms were repopulated, egg production increased steadily. In 2019 and 1Q 2020, rising hen numbers resulted in a surplus of eggs in the market. A dramatic surge in demand for eggs during the initial stages of the COVID-19 lockdown (from March 2020) helped to balance supply and demand. In 2021, egg numbers decreased in line with hen numbers, which dropped because of HPAI-related culls.

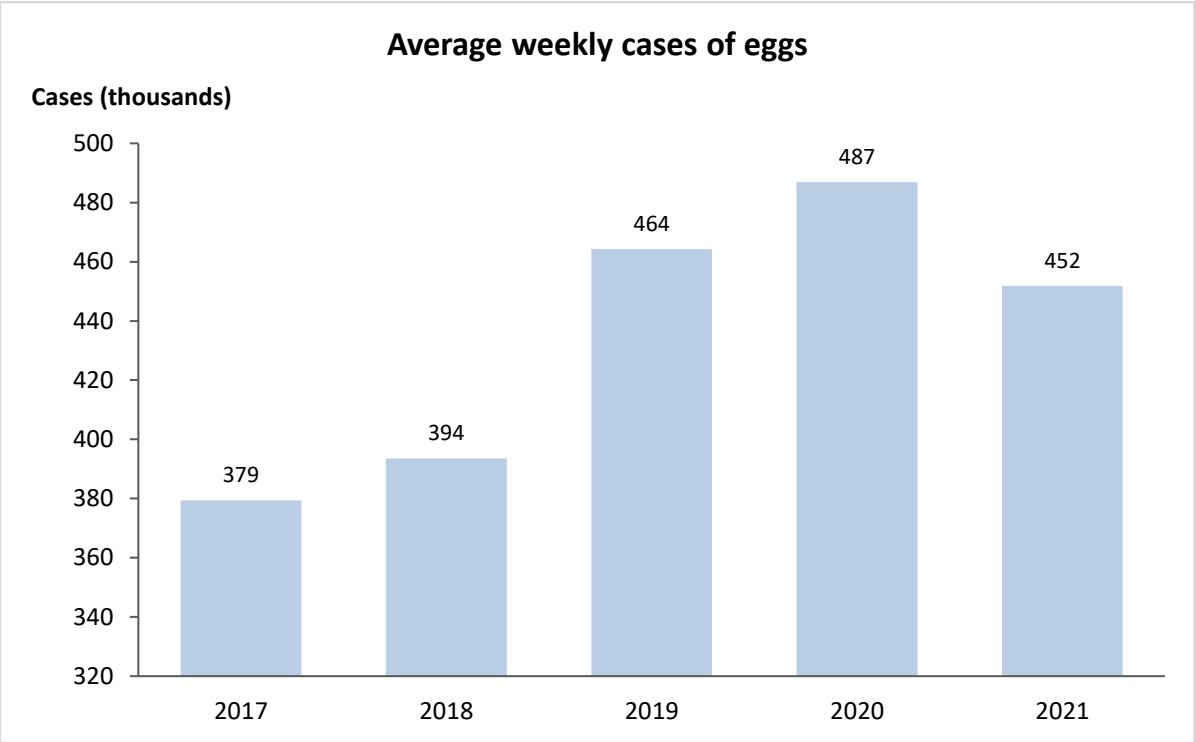


Figure 13. *Cases of eggs produced annually in South Africa (thousands)*

The average number of cases produced per week was 451 815, a decrease of 35 066 cases (or - 7.2 %) per week. Total egg production in 2021 amounted to 23.555 million cases, or 706.7 million dozen eggs; a decrease of 7.5 % compared to 2020. Table 6 summarises bird numbers and egg production and shows the changes for 2021 compared to the previous year.

Table 6: *Bird numbers (millions) and egg production (million cases) for 2020 and 2021*

Year	DOPs	LRPs	Laying hens		Cases of eggs
	Placed	Placed	Av. no.	Depopulated	Total
2020	25.534	24.350	28.888	23.806	25.456
2021	26.024	24.712	26.846	22.250	23.555
Change	+ 0.49	+ 0.36	- 2.04	- 1.56	- 1.90
% Change	+ 1.9	+ 1.5	- 7.1	- 6.5	- 7.5

DOP = Day-old pullets LRP = Layer replacement pullets

Figure 14 illustrates the relationship between egg volume and producer price. Supplies tightened in 1H 2017 and producer prices firmed compared to the previous year. As avian influenza hit the national flock in mid-2017, egg shortages pushed producer prices up. As egg supplies began to recover in early 2018, year-on-year increases in the producer price began to decline, although prices remained very much higher than in the previous year.

Oversupply issues, exacerbated by unexpected imports of shell eggs from Brazil, began to arise from mid-2018. By October 2018, production was 20 % higher than in October 2017 because of successful repopulation of HPAI-affected farms so that, in December 2018, producer prices were almost 15 % below the inflated prices realised in December 2017. Through 2019, producer prices were inversely proportional to egg volumes. Volumes in January 2019 were 23.9 % higher than in January 2018 and producer prices were 21 % lower. By December 2019, the annual increase in egg volumes had moderated to + 12.7 % and producer prices were 7.9 % below December 2018 prices.

Supply and demand were better balanced in 2020. As the number of cases of eggs produced steadily dropped below the number produced in the previous year, producer prices increased over 2019 prices, helped greatly by strong demand for eggs in the lockdown months. This year-on-year increase in egg price, seen from March 2020 onwards, was not as high as in 2017/2018, when the national flock was being rebuilt after the HPAI epidemic. Tighter stocks since mid-2020 underpinned a more favourable position in 2021, demonstrating the importance of disciplined supply to the market. The initial oversupply of eggs at the start of 2021 progressed to a more balanced position following the H5N1 HPAI outbreak.

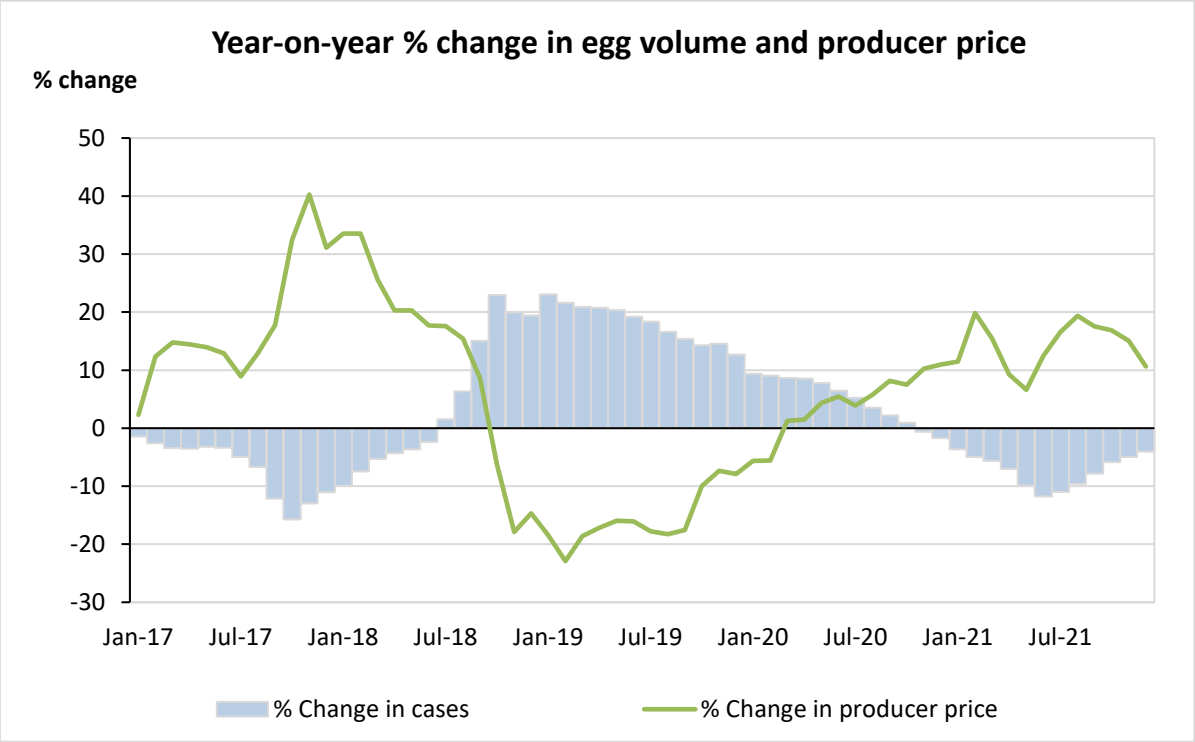


Figure 14. *Percentage change in egg volume and producer price (egg price after discounts, rebates and advertising)*

The average number of point-of-lay pullets placed is expected to increase by 0.6 % during the first four months of 2022, compared to the same period in 2021.

An average flock of 27.58 million layers is projected for the first four months of 2022; a decrease of 173 000 layers (- 0.6 %) compared to the same period in 2021. As a result, egg production is expected to decrease by 0.3 % to an average of 463 800 cases per week in the first four months of 2022 compared to the same period in 2021.

5.4 Producer and retailer egg prices

The average *producer* egg price (cage, barn and free range) for 2021 was R16.89 per dozen; an increase of 14.7 % from the average price for 2020 (R14.72; SAPA). Graded eggs averaged R17.25 per dozen and ungraded eggs sold at R14.75 per dozen.

During 2021, 85 % of eggs were sold graded and 15 % ungraded.

The average retail price for eggs, size large, was R34.01 per dozen in 2021 (Stats SA). In 2021, the retail price increased by 0.5 % from 2020 prices (compared to the 14.7 % increase in producer prices). Using SAPA producer prices, the estimated mark-up on eggs, size large, was 120 % in 2021. Quarterly producer egg prices are shown in Figure 15.

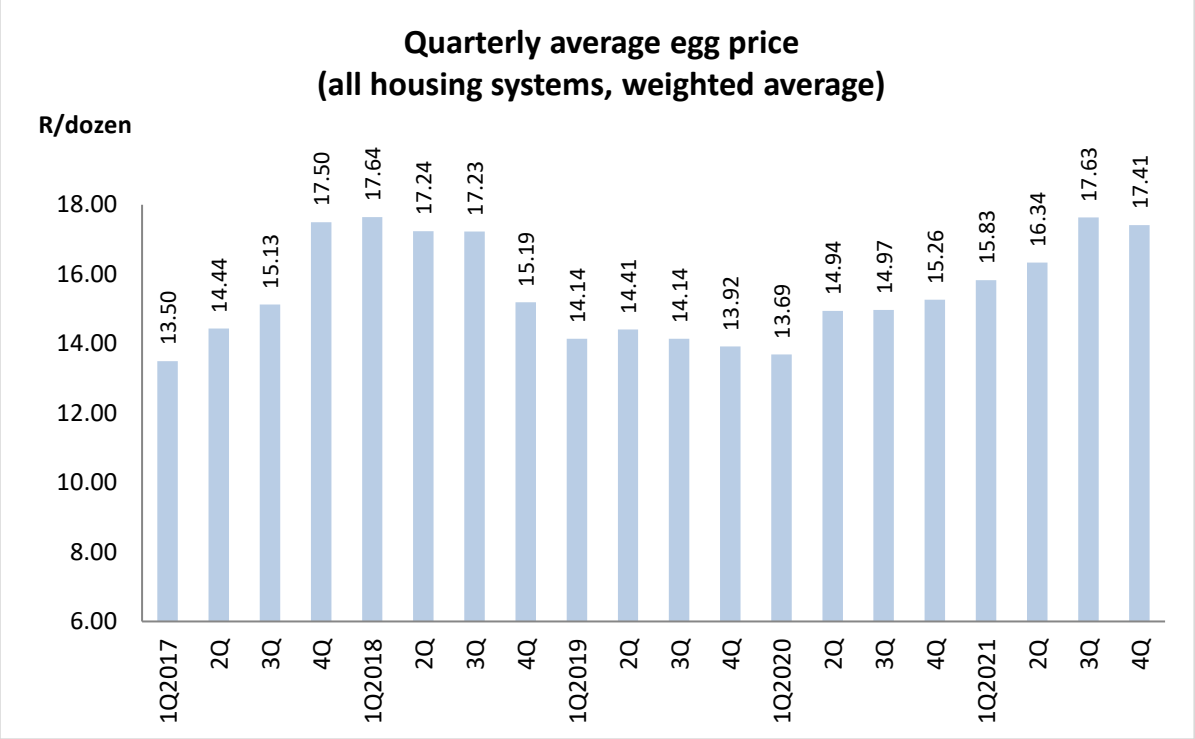


Figure 15. *Quarterly weighted producer egg prices from 1Q 2017*

5.5 Feed usage and cost

Layers in all stages of the production cycle consumed 1.237 million tonnes of feed in 2021 (SAPA). These figures exclude breeder rations. Of this total, layers in rearing consumed approximately 0.15 million tonnes and hens in lay consumed approximately 1.08 million tonnes. The feed usage for layers and pullets in 2021 is summarised in Table 7 below.

According to the Animal Feed Manufacturers Association (AFMA), national sales of layer feeds to their members amounted to 1.032 million tonnes from 1 January to 31 December 2021 (excluding breeder feeds), a 0.6 % increase from 2020 levels.

Table 7: *Feed usage in the egg industry in 2021 (source: SAPA)*

	Feed usage (tonnes)			
	Rearing per annum	Laying per annum	Total per annum	Total per week
2020	149 716	1 171 982	1 321 697	25 278
2021	153 689	1 083 789	1 237 477	23 732
Change	+ 3 973	- 88 193	- 84 220	- 1.546
% change	+ 2.7	- 7.5	- 6.4	- 6.1

Global maize and soybean prices; high freight costs (resulting from COVID-19 disruptions to trade); and the rand:dollar exchange rate drove domestic feed prices up from 3Q 2020, right through 2021. The layer feed price indicator includes distribution, but excludes medication, additives and VAT. The movement in the feed price is shown in Figure 16.

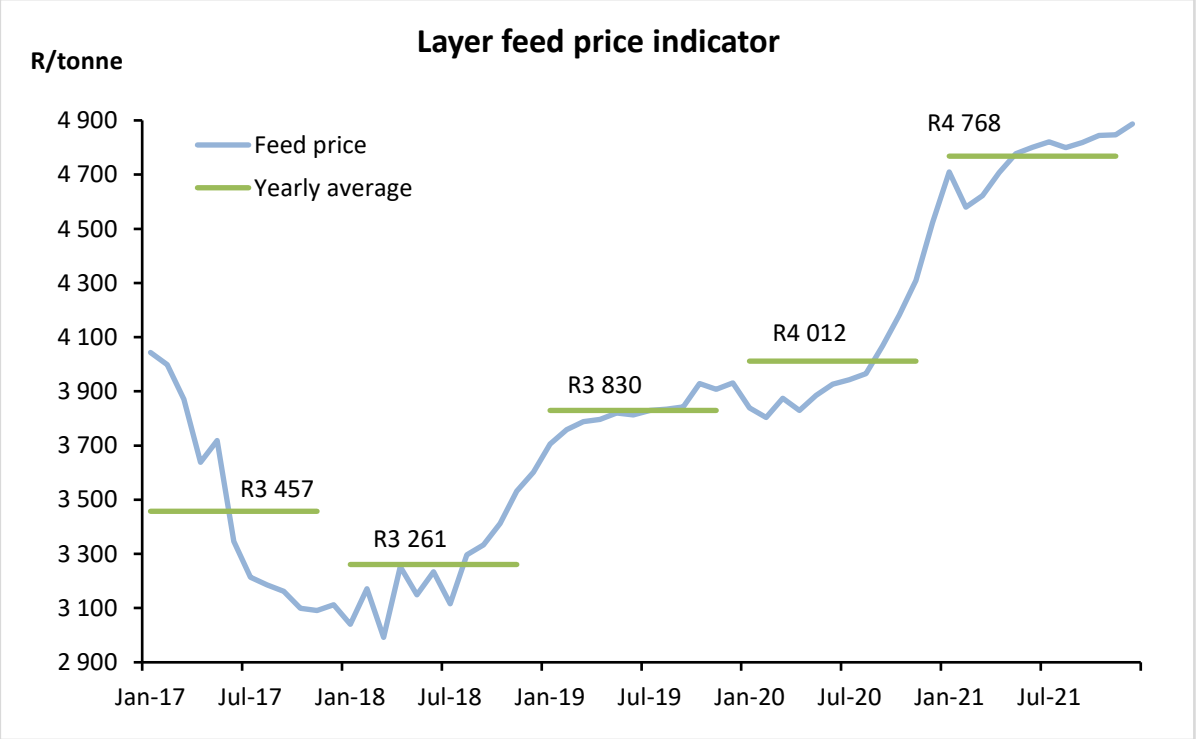


Figure 16. *The layer feed price indicator since January 2017*

Year-on-year percentage changes in the feed price index and the egg producer price are presented in Figure 17. As feed prices continued to drop in 2017 relative to 2016 prices, egg prices firmed nicely in 1H 2017. When avian influenza hit the national flock in mid-2017, egg prices increased dramatically compared to prices in 2H 2016, whilst feed prices remained much lower. Egg farmers who did not suffer culling losses during the outbreak benefitted from the egg shortages experienced in the second half of 2017.

Although egg prices dropped steadily through 2018 as farms restocked, prices remained strongly above 2017 prices until mid-year when an oversupply (exacerbated by unneeded imports of shell eggs from Brazil) sent egg prices into negative territory, year-on-year.

Feed prices climbed steadily through 2018 but remained below 2017 prices until mid-year. From August 2018, right through 2019, feed prices exceeded 2017/2018 prices; for the most part by more than + 10 %. Conversely, monthly producer prices from August 2018 were consistently lower, year-on-year; regularly over 10 % down. This gap was at its widest in March 2019, when feed prices were 26.6 % higher than in February 2018, but producer egg prices were 18.4 % lower than the previous year. By December 2019, feed prices were 9.2 % higher than in December 2018, but producer prices were stubbornly 7.9 % below the price realised twelve months earlier.

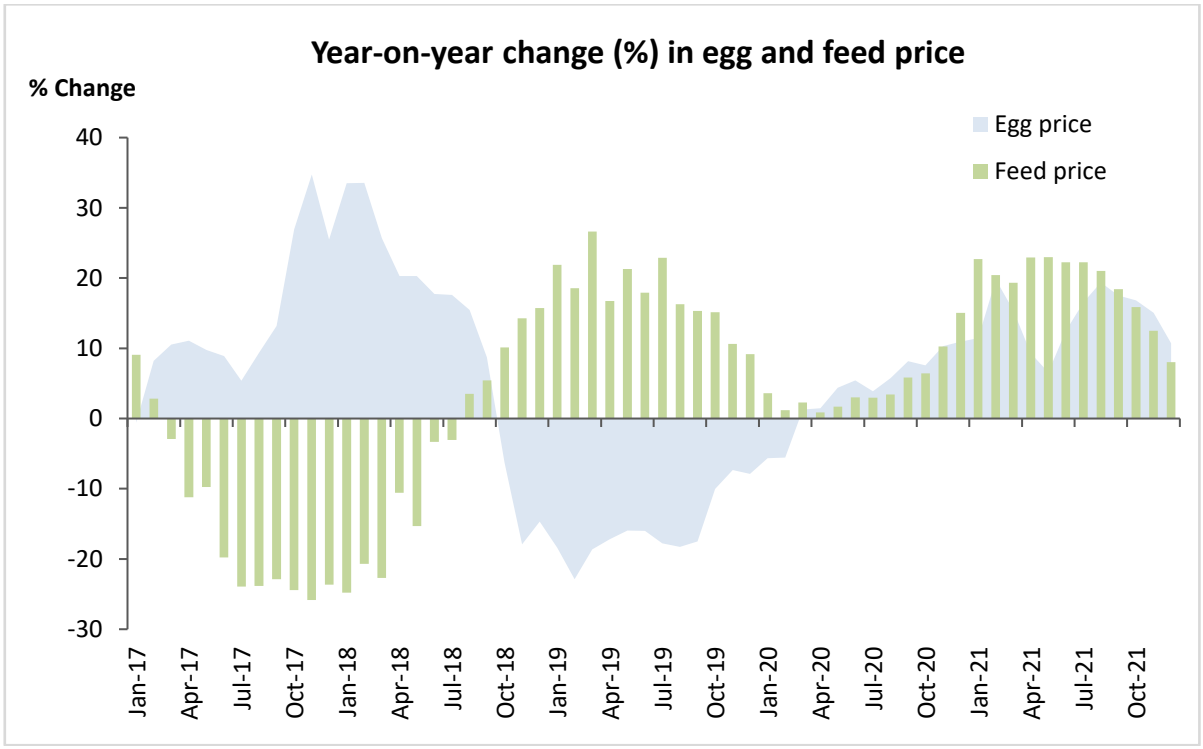


Figure 17. *Year-on-year percentage change in egg feed price and producer price*

From March 2020, as the hard lockdown began, egg prices moved back into positive territory, year-on-year, and remained that way through to December 2021. Over the same period from 2Q 2020, year-on-year feed price increases have climbed steadily to a level averaging ± 20 % (y-on-y) between January and August 2021.

These year-on-year increases in feed prices consistently outpaced increases in egg prices from November 2020 to October 2021, eroding the profitability of egg production.

5.6 Consumption

In 2021 the per capita consumption dropped from 159 eggs (9.73 kg) the previous year to 146 eggs (8.95 kg) (Figure 18). While the population increased by 0.9 % to a midyear estimate of 60.14 million (source: Stats SA), the per capita consumption of eggs decreased by 7.7 %.

Abundant supply and lower prices encouraged increased consumption in 2019 and a lockdown baking frenzy helped increase egg sales through a difficult trading period in 2020.

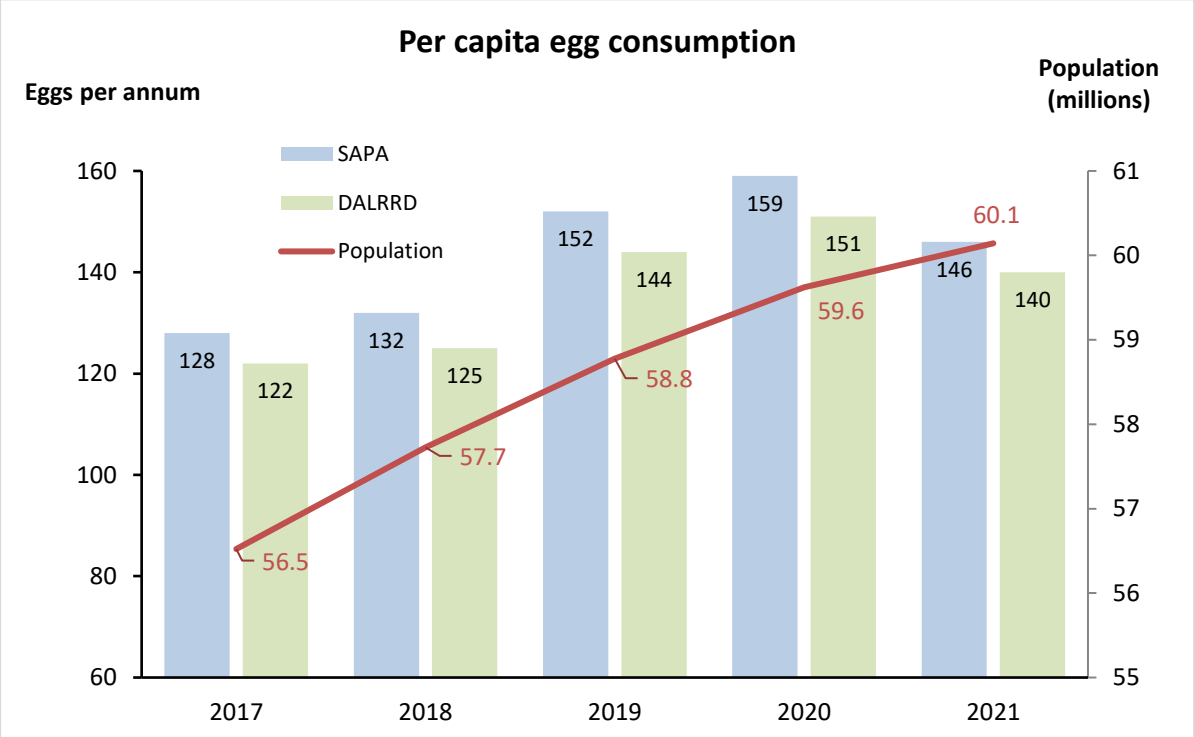


Figure 18. *Per capita egg consumption in South Africa from 2017*

The annual per capita consumption of eggs for some of the top egg-eating nations is shown in Figure 19, for 2020 (IEC). Once again, Mexico featured as the top egg-eating nation with a per capita consumption of 380 eggs, followed by Japan with 340 eggs.

Considerable scope exists for increasing the per capita consumption of eggs in South Africa, particularly when taking into account the price competitiveness as a protein source compared with other animal proteins.

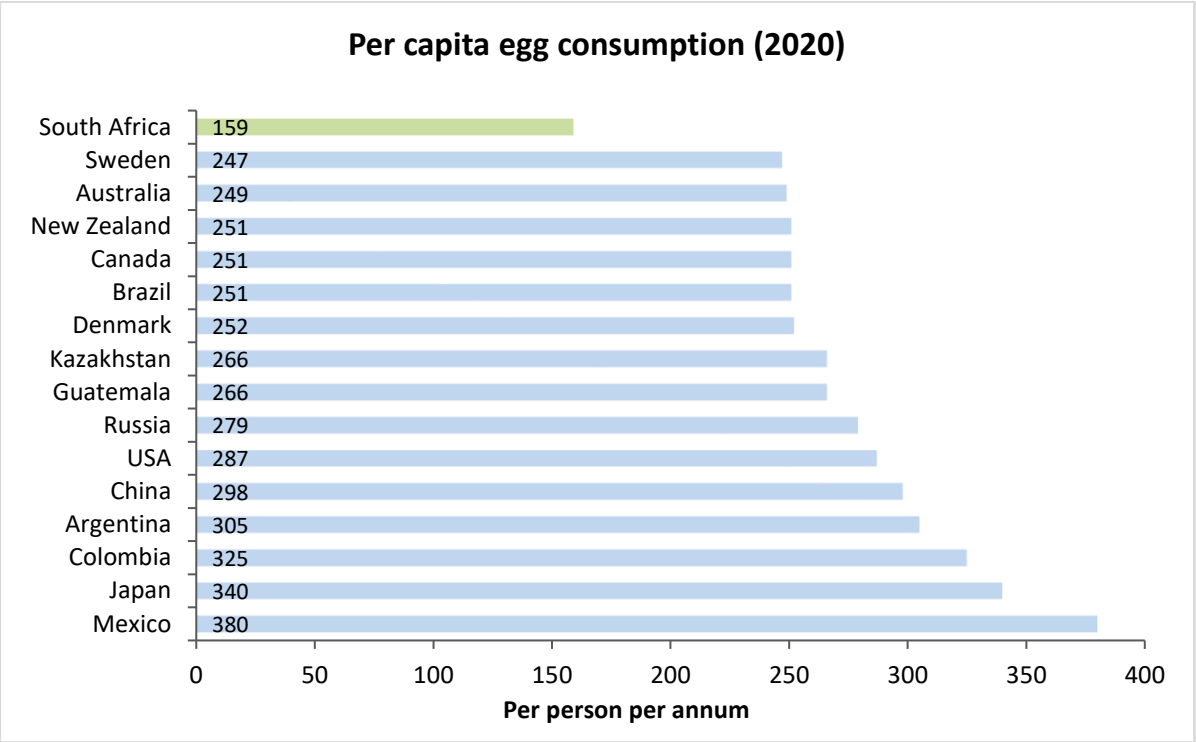


Figure 19. *Global per capita consumption of eggs in 2020 (per person per annum; source: IEC/media)*

5.7 Trade

Egg exports

Egg exports for 2021 totalled 8 006 tonnes (*Gallus gallus domesticus*), a decrease of 36.4 % compared to 2020. The total value of all egg exports was R289.4 million (- 13.8 %; Table 8). The sharp decline in exports was largely due to trade bans imposed by other SADC countries, following the H5N1 HPAI outbreak in South Africa. Please note that fertile eggs exported under tariff code 0407.1990, fresh shell eggs exported under 0407.2990 and raw egg pulp exported under 0408.9990 have been included under *Gallus gallus domesticus* (chicken) exports in this analysis. These three tariff codes relate to poultry species other than chicken, but it is highly unlikely that the South African egg industry exported any significant volumes of fertile or fresh eggs from other species. This is almost certainly a clerical error on the part of exporters or SARS and, despite requests from SAPA, the Revenue Service is not prepared to investigate the matter.

Of the 8 006 tonnes exported, fertilised eggs accounted for 4 297 tonnes (53.7 % of total exports) at an FOB value of R220.7 million.

Besides fertile eggs, 3 709 tonnes of shell eggs and egg product were exported, at an FOB value of R68.7 million.

Table 8: *Annual egg exports in 2021 (source: SARS*

Product (*Gallus gallus domesticus*)¶	Value (R million)	Quantity (tonnes)	% of exports
Fertilised eggs for incubation	220.72	4 297.2	53.7
Shell eggs (fresh and preserved)	67.94	3 647.1	45.6
Egg product (yolks, raw pulp, albumins)	0.72	62.1	0.8
liquid egg product	*0.56*	*60.8*	
dried egg product	*0.17*	*1.4*	
Total exports	289.38	8 006.4	100.0

¶ See comment above regarding tariff codes included in this analysis

The bulk of the egg products exported were liquid (60.8 tonnes; 97.9 % of total egg products). Liquid egg products comprised 60.6 tonnes raw egg pulp; and 0.15 t egg albumins and liquid egg yolks. Dried egg products totalled 1.4 tonnes (2.1 % of total egg products); of which 1.21 t were dried egg (not yolks); 0.13 t dried yolks; and 0.02 t dried egg albumins.

The FOB value of liquid egg products was R0.56 million and the FOB value of dried egg products was R0.17 million.

The main destinations of these exports were Mozambique (73.1 %), eSwatini (17.2 %), Lesotho (4.1 %) and Botswana (3.5 %). These four countries received 97.9 % of South Africa's exports.

Hen egg exports (not fertilised) continue to operate from a low base, being only 0.72 % (3 709 t) of total egg production (518 182 t) in South Africa in 2021; down from 1.4 % in 2020.

Egg imports

Total imports of chicken eggs, including fertile eggs, shell eggs and egg products (liquid and dried), increased from 746 tonnes in 2020 to 1 238 tonnes in 2021 (+ 492 t; + 65.9 %). Imports had a free-on-board value of R112.8 million (+ 68.6 %). National self-sufficiency in table eggs was restored in 2018, as the local industry quickly recovered from the 2017 HPAI outbreak.

Dried egg products (including albumins) accounted for 77.3 % of egg imports into South Africa in 2021. Imports of eggs and egg products (957 tonnes; no fertile eggs) represented 0.18 % of total domestic egg production (518 182 tonnes) in 2021.

Imports of fertile eggs reached 281.5 tonnes in 2021, up from 160 tonnes in 2020. Fertile eggs represent 22.7 % of total imports and were almost all imported from the United States (95.1 %). The remainder were brought in from Brazil.

Denmark, the USA, Italy and the Netherlands were the main countries of origin of chicken egg imports, with 22.6 %, 21.6 %, 18.9 % and 16.2 % of the total, respectively. A further 12.1 % of egg imports came from France and 6.2 % from Argentina. These six countries supplied 97.7 % of South Africa's egg imports.

5.8 Provincial distribution of layers on layer/layer breeder farms

In a recent Avian Influenza (AI) surveillance survey, the location of layer farms was recorded. The survey covers layer breeders, day-old pullets, layers in rearing and layers in lay.

Table 9 gives the provincial distribution of layer farms (breeder, rearing and in-lay).

A total of 280 farms reported in the AI survey, of which 2 were grandparent farms, 3 were parent rearing farms, 37 were layer breeder farms, 32 were pullet rearing farms and 206 were commercial laying hen farms. We continue to try to improve the representation of producers in this survey for disease control and management purposes.

Table 9: *Provincial distribution of layers in South Africa (4Q 2021)*

Province	Layer birds	% of total layer birds
Eastern Cape	1 199 211	3.8 %
Free State	5 171 505	16.4 %
Gauteng	8 409 674	26.6 %
KwaZulu-Natal	3 746 438	11.8 %
Limpopo	2 535 237	8.0 %
Mpumalanga	2 122 358	6.7 %
North West	3 581 236	11.3 %
N & W Cape	4 859 080	15.4 %
GRAND TOTAL	**31 624 739**	100 %

5.9 Regulatory issues

The Egg Organisation collaborated closely with DALRRD in finalising amendments to regulation R725 ('Regulations regarding the grading, packing and marking of eggs destined for sale in the Republic of South Africa') relating to the Agricultural Product Standards Act, Act no. 119 of 1990. Regulation R725 was repealed and the updated regulations, now known as R345, were gazetted for implementation on 20 March 2020. They are available in gazette No. 43108, as published by DALRRD.

Various stakeholders continued to meet during the year to work on the Egg Sector Master Plan. These included representatives from SAPA, the Department of Trade, Industry and Competition (DTIC), the Association of Meat Importers and Exporters, and the African Farmers' Association of South Africa. A summary of the Master Plan value chain was submitted for approval and feedback. There were suggestions that the Egg Sector Master Plan might end up as a chapter in the Poultry Sector Master Plan, but Board members were unanimous in wanting an independent plan focusing on egg matters.

Dr Mazibuko of NAMC put forward a proposal that the Egg Sector Master Plan move away from the DTIC to fall under the auspices of DALRRD and form part of the Agriculture and Agro-

processing Master Plan (AAMP). This was sensible, given many of the concerns and issues raised by egg producers linked into the AAMP. The proposal was accepted by the Board and a meeting subsequently took place with senior government officials at DALRRD.

As mentioned above, the Egg Organisation's new transformation model, entitled Amakip-kip, was launched in 2021. The model is described in more detail in Chapter 9.1.

The National Agricultural Marketing Council continued with its research into the economic impact of layer hen housing, focusing at the outset on market surveys of consumer perspectives. An extension to the deadline for completion of the report was requested and this was granted, initially to the end of May 2021. However, a significant number of telephonic surveys had to be conducted to allow the researchers to proceed with their analyses. By the end of the year, the study was 95 % complete and the first draft of the report was expected by January 2022 (Chapter 8.3).

The South African Bureau of Standards (SABS) published a 53-page draft standard entitled 'Welfare of chickens (*Gallus gallus domesticus*)' (SANS 1758:201X) in January 2021 (Chapter 8.3). The Egg Organisation provided feedback on several points to the technical committee at the SABS. The various role players, which included animal welfare lobbyists, failed to reach a consensus and the process was reverted to the working group committee.

A revised draft of the OIE chapter on layer hen housing and welfare was distributed to members of the Egg Organisation Board for their input. In July, a letter containing eleven proposed amendments was sent to the OIE through the state's Chief Veterinary Officer and the IEC (Chapter 8.3).

A statutory food safety agency with a regulatory framework is considered essential by all stakeholders to ensure the health and safety of consumers. The egg industry has struggled to find a workable solution with the DALRRD and their assignee, the Food Safety Agency (FSA). Several meetings took place during the year to discuss the issues surrounding the sampling of table eggs during farm, pack station and market egg inspections. A document containing standard operating procedures and a service level agreement (SLA) were submitted to the FSA, which agreed to the SLA. The SLA included the proposal that R1.5 million of egg statutory levy money be used to pay for the egg inspections and levy inspections. However, at a special general meeting of the Egg Organisation, the SLA was rejected because the matter failed to receive majority support.

5.10 Challenges and prospects for the South African egg industry

Although farm gate prices increased by an average of 13.7 % in 2021, SAPA's layer feed price indicator increased by 18.8 % over the same period. The drop in egg supply caused by avian influenza-related culls helped keep year-on-year egg price increases in positive territory, but good profits are only made when year-on-year changes in feed costs are smaller than those in producer prices, or dip into negative territory. Although the upward trajectory in feed prices eased a little in the 4Q 2021, producers are still expected to come under pressure from input costs going into 2022.

Retailers are a big part of the revenue problem and continue to take mark-ups in excess of 100 % on eggs; this despite the product having a long shelf-life with little or no need for refrigeration. Perhaps the Egg Sector Master Plan should investigate introducing regulations which would cap the mark-up that retailers can charge on unrefrigerated eggs.

Highly pathogenic avian influenza will remain a major concern for South African egg producers in 2022. With no state compensation available for precautionary culls in infected zones, government has disincentivised farmers to report possible cases in their flocks. Mass deaths of wild seabirds are still being reported on Dyer Island, a breeding colony off the coast of Gansbaai in the Western Cape and there is no reason to believe that the H5N1 HPAI virus can be considered contained – in South Africa or globally. Farmers and all poultry keepers have been urged to review and improve their biosecurity measures and to report ill and dead birds to state veterinarians.

French officials are exploring the possibility of vaccinating flocks against HPAI. The Purbright Institute in Surrey, UK, reported the development of a new vaccine against avian influenza in 2021, with claims that it is fast-acting, more cost-effective and able to reduce disease transmission between birds. Gene-editing, in the form of Crispr technology, may provide a more robust solution to keeping poultry flocks free of avian influenza infections than vaccination programmes. Vaccinations are not able to prevent all infection and transmission between birds, and even mild infections can result in production losses and the risk of viral mutation. On paper, gene-editing would seem like the answer, but any form of genetic engineering brings with it ethical considerations and registration challenges. Vaccines in development are more likely to help control epidemics in the short term.

Like all South African farmers, egg producers will have to contend with a volatile exchange rate and frequent Eskom outages in 2022, along with fuel and electricity price hikes, and increased packaging, medication, labour and distribution costs; all of which will squeeze margins even further. Failing municipal infrastructure, high crime rates and COVID-19 related disruption of supply chains all impact egg producers. For subsistence and small scale farmers in the egg industry, additional challenges exist: a lack of training and veterinary support; transport and procurement issues; and a lack of access to financing and investment.

With South Africa's unemployment levels reaching an all-time high in 2021, disposable income is constrained, and egg consumption is likely to drop as a result - unless consumers can be persuaded that egg protein is a cost-effective, high quality food. Local demand for eggs increased by 4.4 % in 2020 to 159 eggs per person/year but retreated to 146 eggs/year in 2021, as lockdowns eased. Consumption remains disappointingly low compared to levels in many developed and developing countries. The world average for per capita consumption is approximately 210 eggs/year. The Mexicans eat a staggering 380 eggs per person per year (IEC, 2020). Recent research on cholesterol and the increasing popularity of high protein/high fat diets (which have resulted in an uptick in the consumption of eggs elsewhere in the world) have not increased the local appetite for eggs as dramatically.

The reasons for South Africa's relatively low consumption include:

- Preference for white meat over eggs, when money permits;
- Unfounded cardiovascular/cholesterol fears;
- Insufficient advertising (egg consumption does not increase with affluence as with broiler meat);
- Lack of understanding of nutritional value of eggs as a high-quality protein source/their value for money in this regard;
- South Africa's climate (less "cold morning" breakfasts served annually);
- Concerns about allergies (eggs are amongst the top eight food allergens, but many children grow out of this allergy);
- Food safety concerns (Salmonella; campylobacter);
- Constrained consumer spending;
- Welfare concerns.

In some African cultures (including eSwatini, Kenya, Uganda and West Africa), the eating of eggs by women and female children over a certain age (usually about 6 years) is taboo. There is a belief that eating eggs may make women sterile or advance puberty. There is evidence that such concerns also exist in local cultures, especially in newly married and pregnant women. If this is the case, then a large potential market for eggs is lost to a set of beliefs that has no basis in science. The 2020 – 2025 Dietary Guidelines for Americans confirm that eggs provide critical nutritional support for prenatal health, infant development and brain function. The guidelines highlight the importance of choline in brain health and recommend eggs as a first food for babies to reduce risk of developing an egg allergy.

There is scope to increase consumption of South African eggs and egg products both at home and abroad. Advertising campaigns and innovative marketing have been used effectively in the US and UK to increase consumption of eggs. Celebrity endorsements and food-fads can be used to great effect in promoting quality products. Social media is undoubtedly a powerful tool in influencing consumer behaviour and SAPA's Egg Organisation has begun tapping into the opportunities presented by Facebook and Instagram with their *EggCellent Food* pages. These pages are a useful tool to reinforce in the public's mind all that is good about eggs (selenium, vitamins A, $B_{12,}$ D, riboflavin, folate, high quality protein, choline, etc.) and to further dispel any lingering cholesterol concerns and cultural egg-eating taboos.

Eggs serve more than a dozen functions in food manufacturing and cookery, including adhesion, gelatinisation, coagulation, binding, aeration and foaming, emulsification, humectancy (moisture content control), tenderisation, texture, nutrient fortification, reducing crystallisation, leavening, thickening, glazing, coating and clarification. They also add to the flavour, richness, colour and shelf-life of a product (thanks to anti-microbial properties) and can be used to adjust pH (eggs are alkaline in nature). Eggs are a hard act to follow and, while nothing could ever beat the real thing, food scientists are developing alternatives to shell eggs and getting alarmingly close to producing something that looks and tastes like an egg. In 2021, Israeli start-up YO-egg introduced the media to its realistic looking, vegan alternative to the traditional fried egg. Meanwhile, The EVERY Company, based in San Francisco, claim to have reproduced egg whites using fermentation technology. In 2021, US manufacturer of egg

alternatives, Eat Just, partnered with Johannesburg-based Infinite Foods to introduce the company's *Folded* mung-bean product to the South African market. At R19.95 per 'egg' portion, the Just Egg *Folded* will only appeal to a niche market and, as an imported product, it cannot boast any sustainability advantage over the real thing. However, plant-based alternatives to eggs remain an important horizon issue for local producers. As meat and egg alternatives become more mainstream, producers of all animal proteins will need to work to keep their products competitive and to demonstrate their sustainability and superior nutritional value to consumers.

The cage-free egg revolution, which started in the United States in 2015, spread to Asia in 2020. In Europe, Nestlé reached its cage-free egg targets and called on EU policymakers to phase out enriched cages in all European laying hen facilities. Unilever and Mondēlez International (one of the world's largest snack companies) added their voices to this call. Laws have been passed in California, Oregon, Washington, Rhode Island, Michigan and Colorado that will require all eggs produced and/or sold within a state to come from cage-free laying systems. In 2021, this list grew to include Nevada and Utah. Similar legislation is under consideration in Maine, Arizona and Hawaii. In 2016, voters in Massachusetts overwhelming supported new legislation, introduced under a 'ballot vote', to improve the welfare standards of poultry and pigs. The new standards were due to be implemented from 1 January 2022 but there were last-ditch negotiations and changes to the legislation aimed at safeguarding supplies of eggs and pork, without compromising the improvements in welfare demanded by the voters. The changes have not met with universal acceptance from welfare organisations.

In November 2016, McDonald's South Africa pledged to transition to sourcing eggs from only cage-free producers by 2025. After pressure from local activists, it is reported that, in December 2021, the Spur Corporation committed to using only cage-free hens eggs in its restaurants by the year 2025. This follows three years of negotiations with the Coalition of African Animal Welfare Organisation (CAAWO), the same group that, in 2018, secured an undertaking from the Famous Brands group to transition to sourcing 50 million eggs a year from cage-free egg suppliers by 2025. The Famous Brands' stable includes Wimpy, Mugg & Bean, House of Coffee and Steers. Indications are that this target will be reached several years ahead of target.

Both French and German authorities resolved to outlaw the killing of male chicks from the end of 2021. The French ban looks set to go into law in early 2022, with hatcheries required to have installed or ordered equipment to carry out *in ovo* sexing by 1 January 2022. Hatcheries will be given to the end of 2022 to be fully compliant. The German law will be signed in January 2022 and, between the two countries, close on 100 million day-old male chicks will either not be hatched, or spared destruction. The second phase of the German law will, from 1 January 2024, prohibit destruction of chicken embryos after the sixth day of incubation; effectively forcing German hatcheries to invest in the development of technology to sex embryos very early in the 21-day incubation period. Identifying and disposing of eggs containing male chicks before the hatchery stage of production remains the Holy Grail of egg industry welfare research. German start-up, Seleggt, now claims to sex eggs with over 99 % accuracy, within 9 days of fertilisation. The patented technology uses a chemical marker to detect a hormone only present in "female" eggs. Meanwhile, Australian scientists have tackled the welfare issue in a

different way, which does not require a hole to be drilled in the eggshell. Genetic engineering is used to modify the hens' genome so that they produce male-chromosome eggs which "glow" under laser light. Dutch biotechnology start-up *In Ovo* has also developed a solution which identifies male embryos at day nine. Their patented biotechnology uses a needle to sample a tiny amount of allantois fluid from the egg, which is tested with mass spectrometry for a biomarker specific to male embryos. Sexing technology needs to be automatic, in-line, highly accurate and cost-effective.

Egg farmers around the world will be better placed to advertise an ethical and wholesome product once the practice of male chick culling is replaced with technological alternatives. Back in 2016, the US United Egg Producers acknowledged that the culling of male chicks needed to end. In collaboration with the Foundation for Farm Animal Research, $6 million dollars' worth of grants and prizes was offered to innovators to develop the necessary technology. This process has now reached a second phase, in which promising *in ovo* technologies are being developed into scalable and commercially feasible solutions.

The World Organisation for Animal Health (OIE) has, over the past few years, been drafting welfare standards for the keeping of laying hens. A revised draft of the OIE chapter on layer hen housing and welfare was distributed to members of the Egg Organisation Board for their input in early 2021 and, in July, a letter containing eleven proposed amendments was sent to the OIE through the state's Chief Veterinary Officer and the IEC. Although the standards are not legally binding, member countries have agreed in principle to write the standards into domestic law. With increasing global pressure from animal welfare groups for the discontinuation of caged housing systems, it is of vital importance that a compromise is reached. The OIE standard will eventually impact on local producers. Businesses may face negative consequences if they do not recognise, evaluate and respond to global trends effectively and in good time. Some local producers are already restructuring their businesses to take advantage of changes in the global industry and NAMC is involved in investigating the economic impact of transitioning to cage-free production in the South African context.

In a year in which climate change and global warming came under the microscope at the United Nations Climate Change Conference in Glasgow (COP 26), egg producers around the globe are starting to evaluate the sustainability of their businesses. From 2022, supermarket giant Morrisons will begin to sell carbon neutral eggs, produced on free range farms in the UK. These carbon neutral farms make use of a circular waste feeding scheme, with insects (grown on waste product from the company's fruit and vegetable farms) used as a protein source for the laying hens. This approach reduces reliance on imported and environmentally damaging soybeans. Each insect 'mini-farm' will support 32 000 free range hens. Morrisons are not the first UK company to market carbon neutral eggs. Stonegate's 'Respectful' brand was launched through retailer Sainsbury's in October 2021. Stonegate farmers also eschew soya in the birds' feed; addressing deforestation and food miles with the use of locally sourced field beans. Farms and packaging plants are powered by renewable energy. In the US, grocery chain Kroger will launch carbon neutral eggs in late 2022. Kroger have partnered with Dutch firm, Kipster, to produce and market the eggs under the Simple Truth brand. The Kipster system makes use of waste products from bakeries and other food producers to remove soybeans from the laying feed, in effect upcycling food waste into eggs, meat and manure.

As farmers start to move towards carbon neutral egg production, producers, retailers and food journalists also need to advise consumers on how to eat sustainably. A 2014 study in the US estimated that around 20 % of eggs are wasted at the level of the consumer. Britons reportedly threw away an estimated 720 million eggs in 2018 because of an overly cautious approach to "best-before" dates on egg packaging. Many of these eggs would still have been perfectly safe to eat; their freshness easily tested by placing each egg in a bowl of cold water (eggs which are not fresh, float). As eggs approach their 'best before' date, their shelf life can be expanded further by freezing cooked or raw egg, by coating the eggshell with mineral oil, or by pickling them in white or apple cider vinegar, with flavouring. There's no excuse to throw any eggs away because of 'best before' or 'use by' stamps.

It will be important for the domestic egg industry to build back towards the increased consumption seen in 2020, through advertising and social media campaigns. Eggs remain the cheapest source of high-quality animal protein, vitamins and minerals when compared to beef, pork and chicken and one of the most versatile pantry staples.

6. THE BROILER INDUSTRY IN SOUTH AFRICA

6.1 Overview

The year started on a subdued note, with the reintroduction of stricter lockdown regulations in December 2020 negatively affecting domestic markets for chicken over a period of several months. Quick-serve restaurants (QSR) and sit-down restaurants operated with reduced hours in accordance with the trading restrictions in place. However, the adjusted import tariffs on bone-in and boneless portions, global freight disruptions and a surge in highly pathogenic avian influenza (HPAI) outbreaks across Europe resulted in a dip in poultry imports; a shot in the arm for the domestic industry. Even so, 2021 was to be another tough year for commercial broiler producers. SAPA's feed price index averaged 16 % higher in 2021 than in 2020; caused by inflated global prices for maize and soya beans. In comparison, producer prices for poultry products increased by only 11.3 % in 2021. High input costs dashed all hopes of a recovery in profit margins post the 2020 COVID-19 pandemic and associated hard lockdowns.

Feed price is the most important determinant of profitability in poultry operations, constituting upwards of 65 % of the cost of a live broiler. Strong domestic maize prices are supported whenever global and sub-Saharan demand for maize is high. The main drivers behind ingredient prices in 2021 were the growing demand for biofuel, unstable weather conditions affecting crops in some regions of the world, and China's resurgent demand for cereals and oilseeds. Input costs were further affected by increased shipping rates, soaring energy prices and widespread supply constraints; a stark reminder that the South African poultry industry operates in a global economy. To make matters worse, domestic demand for chicken was subdued as consumers found themselves cash-strapped by the impact of COVID-19 on an already weakened economy.

In March 2021, the industry suffered a further setback with the outbreak of HPAI H5N1 on a farm in Gauteng. Despite efforts to tighten biosecurity and halt infections, the virus quickly spread to other provinces. An estimated 801 000 broilers and breeders were culled during the year. The industry dealt with the anticipated shortage of day-old chicks by keeping healthy broiler breeder flocks for longer and importing fertilised hatching eggs. Unfortunately, the disease hampered efforts to meet the production targets prescribed in the Poultry Master Plan, as slaughter numbers were reduced.

The announcement by Department of Agriculture, Land Reform and Rural Development (DALRRD) Minister Thoko Didiza that a task team had been appointed to tackle animal diseases was welcomed by the agricultural sector. The aim is to form partnerships between the state and the private sector to manage diseases such as HPAI, foot-and-mouth disease and African swine fever. DALRRD also agreed to the principle of using private veterinarians to assist with inspections at ports, management of HPAI outbreaks on farms and negotiation of export certificates.

The unprecedented riots and looting that took place in KwaZulu-Natal and Gauteng in July caused millions of rands worth of infrastructural damage to the South African poultry industry, along with large-scale theft and looting. Biosecurity measures were violated, putting flocks at

risk of contracting highly pathogenic avian influenza (HPAI). Day-old chicks had to be euthanised at hatcheries; there were fears of birds starving to death as poultry farmers struggled to obtain feed deliveries; and, in many cases, farmers were unable to transport broilers at optimal slaughter weight to abattoirs. A national food crisis loomed as warehouses, cold storage facilities and transport systems were shut down for 10 days. The closure of the N3 highway between the two provinces caused severe disruptions to supply and delivery channels. The broiler industry came under pressure to find alternative storage facilities, with the Association of Meat Importers and Exporters reporting a loss of 40 000 tonnes of cold storage capacity. Government was asked to fast-track imports through the port in Durban.

Further challenges were experienced through the year with national electricity load shedding and failing municipal infrastructure, including water supply and road maintenance. These issues continue to plague the ability of local poultry producers to remain globally competitive. Under these trying conditions, the industry is still working to build on the objectives of the Poultry Master Plan introduced in 2020. The plan outlines several strategic objectives to stabilise and grow the industry. The five pillars of the initiative are:

- To expand and improve local poultry production, which will simultaneously increase job creation in the maize and soya industries. Expansion is to be coupled with skills development amongst the workforce and black economic empowerment;
- To drive domestic per capita consumption of poultry products, and to promote the affordability of local broiler products;
- To develop opportunities for producers to export poultry products, through assistance with the necessary food safety and veterinary certification processes;
- To introduce a stricter regulatory environment within the broiler production value chain (both local and imported meat); to improve product labelling and traceability and to reduce issues with illegal thawing of frozen product, classification, under-declaration of imported value, etc.
- To protect the local chicken industry from unfair trade practices through appropriate measures.

Details of the plan can be found at:

http://www.thedtic.gov.za/wp-content/uploads/Poultry_Sector_Master_Plan.pdf

Pillar One of the Master Plan calls for an investment of R1.5 billion in production facilities by broiler companies. This was expected to result in the slaughtering of an additional 1.7 million birds per week, an increase in the amount of cooked chicken available for export, and the creation of 3 600 jobs. A further R1.7 billion would be invested in 50 contract farming operations (at a cost of R35 million each), adding approximately 1 000 jobs. SAPA was tasked with developing a comprehensive support programme for small independent farmers.

By mid-2021, an additional 388 employment opportunities had been added on top of the 980 new jobs created in 2020. The capacity to produce cooked chicken increased from 65 to 140

tonnes a week in 2021. The industry reported growth in turnover of R4.7 billion since 2019, bringing closer the target of increasing its contribution to GDP to a figure of R56 billion by the end of 2022. The grain value chain benefited as well: the number of hectares of farmland planted with maize and soya beans expanded by 144 600 and 122 200 respectively.

By the end of the year, the industry had achieved all but one of its Master Plan milestones. In total, R1.14 billion of the R1.5 billion pledged had been invested, with R570 million being spent on farm infrastructure. Black producers were farming with 16 million bird and remote assistance to subsistence and small commercial farmers accelerated meaningfully in 2021 (see Chapter 9.1).

The packaging and traceability of imports is a task which falls under Pillar Four of the Master Plan. The dispensation which allowed the labelling of bags of imported chicken with multiple possible countries of origin was withdrawn on 1 September 2021. Importers and food suppliers will no longer be able to mix chicken portions from different sources in the same bag. This is a major step forward in the move towards improving traceability, thus enhancing food safety.

Another area to be addressed by Pillar Four of the Master Plan is a review of the regulations governing the classification of imports according to tariff lines, with the aim to prevent fraudulent practices such as the use of incorrect tariff lines and under-declaration. Although SAPA is not directly involved in this process, Izaak Breitenbach (General Manager of SAPA's Broiler Organisation) conducted virtual training of 120 SARS officers (including physical inspectors and senior officials) during August 2021. The training aimed to teach the officials what different cuts of chicken look like (especially when frozen) to prevent, for example, bone-in portions being declared as mechanically deboned meat (MDM) (a non-tariff product).

Pillar Five of the Master plan outlines the steps to be taken by the International Trade Administration Commission (ITAC) in reviewing the entire tariff framework for the poultry industry. SAPA proposed changing to an entry price system (which would elevate the price to a realistic international production price level and thereby prevent under-declaration) with an *ad valorem* tariff (calculated as a percentage of the value of the product). Both ITAC and the DTIC have worked hard to address the issues, and an announcement from Minister Patel is expected in 2022.

Safeguard duties are mechanisms to provide protection from sudden surges in imports. A safeguard duty of 35.3 % on bone-in portion imports from all EU countries was gazetted on 28 September 2018. This duty decreased annually to 15 % from March 2021 and will lapse in March 2022. All other poultry products from the EU enter South Africa duty-free. The EU registered a dispute over the safeguard duties in 2019 through the dispute settlement mechanism of the trade agreement between the EU and SADC. This legal challenge is still in the arbitration phase.

An application for anti-dumping duties against Denmark, Ireland, Poland, Spain and Brazil was submitted to ITAC in February 2021 and was published in the government gazette at the end of that month for comment. Dumping margins as high as 209 % on frozen bone-in portions were demonstrated in SAPA's application, and the industry has been able to prove material injury as a result of the dumping of poultry products from these five countries. A preliminary, favourable

ruling is expected in early 2022. Existing anti-dumping duties against Germany, the UK and the Netherlands were renewed for a further five-year period on 23 August 2021. These duties apply to bone-in portions and are set at 73.33 %, 30.09 % and 22.81 % for the three countries respectively. This outcome is another significant victory for the industry.

The United States of America (USA) anti-dumping duty of R9.40 expires in November 2022. SAPA has given formal notification to ITAC that it will be applying for a renewal of the anti-dumping duty.

Under the terms of African Growth and Opportunity Act (AGOA), the USA is allowed an annual export volume of 69 972 tonnes of frozen bone-in chicken which is free from anti-dumping duties. For the period from April 2020 to March 2021, the USA sent 65 458 tonnes of bone-in portions to South Africa. The new quota for the cycle April 2021 to March 2022 is expected to be 71 290 tonnes (a 1.9 % annual increase) but this is yet to be gazetted. The US look unlikely to reach the anticipated quota during the April 2021 – March 2022 cycle.

Those in the import business and the media who argue that anti-dumping duties push up retail prices would do well to read the 2020 ITAC analysis of the effect of dumped poultry products on the local market. While investigating SAPA's successful application to raise the general tariffs on bone-in and boneless chicken portions, they found no evidence that imported chicken was sold cheaply through to retail level – the importers' claim that they help cash-strapped consumers is erroneous. It should also be noted that food safety concerns around imported products centre on a lack of traceability, vague or non-existent labelling, and special dispensations which allow imports to slide into our ports without adherence to the same health regulations as local products. A very succinct summary of why ITAC found evidence of "dumping" and recommended that the general tariff on frozen chicken portions be increased can be found below:

https://fairplaymovement.org/opinion-will-tariff-enable-broiler-industry-to-fulfil-its-role/

The increase in the general tariff applied to bone-in and boneless portions from 2020 does not apply to EU exporters, because of the economic partnership agreement (EPA) which exists between South Africa and the EU. The tariff hikes only relate to 0207.141* and 0207.149* tariff lines. Thus, estimations of what effect these increases might have on domestic retail prices must take this information into consideration.

It has become apparent that the tariff increases alone are insufficient to stem the flow of cheap imports into South Africa. Several instances of illegal trade (such as round-tripping, under-declaration and under-invoicing) have been uncovered. Transgressors have been fined heavily by the South African Revenue Service (SARS) but further arrests and prosecutions will be needed to act as a deterrent to offenders seeking to avoid paying duties.

For the Poultry Sector Master Plan to succeed, it is imperative that locally produced chicken makes up a greater proportion of consumption. It is hoped that an increase in production capacity will also stimulate demand for locally grown and manufactured poultry feed and encourage further investment in new poultry processing facilities.

6.2 Turnover

The gross value of primary agricultural production from poultry meat (inclusive of all types of poultry) for the period 2021 was R50.96 billion, reflecting an annual increase of 2.8 % (source: DALRRD).

Broiler production was the second largest product sector in agriculture in South Africa in 2021, ahead of all other animal sectors (beef production (R43.0 billion), milk (R21.2 billion) and eggs (R11.44 billion)) and ahead of all field crop and horticultural sectors except for the maize sector (R55.81 billion). In 2021, deciduous and citrus fruit were valued at R29.18 and R27.99 billion, respectively.

Poultry meat's share of the gross value of all agricultural production was 13.6 % (from 14.8 % in 2020), and of all animal products 32.6 % (down from 33.8 % in 2020).

6.3 Production

A total of 1.089 billion broilers were produced for slaughter in 2021; 19.74 million (+ 1.8 %) more than in 2020 (Table 10).

Table 10*: Summary of key results: broiler production*

Forecast period	Day-old parent pullets placed	Breeder hens	Broiler chicks placed	Broilers slaughtered (based on actual chicks)
	/year	Average	/year	/year
2020	9 741 154	6 725 258	1 127 126 000	1 069 646 000
2020	9 835 824	6 740 557	1 140 108 000	1 089 382 000
Change	94 671	15 298	12 982 000	19 736 000
% change	+ 1.0	+ 0.2	+ 1.2	+ 1.8

Based on the number of day-old parent pullets placed to December 2021, the size of the breeder flock is expected to increase by 1.2 % to 6.954 million during the first four months of 2022. The forecasting model predicts a potential production of broilers to July 2022 of 23.0 million slaughtered per week. These figures do not take exports into account, nor the possibility that some fertile eggs may not be incubated if the industry attempts to adjust to a situation of oversupply.

6.4 Producer and retailer broiler prices

The weighted average producer price for broilers (NSV; less all discounts, rebates, advertising spent, secondary distribution, VAT, etc.) of R26.18/kg was 11.3 % higher in 2021 than in 2020 (R23.52/kg; Figure 20). This increase should be seen in the context of price suppression in 2020 (COVID-19-related demand issues) and the generalised global food price inflation seen in 2021 (discussed below in Section 6.10).

If the price is adjusted for CPI (meat; base = 2016) to estimate the annual producer price in *real terms*, then the average producer price in 2021 increased by 2.7 % compared to 2020.

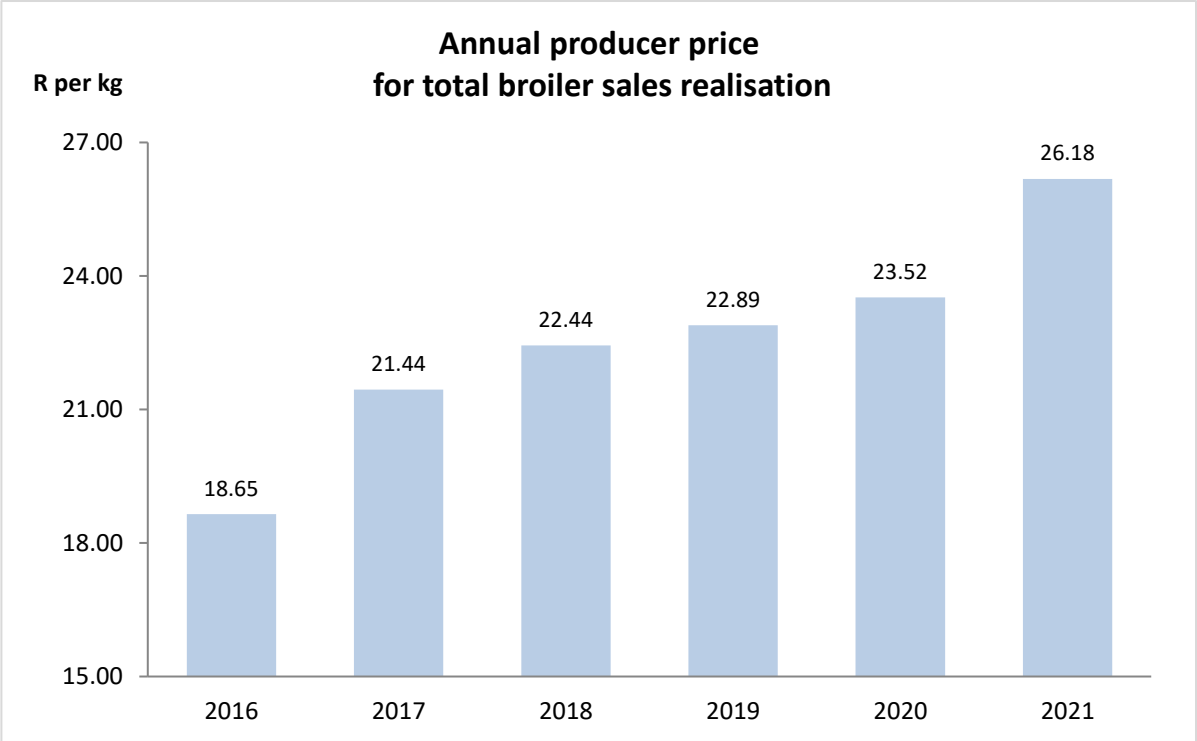


Figure 20. Annual producer prices for total broiler sales realisation (NSV; *source: SAPA)*

The average retail price for whole fresh chicken was R56.61 per kg in 2020 and for 2021 was R58.54 per kg (+ 3.4 %; Stats SA). In 2021, the average mark-up between producer and retail prices was 98.2 % for whole fresh chicken (down from 108 % in 2020).

The average retail price for fresh chicken portions was R72.35 per kg in 2020 and R71.27 per kg in 2021 (- 1.5 %; Stats SA). The mark-up from producer to retailer through 2020 was 121 % and in 2021 was 109 %.

The average retail price for 2 kg IQF bags was R35.58 per kg (Stats SA) in 2020 and R39.65 in 2021 (+ 11.4 %; Stats SA). The average mark-up on 2 kg IQF bags in 2021 was 54.6 %. The producer price for IQF portions was R25.64/kg (+ 12.3 % on 2020 prices).

6.5 Feed usage and cost

The average broiler index feed price for 2021 was R7 102 per tonne; an increase of 16.0 % in comparison with 2020. This followed a year-on-year increase of 9.0 % in 2020. The broiler feed price index includes distribution, but excludes medication, additives and VAT. The movement in the index feed price is shown in Figure 21.

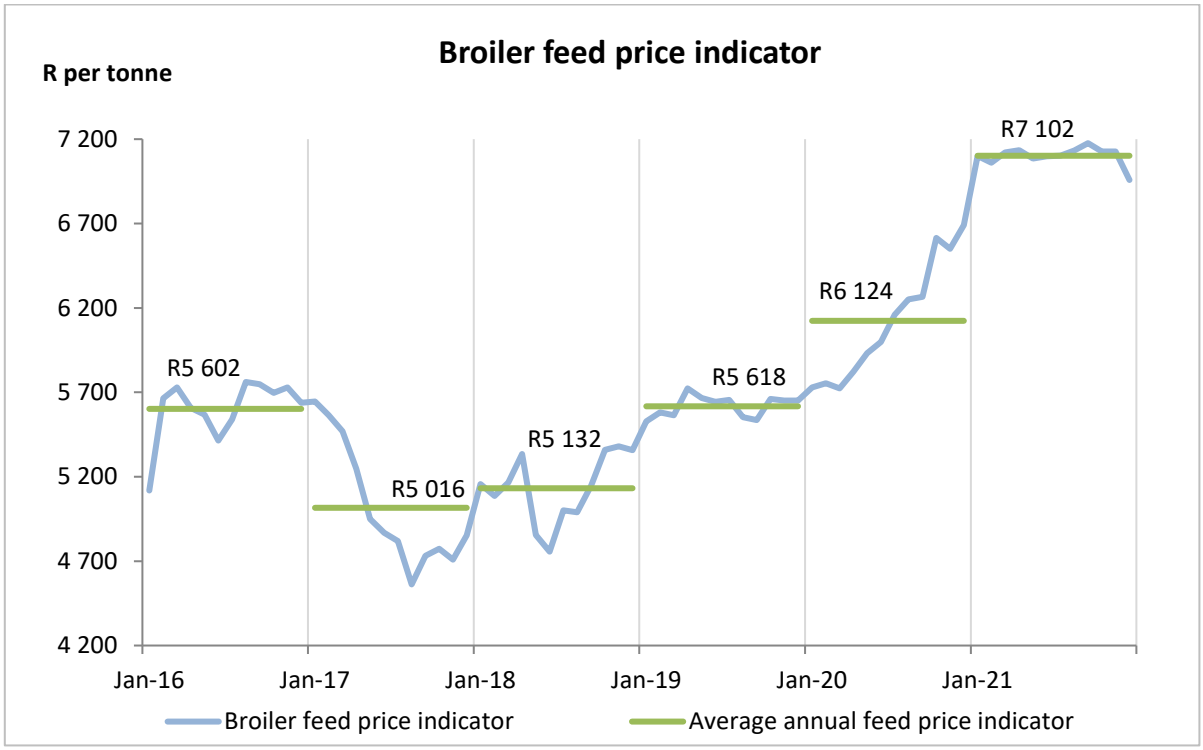


Figure 21. *Broiler feed price indicator (average across feed phases) from 2016*

The year-on-year percentage changes in broiler feed price and producer chicken price are shown in Figure 22. From January to end July 2015, broiler producers enjoyed higher year-on-year percentage increases in the producer price than the year-on-year changes in the feed price.

With the drought biting, the situation deteriorated for broiler producers from August 2015, with annualised increases in feed prices outstripping increases in broiler revenues through to January 2017. In this period, year-on-year percentage increases in broiler producer price moved into negative territory between March and July 2016.

Year-on-year increases in feed prices moved into negative territory from February 2017 as the effects of the drought eased; and remained there until the end of 1Q 2018. The year 2017 was thus a good one for broiler producers, with year-on-year changes in producer prices exceeding + 15 % for several months.

Year-on-year increases in feed prices returned to positive territory in 3Q 2018 and have remained there through to end of 4Q 2021. The index for feed price exceeded + 15 % every month from October 2020 to July 2021. In fact, in January and March 2021, the annual increases in feed reached almost 25 %. In 4Q 2021, year-on-year increases in feed prices averaged + 6.8 %, compared to 14.6 % in 3Q 2021.

During this same period from 3Q 2018, increases in broiler prices dropped back below the + 5 % level in 2Q, 3Q and 4Q 2018 and moved into negative territory (average negative 3.2 %) in 1Q 2019. This situation eroded profits. From May 2019 to March 2020, year-on-year increases in broiler prices moved back into positive territory, averaging + 5.4 % against an average year-

on-year increase in feed price of 8.5 % for the same eleven months.

In 2Q 2020, annual increases in broiler prices slipped back into negative territory, with difficult trading conditions under COVID-19 lockdowns. A degree of recovery from this position was experienced in 3Q and 4Q 2020, as lockdown regulations were eased, but year-on-year increases in broiler prices stayed stubbornly at + 2.5 % and 4.1 % in 2H 2020 and 1Q 2021 (respectively), compared to an average year-on-year feed price increase of + 14.3 % from July to December 2020, and 23.7 % in 1Q 2021. In 2Q 2021, year-on-year increases in broiler prices improved to + 16.3 % - but this remained below the 20.1 % annual increase in feed prices. In 3Q 2021, producer prices averaged + 11.4 % higher than in same quarter in 2020, compared to the + 14.6 % for feed prices, discussed above. In 4Q 2021, producer prices averaged 13.9 % higher than in 4Q 2020, while feed prices were, on average, 6.8 % higher.

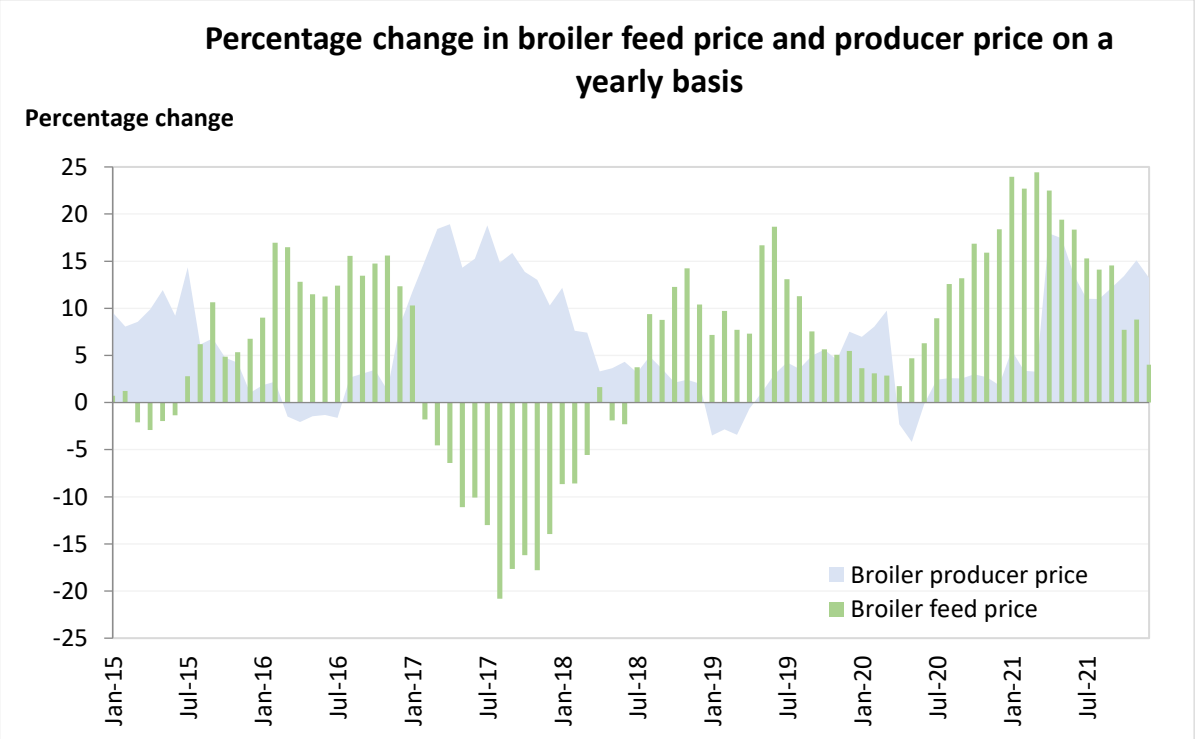


Figure 22. *Year-on-year percentage change in broiler feed price and producer price*

In 2020, approximately 3.35 m tonnes of feed were used by the broiler industry. Approximately 2.82 million tonnes of feed were used to grow broilers, while the remaining 527 186 tonnes were used in the broiler breeder industry. The feed usage for broiler breeders and broilers is summarised in Table 11.

According to the Animal Feed Manufacturers Association (AFMA), national feed sales for broilers from 1 January to 31 December 2021 amounted to 2.974 million tonnes (+ 5.6 %) and, for breeders, 0.525 million tonnes (- 2.1 %). These figures exclude non-members of AFMA.

Table 11: *Feed usage for broiler breeders and broilers in 2020 (tonnes)*

	Broiler parents		Total breeding stock		Broiler production		Broiler industry	
	rearing per annum	laying per annum	per annum	per week	per annum	per week	per annum	per week
2020	104 423	421 634	526 027	10 061	2 785 631	53 277	3 311 659	63 338
2021	107 168	420 019	527 186	10 110	2 824 948	54 177	3 352 134	64 288
Change	2 744	-1 585	1 159	50	39 317	900	40 476	950
%	+ 2.6	- 0.4	+ 0.2	+ 0.5	+ 1.4	+ 1.7	+ 1.2	+ 1.5

6.6 Consumption

Poultry consumption

According to DALRRD estimates for 2021, total production of poultry meat (including turkey, ducks, geese and guinea fowl) was 1.915 million tonnes, whereas consumption (including backyard consumption) amounted to 2.307 million tonnes (- 0.6 %).

The per capita consumption of poultry meat for 2021 was 38.04 kg per annum, down 1.5 % from 38.61 kg in 2020 (Figure 23).

DALRRD based its calculations on its own estimates of production and also used trade statistics from a source other than the South African Revenue Service (SARS). DALRRD's estimate of poultry meat consumption is 0.65 % higher than SAPA's estimate.

According to SAPA's calculations, poultry consumption amounted to 2.292 million tonnes. The per capita consumption of poultry meat for 2021 was 38.10 kg, compared to 38.80 kg (- 1.8 %) in 2020. This includes the sale of spent hens from the broiler breeder and commercial layer industries, the sale of all the edible offal, imports, as well as other poultry species.

The annual per capita consumption of poultry around the world, according to OECD-FAO data for 2021, is shown in Figure 24.

Note, these are *forecast* figures for consumption. The OECD-FAO data for 2021 is "provisional" and can be found on the website for the OECD-FAO Agricultural Outlook 2021 - 2030. The South African per capita value in Figure 24 is sourced from DALRRD.

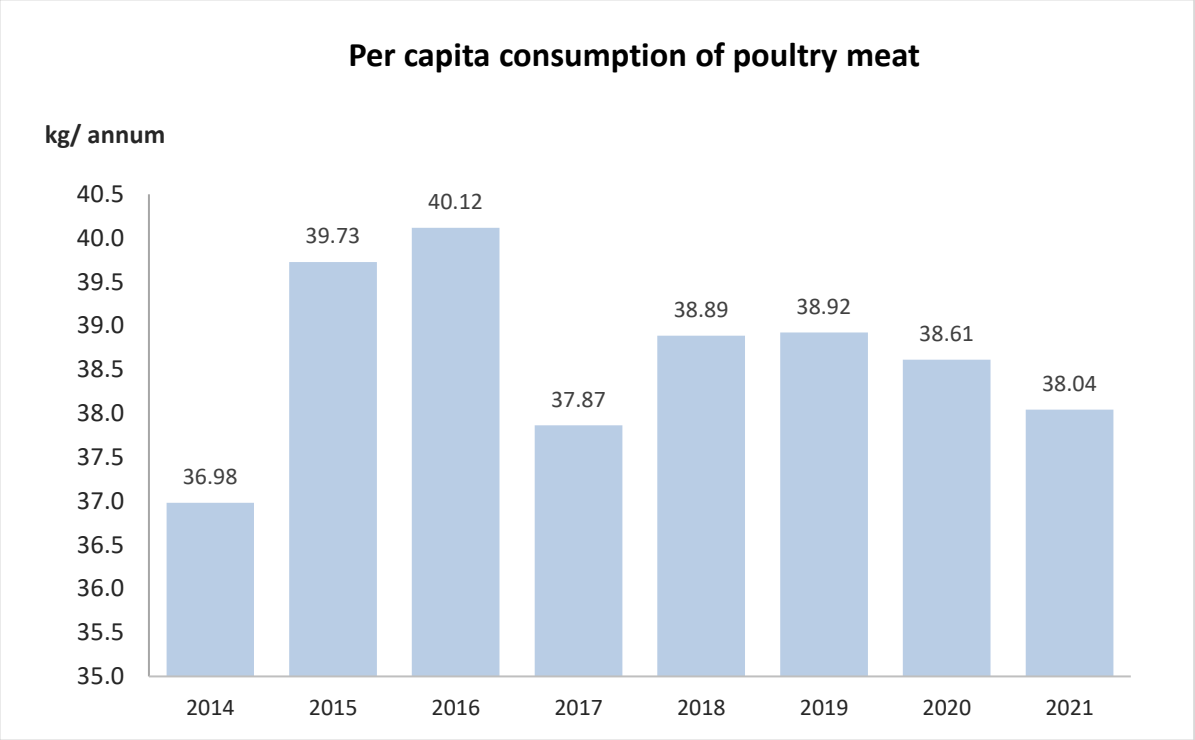


Figure 23. *Per capita consumption of poultry meat in South Africa from 2014 (DALRRD)*

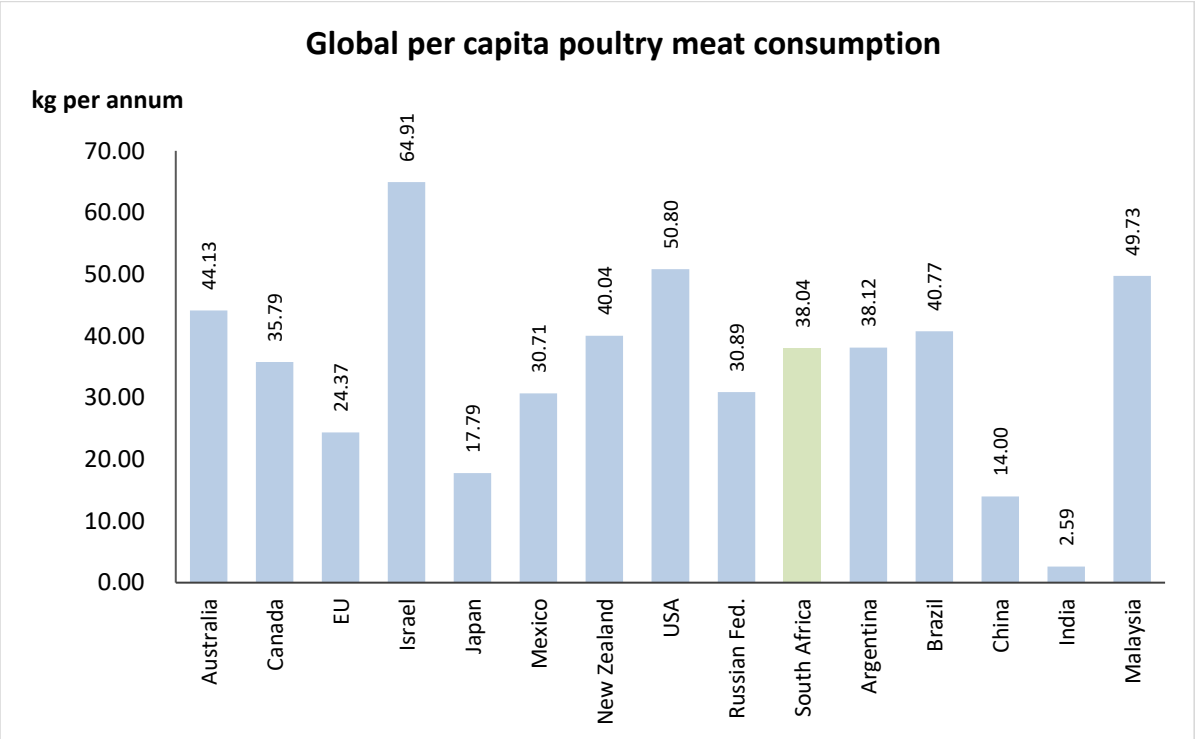


Figure 24. *Approximate per capita consumption (kg) of poultry meat worldwide (OECD-FAO; DALRRD)*

Chicken consumption

Chicken production, including subsistence farming and depleted breeders in the broiler and egg industries, was 1.909 million tonnes (99.97 % of total poultry production; SAPA estimate). Consumption of chicken meat amounted to 2.267 million tonnes in 2021. The per capita consumption of chicken meat for 2021 was 37.70 kg per annum, down 1.9 % from 38.41 kg in 2020 (source: SAPA).

6.7 Trade

South Africa is among the most unprotected markets in the world. Exporters such as Brazil and the EU take advantage of this to dump substantial quantities of cheap chicken here. In contrast, Nigeria does not allow imports at all, and in Botswana poultry imports are permitted only in the uncommon event that there is a domestic market shortage. Namibia introduced a poultry meat import quota in 2013, which was set at 1 200 tonnes/month in 2021.

Worldwide, countries impose very large tariffs to protect their industries while others use sanitary regulations to stop imports into their home markets. For example, the EU, a leading exporter of chicken to South Africa, imposes tariffs of between €18.70 to €102.4/100 kg on broiler imports, compared to an EU farm gate selling price of roughly €180 to €200/100 kg.

https://ahdb.org.uk/eu-and-uk-import-tariff-rates-for-poultry-meat-and-derived-products

https://ec.europa.eu/taxation_customs/business/calculation-customs-duties/customs-tariff/eu-customs-tariff-taric_en

Even more importantly, the EU prescribes strict sanitary, phytosanitary and welfare conditions that must be met in order for a country to export to EU members.

https://food.ec.europa.eu/system/files/2018-06/ia_trade_facstheet_poultry-and-products.pdf

Canada applies a 249 % tariff on all whole, fresh/chilled chickens imported over and above an agreed annual quota (within the quota, the tariff is 5 % (unless a duty-free agreement in place)).

In South Africa, the general tariff on bone-in portions is now 62 % (up from 37 % from March 2020), with no tariff at all on mechanically deboned meat (MDM) which is used in sausages and polonies. In 2015 and 2016, 81 % of imported bone-in portions came from the EU, duty-free, and therefore there was, in effect, almost no duty raised on bone-in portions. In 2018, 17.7 % of imported bone-in portions came from the EU (because of lingering AI-related trade bans against EU nations). The EU accounted for 39 % of bone-in imports in 2019; 31.7 % in 2020 and just 11.0 % in 2021.

Brazil landed 20.5 %, 17.8 % and 34.9 % of the bone-in portions imported in 2019, 2020 and 2021, respectively (from, 46.1 % in 2018) and 32.9 %, 44.8 % and 45.2 % came from the US in 2019, 2020 and 2021, respectively (*cf* 28.1 % in 2018). Duties would have been payable on imports from the Americas.

Annual broiler imports

According to the audited figures of SARS (verified), the annual broiler imports for 2021 totalled 406 826 tonnes; an 11.7 % decrease on 2020 levels (- 53 882 t). Broiler imports in 2021 were 20.7 % lower than the 5-year average (2016 to 2020).

On an FOB basis, the value of imports for 2021 increased by R216 million (+ 4.2 %) from the 2020 value, to R5.35 billion. Broiler imports represent 94.1 % of the total poultry products imported (432 307 t; includes turkey, ducks, geese and guinea fowl). Turkey imports in 2021 amounted to 25 306 t (5.9 % of total poultry imports). Figure 25 presents annual imports of broiler products since 2015, compared with local South African broiler production. The ratio of local production to imported products in South Africa's stocks of broiler meat (before exports) is given in red font.

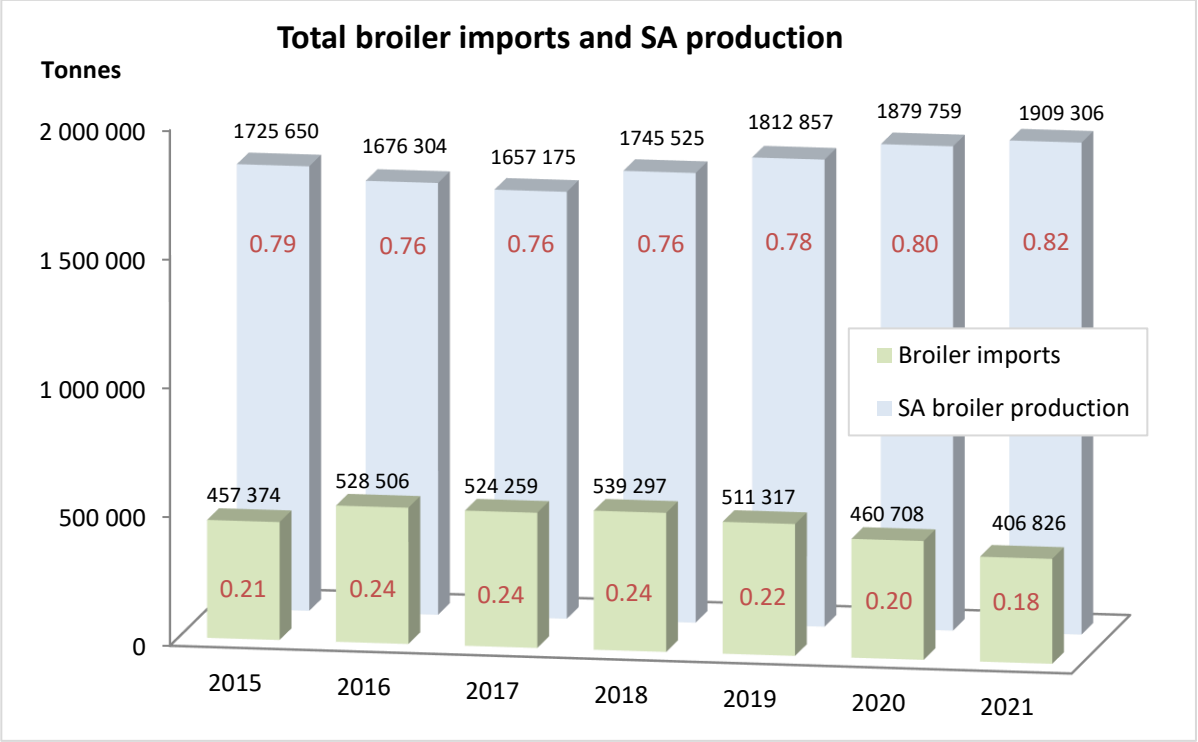


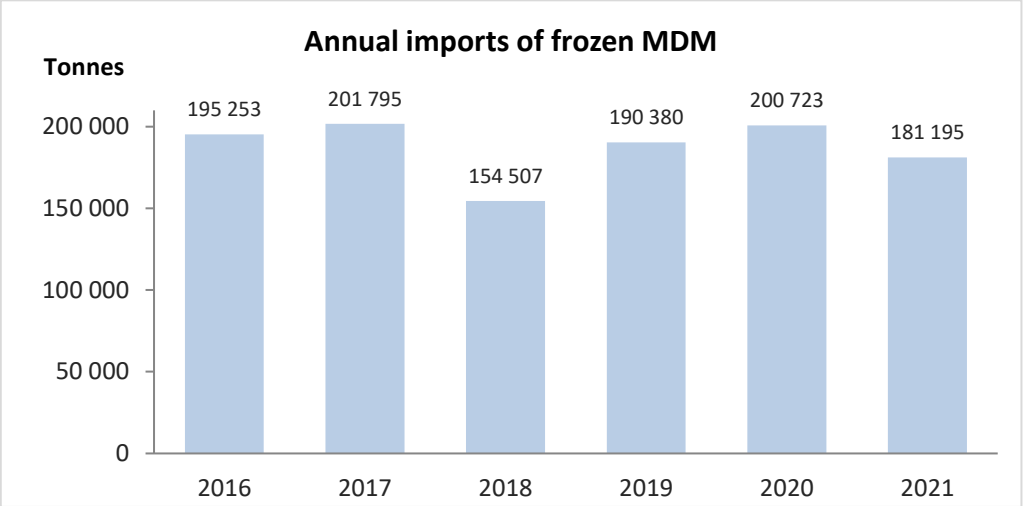
Figure 25. *Total annual chicken imports since 2015 (tonnes) against local production*

Frozen broiler meat imports

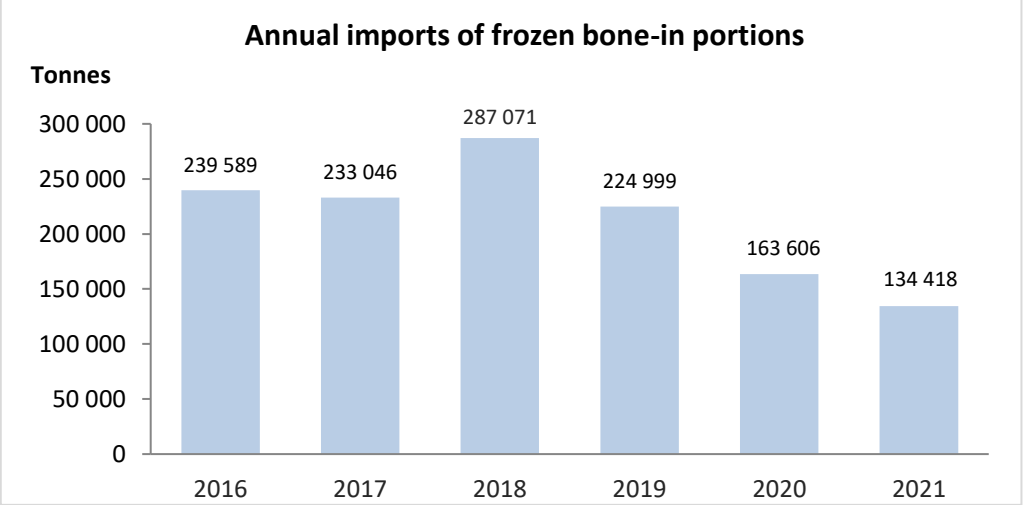
Of the total broiler meat imported through 2021, 99.8 % was frozen (405 853 t). Frozen broiler meat imports decreased by 11.8 % in 2021 from levels imported during 2020 (460 026 t). Frozen broiler imports contributed 17.9 % of broiler consumption in South Africa in 2021; from 20.1 % in 2020. If frozen mechanically deboned meat (MDM) imports are excluded, then frozen broiler imports contributed 9.9 % of broiler consumption; from 11.3 % in 2020.

Mechanically deboned meat (MDM) made up 44.6 % of frozen broiler meat imports (181 195 t), while bone-in broiler imports contributed 33.1 % (134 418 t); whole broilers 3.3 %; carcasses 1.8 %; boneless portions 2.4 %; and offal 14.8 %.

(a)



(b)



(c)

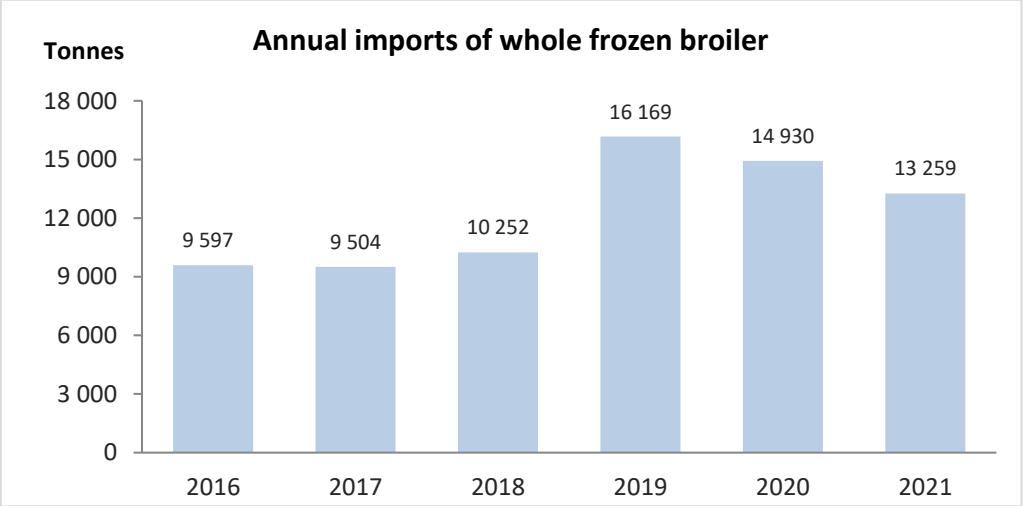


Figure 26. *Annual imports of mechanically deboned meat (MDM), frozen bone-in portions and whole frozen chickens*

Leaving MDM out of import totals ignores the effect that 181 195 tonnes of chicken entering the market at R8.92/kg has on overall pricing. The average FOB price of MDM increased by 30.8 % in 2021, after a 4.6 % increase in price in 2020.

Annual imports of frozen mechanically deboned meat (MDM), frozen whole chickens and frozen bone-in portions are given, above, in Figures 26 (a) to 26 (c); illustrating an almost 10 % decrease in the importation of MDM; and welcome reductions in the importation of frozen bone-in portions and whole frozen chickens.

Origin of imports

The origin of imports had changed over the past decade, with a significant increase in tonnage from the European Union, which enjoys a free trade agreement with South Africa. This picture changed from 2016 and, because of avian influenza-related trade bans against EU exporters, Brazil remained the main country of origin in 2021. Brazil is consistently the main source of mechanically deboned meat in South Africa and joins the US in landing bone-in portions when HPAI affects the European Union. Brazil accounted for 279 259 tonnes or 68.8 %, of total frozen broiler imports into the country in 2021 (up from 57.0 % in 2020; Figure 27); up 28.1 % on Brazilian imports in 2016, before the European HPAI events.

The US was the second largest exporter of frozen broiler products into the country in 2021, with 15.2 % or 61 837 t. Argentinian broiler exports to South Africa decreased by 19.8 % in 2021 (23 690 t; 5.8 % of total); while Thai exports increased by 12.3 % to 4 375 t (1.1 % of total). Australian frozen broiler imports decreased by 18.3 % in 2021 (2 125 t; 0.5 % of total).

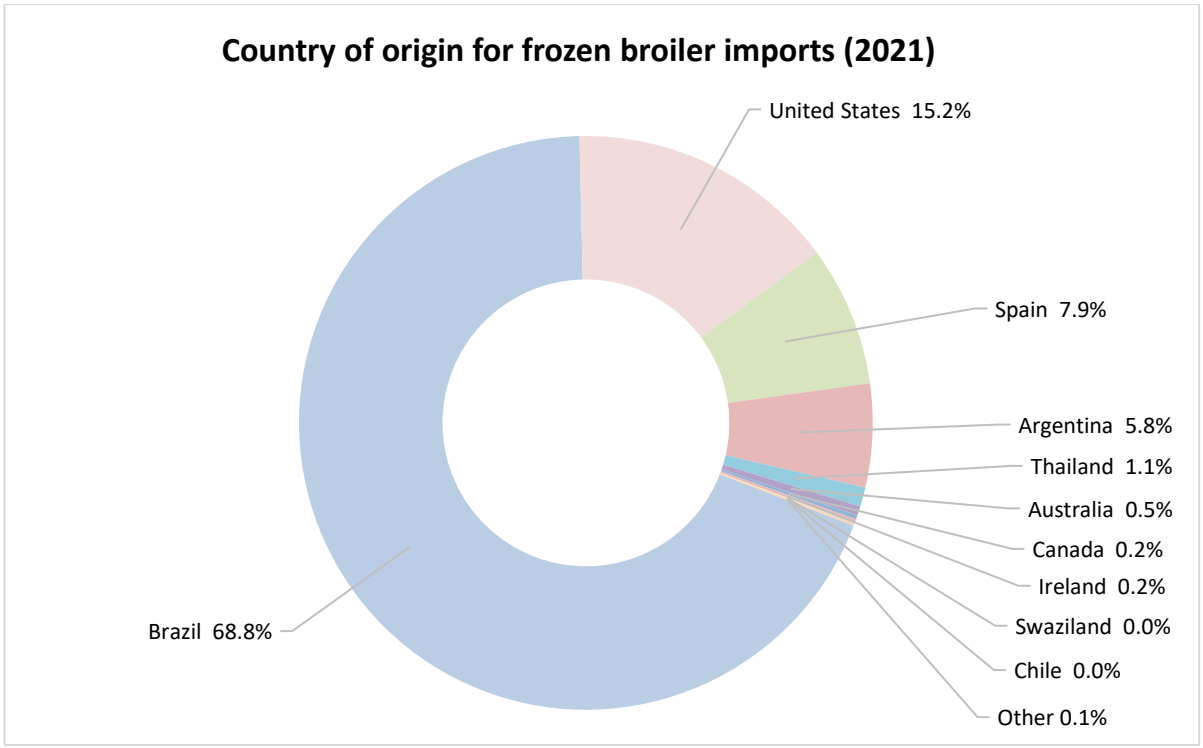


Figure 27. *Frozen broiler imports into South Africa in 2021*

Of the EU exporters, only Spain and Ireland exported significant quantities of broiler products to South Africa in 2021: 32 111 t (7.9 %) and 852 t (0.2 %), respectively. If the EU countries are considered as a single entity 8.2 % of frozen broiler imports entered South Africa through the EU in 2021, compared to 18.6 % in 2020 and 51.1 % back in 2014 (before the European HPAI events). In tonnage terms, a total of 33 086 t of frozen broiler meat was imported from the EU in 2021, compared to 85 475 t last year; 188 474 in 2014; and a paltry 4 139 t in 2009. The drop in EU imports in 2021 reflects the impact of on-going trade bans on EU countries affected by avian influenza.

South Africa was the single largest export destination for EU broiler meat exports in 2016 but this changed from 2016. In 2021, the EU exported more to the UK (now ex-EU); Ghana, Ukraine, the Democratic Republic of Congo, Benin and Saudi Arabia.

The EU has been, over a number of years, the major supplier of bone-in portion imports into South Africa (Figure 28) but, through 2017 and 2018, outbreaks of HPAI and lingering trade bans eroded EU market share, from 81.1 % in 2016 to just 17.7 % in 2018. The EU contribution to bone-in imports increased again to 39.0 % in 2019 and 31.7 % in 2020 - but crashed down to 11.0 % in 2021. Ireland (0.35 %) and Spain (10.6 %) were the only EU exporters sending significant quantities of frozen bone-in portions to our shores. Brazil increased its market share of bone-in portions from 7.9 % in 2016 to 46.1 % in 2018, before dropping to 17.8 % in 2020. Similarly, the US increased its share from 9.2 % in 2016 to 44.8 % in 2020. The Argentinians claimed 5.1 % of the bone-in market in 2020, against 1.2 % in 2016. In 2021, these three importers have accounted for 34.9 % (46 919 t), 45.2 % (60 703 t) and 8.0 % (10 818 t) of bone-in imports, respectively.

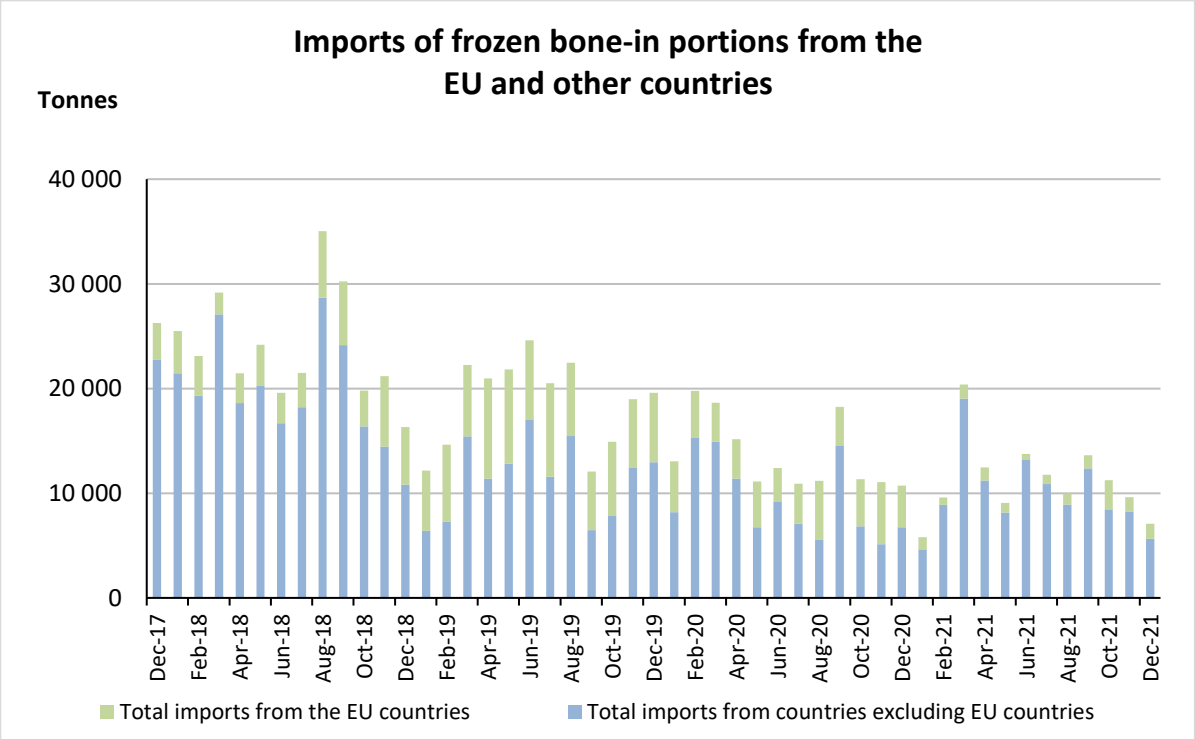


Figure 28. *Imports of frozen bone-in portions from the EU (presented as a single entity) in comparison with the rest of the countries combined*

For some time, Brazil has been the biggest exporter of mechanically deboned broiler meat to South Africa; accounting for 94.3 % of MDM imports in 2021 (170 869 tonnes).

The main product imported from the EU in 2021 was frozen bone-in portions, accounting for 38.7 % of total poultry imports from the Union and 44.7 % of EU frozen broiler imports. This was followed by whole frozen chicken and frozen chicken offals at 33.3 % and 21.5 %, respectively (as a proportion of frozen broiler imports). The main product imported from Brazil was mechanically deboned meat (59.4 % of Brazilian poultry imports; 61.2 % of frozen broiler imports); down from levels close to 78 % in 2016. Bone-in chicken portions made up 16.8 % of Brazilian frozen broiler imports in 2021; along with offal at 17.5 % and boneless chicken portions at 2.9 %. Frozen bone-in portions made up 90.2 % of total US poultry imports in 2021 (98.2 % of frozen broiler imports).

Value of imports

The value of broiler imports into South Africa amounted to R4.712 billion at the free on board (FOB) level in 2021; a 1.8 % increase from 2020. Frozen bone-in portions were imported at an FOB value of R1.954 billion (41.5 % of total broiler value) and frozen MDM at R1.617 billion (34.3 %). The average FOB value of frozen bone-in portions was R14.54/kg; and MDM was imported at R8.92/kg.

The value of total poultry imports into South Africa, including broilers, turkeys, geese, ducks and guinea fowl totalled R5.355 billion, a 4.2 % increase in comparison with the value of total poultry imports for 2020.

Poultry exports

A total of 50 611 tonnes of poultry products (chicken, turkey, ducks, geese and guinea fowl) were exported at an FOB value of R1.153 billion during 2021. This was a decrease of 3.7 % on 2020 tonnages.

Broiler exports accounted for 96.8 % of total poultry exports in 2021 (48 997 t), and 95.3 % of the rand value of total poultry exports (FOB; R1.099 billion). Broiler exports dropped by 2.2 % in 2021. Turkey exports totalled 553 t in 2021; geese exports 242 t; duck exports 57 t; guinea fowl 6 t; and mixed product (ducks, geese or guinea fowl; not specified) 756 t.

Of the total 48 997 t of broiler exports, 35 930 t were frozen products (including 10 384 t of frozen chicken bone-in portions; 8 912 t of MDM and 7 110 t of whole frozen chicken); and 11 419 t were fresh poultry products (including 10 782 t of fresh chicken cuts and offal and 637 tonnes of whole fresh chickens). There were also 1 649 t of products which might either be fresh or frozen (e.g. pâtés, sausages and value-added products).

The main destination countries for *broiler* exports were Lesotho at 27 396 t (57.0 % of total), Namibia at 9 245 t (18.9 %), Mozambique at 3 907 t (8.0 %), Botswana at 3 560 t (7.3 %), eSwatini at 2 522 t (5.1 %), and the UAE at 614 t (1.3 %) of the 48 997 tonnes of broiler meat exported.

6.8 Provincial distribution of broiler farms

In the fourth quarter 2021 Avian Influenza (AI) surveillance monitor, the location of broiler farms was recorded. The survey covers broilers, broiler breeders and breeders in rearing.

Table 12 gives the provincial distribution of broiler farms (breeder and rearing). A total of 694 farms reported in the AI survey, of which 156 were broiler breeder farms and 510 were broiler rearing farms.

Table 12: *Provincial distribution of broiler chickens in South Africa*

Province	Broiler birds	% of total broiler birds
Eastern Cape	7 435 530	6.5 %
Free State	15 260 209	13.3 %
Gauteng	11 024 733	9.6 %
KwaZulu-Natal	6 694 209	5.8 %
Limpopo	3 806 120	3.3 %
Mpumalanga	25 866 964	22.5 %
North West	28 898 974	25.1 %
Northern Cape	311 500	0.3 %
Western Cape	15 766 018	13.7 %
GRAND TOTAL	**115 064 257**	100 %

6.9 Performance efficiency

Feed conversion ratio (FCR) and performance efficiency factor (PEF) values depend on the management of each enterprise. However, top South African broiler farms are capable of achieving FCR figures below 1.5 and PEF figures approaching 375. Average slaughter age is now 32 – 33 days at a weight of 1.8 – 1.85 kg.

6.10 Challenges and prospects for the South African broiler industry

Meat importers have been at pains to convince the public that the local poultry industry does not have the capacity or efficiency to meet South Africa's rising demand for chicken products, and that 30 % of the country's requirement has to be met by imports. Local producers know this to be untrue. Years of predatory competition from cheap poultry imports (often priced below the cost of production) saw the local industry shed jobs and mothball production capacity. Only large, integrated poultry operations can achieve the economies of scale needed to survive the challenge of dumped imports and so investment in the local industry stalled. Production, through necessity, became concentrated in a few big producers, reducing opportunities for transformation, job creation and industry expansion. Organisations arguing against a higher level of tariff protection fail to consider the wider implications of replacing imported chicken with local production: including rural employment; improved environmental sustainability; long-term food security (chicken and feed ingredients); better food quality and safety; and, of course, a lower trade deficit.

The poultry sector plays a key role in the South African agricultural economy. It is the second largest market for South African maize farmers and provides a high quality, affordable source of protein to millions of households. Large producers have some scope to adapt to difficult market conditions by changing their business models, investing in infrastructure, and improving production efficiencies. Smaller broiler producers can provide significant employment opportunities and food security in rural communities but find it harder to withstand the combined challenges of high import volumes and predatory pricing of imported products. If the industry is to be transformed, these entrepreneurs need to be supported. The Poultry Master Plan (described above, Chapter 6.1) is a firm step in the right direction as Government and the poultry industry seek ways to substitute "unfair" broiler imports from the Americas and Europe with local product and, in the process, return "outsourced" agricultural jobs to South Africa.

Poultry imports from the UK were not a concern in 2021 because of HPAI-related trade bans. During this break from UK import pressure, the post-Brexit SACUM-UK EPA came into force on 1 January 2021. The EPA is a free trade agreement between SACU member states (and Mozambique) and the UK. In terms of market access, benefits and opportunities, it is a replica of the SADC-EU EPA, except for few provisions that were modified during negotiations. Under the SACUM-UK EPA, the transitional implementation provisions on safeguard measures ensure that measures instituted against the UK under the EU-EPA will continue to be "applied for no longer, and at a level no higher, than if the effects of the existing EU EPA were continued" (UK Department for International Trade). This means that the current EU-EPA safeguard measure of 15 % levied on bone-in imports will remain in place against the UK until the safeguard falls away in 1Q 2022.

The year 2022 is expected to bring resolution on a number of other trade issues. The EU request for formal consultations with the Southern African Customs Union (SACU) on the duties imposed on bone-in portions (EU EPA safeguard) should reach conclusion in 2022 and the local industry is confident that the arbitration panel will find in their favour. SAPA's application to ITAC for anti-dumping duties to be levied on bone-in imports from Brazil and four EU nations (Denmark, Ireland, Poland and Spain) is expected to be finalised in mid-2022, with the possibility of interim measures being applied earlier in the year. A sunset review of US anti-dumping duties on bone-in portions is scheduled for November 2022, and SAPA will argue that these duties should remain in place to prevent material injury to the local industry.

Poultry producers have been urged to look for export opportunities for white breast meat because a key finding of the government-led industry analysis (which resulted in the Master Plan) was that South Africa needs to become a significant exporter of poultry products. Broiler exports in 2021 were almost 30 % lower than in 2016. Outbreaks of HPAI in the South African flock reduced export opportunities and it is unlikely that exports will recover much in 2022 for the same reason. Export-led growth is the surest way for consistent industry expansion in excess of population growth levels, and the opening up of new export markets for South African meat and egg products should be an industry and government priority over the next few years. However, achieving a level playing field in international trade is difficult: South Africa is a first world country in World Trade Organisation terms and therefore has open borders. The EU and SADC producers are able to export to South Africa at preferential tariff rates. A legislative review by BFAP suggests that the broiler industry is not in a favourable position regarding

unilateral and bilateral commitments to imports and exports. Currently the bulk of exports is destined for SADC neighbours, but even some possible neighbouring markets are not accessible to South African producers for non-tariff reasons (BFAP). Europe and the USA block imports from South African on the basis of non-tariff barriers, such as the presence of Newcastle disease, and AI in ostriches. Issues of bird welfare, meat inspection, medication residue monitoring, environmental protection, food safety and animal health will need to be understood by the industry and responded to (in collaboration with DALRRD) in order to allow competition in international markets.

Data from BFAP suggest that South Africa will not be able to compete with leading exporters such as Brazil and the US unless favourable transportation rates to the export destinations can be realised; or it obtains preferential access into certain markets. Many Eastern markets, including the UAE, Saudi Arabia, Hong Kong and Japan, are located favourably for South Africa in terms of transport costs but the demand structure in these countries is similar to South Africa. The UK and Europe (breast meat) and Saudi Arabia (whole birds) present export options for South African producers if phytosanitary, sanitary, traceability and welfare barriers can be overcome.

Closer to home, the Government released a policy statement on localisation for jobs and industrial growth in May 2021. The statement emphasised that South Africa has an over-propensity to import goods which could otherwise be produced in South Africa; a situation which does not support developmental needs. In a society with extraordinary levels of unemployment and poverty, Government believes that new job growth will be stimulated by demand for the products and services produced and that this demand can come from a combination of expanded domestic consumption and increased levels of exports. A deliberate strategy of localisation is to be pursued to build local industrial capacity and job creation. Although controversial, the South African broiler industry may derive some benefit from the localisation strategy if Government were to commit to preferential procurement of local chicken products in its tendering processes; and to promote export opportunities for locally produced chicken.

The deterioration in municipal infrastructure, and electricity and water supply have become almost insurmountable problems for broiler farmers. Astral's experience at Standerton in the Lekwa Municipality is a case in point. In 1H 2019, water supply interruptions to southern Africa's largest poultry processing plant cost the company at least R85 million. The supply of water became so constrained that it fell short of the 4 megalitres per day agreed to under an existing court order and, at times, failed completely for extended periods. When a processing plant stands idle, there are inevitable negative consequences for the company, the workforce, suppliers and the wider community. An emergency arrangement in 2019 allowed Astral to install infrastructure to extract raw water from the Vaal River and transport it by road to a company-owned filtration plant. While the arrangement supported continued production at the plant, it came at a significantly higher operational cost. A High Court interdict obliged the Lekwa municipality to submit a longer term plan to repair and improve the municipal water supply infrastructure but the MEC for Finance in Mpumalanga only approved the financial recovery plan on 14 October 2019. Over the next year, the Municipality's infrastructure continued to deteriorate, the debt owed to Eskom and Rand Water increased and the interruptions of water

and electricity supply to the community continued. In 2021, Astral approached the North Gauteng High Court in Pretoria to force an intervention by national government, arguing that none of the steps set out in the financial recovery plan had been actioned. On 12 April 2021, the Court ordered the involvement of the National Treasury under section 139(7) of the Constitution, and section 150 of the Municipal Finance Management Act (MFMA). The first firm action taken was the national Executive's resolution to dissolve the municipal council of Lekwa, followed by the appointment of an experienced administrator in May 2021. In October, National Treasury published a financial recovery plan for the insolvent municipality, giving it three years to get its finances in order. Local government failings and inefficiency are serious risks to the sustainability of local businesses, especially those in rural areas where jobs are desperately needed. Without court action, very little is done to support businesses operating under these conditions. Unless infrastructural challenges are addressed urgently, businesses will be dissuaded from investing and expanding and will struggle to remain globally competitive.

The ability of financially-constrained South African consumers to purchase chicken was reduced further in 2021 by global food price inflation. Food constitutes a significant share of spending in poor households, making a sustained rise in prices concerning. South African food price inflation averaged 6.5 % in 2021 (Stats SA), against a global annual food price index increase of 27.1 % (FAO). It seems that high food price inflation is likely to continue into 1H 2022, because of COVID-19 related supply chain disruptions, stimulus packages and lockdown savings spurring pent-up demand, and unfavourable weather conditions in important production regions. Poultry meat price inflation climbed in 2021 because avian influenza and high input costs slowed the post-COVID recovery in global production, which then lagged behind the rising demand in reopening economies. Of course, price pressures at the agricultural level and a weak rand exchange rate inevitably drive up manufacturing costs and retail pricing. The emergence of the omicron variant of the COVID-19 virus in December 2021 reinforces the likelihood that disruption to supply chains and food price inflation will persist into 2022.

Can broiler farmers expect feed prices to drop in 2022? Chinese demand for maize and oilseeds remains high as the country's pig herd is rebuilt, and demand for biofuels is increasing as markets look to move away from fossil fuels to more sustainable options. Oil prices are rising as the world reopens and this could, in turn, move biofuel and feed ingredient prices ever upwards. However, the USDA is cautiously optimistic that maize crops in the US, Brazil, China and Ukraine will support an increase in global production that will exceed demand in 2022. The caution in this forecast stems from concerns about climatic conditions, particularly in Brazil where a second year of the La Niña weather pattern could reduce yields. Shipping costs will remain high in 2022, as will domestic transport costs, putting further upward pressure on feed prices.

As with the cage-free revolution in the egg industry, broiler welfare initiatives are rapidly becoming another horizon issue for South African farmers. There were a number of developments in this regard in 2021. In August, the last Dutch supermarket signed up to the Better Life (Beter Leven) quality assurance scheme. This means that, by the end of 2023, all fresh chicken sold in Dutch supermarkets will carry at least one Better Life star. One star indicates that the bird's welfare is given sufficient attention, including provision of additional space compared to normal production systems. Two- and three-star awards signify

increasing levels of welfare. Five Belgium supermarket chains, Colruyt, OKay, Delhaize, Lidl and Aldi have signed up for the Better Chicken Commitment (run by Compassion in World Farming (CWF)). By 2026, all chicken sold in the supermarkets will be of a slower-growing breed and reared under enhanced welfare conditions. Colruyt and OKay also committed to using chicks hatched on site; allowing immediate access to food and water. One of Scandinavia's leading poultry producers, Danpo, is to also on track to transition to a slower growing broiler; phasing out the Ross 308 by late 2021. In August, the UK announced the development of new regulations governing the transportation of live animals. Higher welfare standards, including maximum journey times (4 hours for broilers and end-of-lay hens; 21 hours for day old chicks) and stricter rules on transportation of animals in extreme temperatures (< 5 °C and > 25 °C) are being worked out in consultation with the industry and transporters.

South African producers can expect fast food chains (with international footprints) to come under increasing pressure to sign up to stricter welfare codes within the next few years. Rabobank's Nan-Dirk Mulder has suggested that social concerns, such as broiler welfare and sustainability, offer opportunities for producers seeking to differentiate themselves from competitors.

There seems to be no end to the challenges faced by broiler farmers as the world moves towards a more sustainable future – one of the latest is reducing antibiotic use. In 2020, almost 60 % of the US broiler flock were reared under "no antibiotics ever" (NAE) programmes; up from 3 % in 2014. American quick serve restaurant, Chick-fil-A, reported in September 2020 that it had reached its 5-year goal of NAE chicken across all its restaurants. Other restaurant chains such as Subway, KFC, Taco Bell and Pollo Tropical, all have NAE policies in place. Major US chicken producers, including Tyson and Perdue, have increased production of antibiotic free chicken in recent years as they transition to NAE production systems.

The South African Department of Health has developed a National Antimicrobial Resistance (AMR) Strategy Framework for managing antimicrobial resistance (2017 – 2024). The drivers of antibiotic resistance include unnecessary, inappropriate and prolonged prescription of antibiotics; reliance on broad spectrum antibiotics; poor infection control practices in medical establishments; and a lack of qualified veterinary health professionals to oversee antimicrobial use in animals (coupled with weak regulations and enforcement mechanisms). The Framework seeks a return to appropriate, targeted antimicrobial use in humans, animals and the environment, in order to maximise the antimicrobial options available to practitioners in the future. The National AMR Strategy Framework outlines key strategic objectives to slow the development and spread of AMR, and improve patient outcomes, animal health and food production through better use of antimicrobials. This is not a topic that broiler farmers will be able to ignore much longer.

As the second largest sector in agriculture, the broiler industry holds the key to unlocking economic growth and job creation throughout the poultry value chain. The on-going expansion of the industry in 2022 is essential for producers and consumers alike, in order to keep pace with the population growth and to create space in which new-entrant black farmers can play a meaningful role.

7. SUBSISTENCE AND SMALL COMMERCIAL FARMERS

7.1 Overview

Emerging broiler farmers contribute less than 1 % to the South African production of chicken meat. Emerging egg producers constitute 1.0 % of the industry total, so there is still a long way to go and much work to be done in opening up the poultry market to new farmers.

An independently operating subsidiary of SAPA, the Developing Poultry Farmers Organisation (DPFO), was formed in 2003 to address the specific needs of emerging and small-scale producers of eggs, dressed broilers and live birds. The DPFO was concerned with promoting and advancing the developing sector of the South African poultry industry so that these farmers could move into the mainstream agricultural economy.

In late 2013, the need for a new, more efficient and relevant SAPA became clear. The restructuring process included consolidating the four SAPA subsidiaries - the Broiler Organisation, the Egg Organisation, the Chick Producers Organisation and the Developing Poultry Farmers Organisation – into two product-related organisations.

Under this consolidation process, producers from the DPFO were absorbed into their respective product value chains, falling under either the Broiler Organisation or the Egg Organisation.

It is important that smaller farms become fully integrated into the new structures and, to this end, a sub-committee on transformation was formally established in August 2014. The sub-committee is tasked with facilitating the transformation process for all SAPA members.

7.2 Subsistence and small commercial farmers: statistics

SAPA continues to play a major role in the collection of statistics by conducting regular surveys amongst new-entrant and small commercial farmers. The aim is to better understand the unique conditions facing the smallholder poultry producer, so that appropriate support can be provided. All small commercial farmers are encouraged to participate in these statistical surveys.

During 2021 two surveys were conducted; one covering the summer months from October 2020 to March 2021 (1H 2021), and the other covering the winter months from April to September 2021 (2H 2021). The results were combined to provide annual figures.

Figure 29 shows the distribution of survey respondents in South Africa for the winter period.

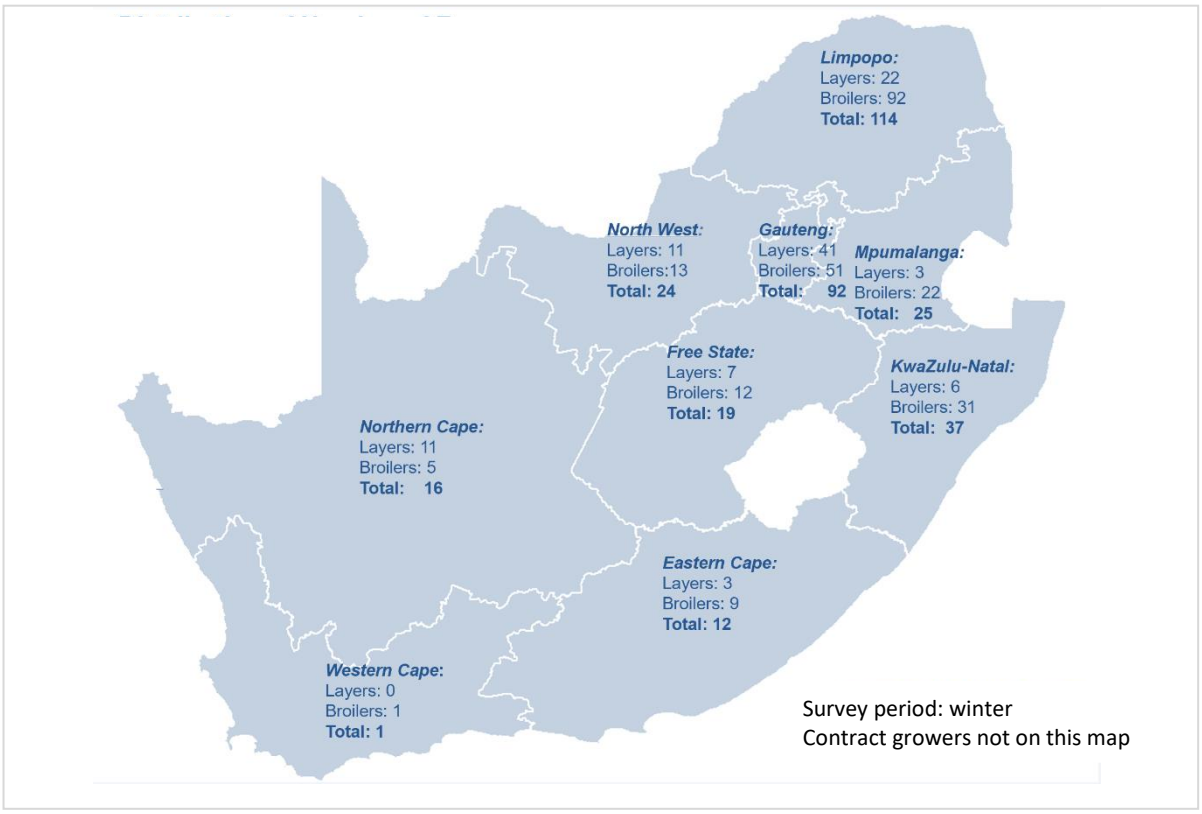


Figure 29. *Distribution of survey respondents (subsistence and small commercial farmers).*

Survey respondents have cited a number of challenges confronting them. These include:

- The need for training in poultry flock management;
- High input costs, especially feed and transport, affecting profitability;
- Difficulty sourcing fertile eggs, good quality day-old chicks and point-of-lay pullets;
- Remote location of farm from feed mill and co-ops;
- Poor condition of their housing facilities and equipment;
- Poor or erratic supply of electricity (due to load shedding) and water
- Lack of funding to renovate facilities, purchase inputs or to expand;
- Poor growth rates and high mortality rates caused by diseases or cold weather;
- Hens coming in to lay late and not reaching target egg production;
- Competitors in the area undercutting prices giving rise to an unstable market;
- Non-payment by customers leading to cash flow problems;
- Reduced or no profits;
- Theft of birds by community members due to unemployment.

Statistical survey: the broiler industry

The statistical survey comprises different types of producers from the broiler industry, including broiler hatcheries, independent broiler growers, contract growers and abattoirs. A small commercial broiler farmer is defined as one producing between 1 500 and 40 000 birds per cycle, whereas subsistence farmers produce less than 1 500 broilers per cycle. Figure 30

depicts the location of the subsistence and small commercial broiler farmers in South Africa in 2H 2021. The survey results are summarised in the tables below.

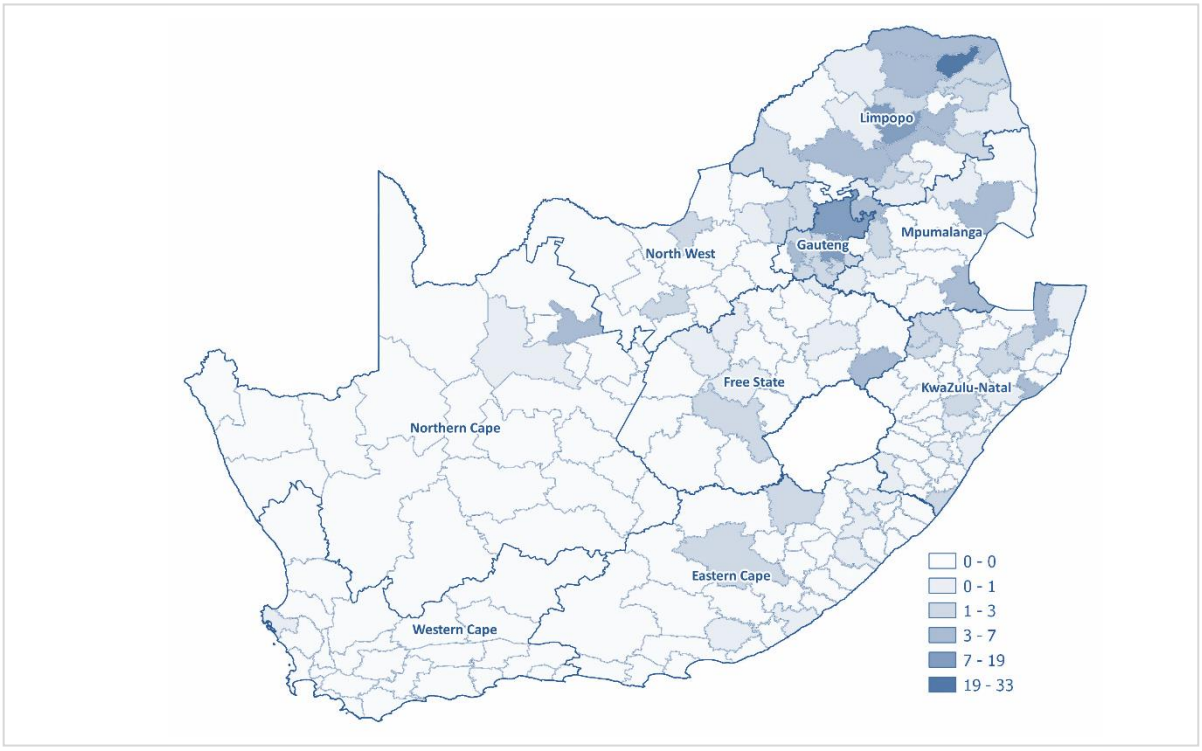


***Figure 30**. Distribution of subsistence and small commercial broiler producers surveyed*

A large number of broiler producers exited the market during the year; evidence of the difficult trading conditions (Table 13).

Table 13: *Survey respondents and business activity: broiler producers*

Period	1H 2021	2H 2021
Number of respondents	243	261
Completed questionnaires	217	236
Number that stopped farming	26	25
Number that resumed farming	27	5

The average costs of inputs paid by survey respondents, for 1H 2021 and 2H 2021, are shown in Table 14 below.

Prices exclude VAT and delivery. Feed is mainly purchased in small quantities in 40 or 50 kg bags but for comparative purposes the prices are shown in rand per tonne. Prices paid by commercial farmers are shown in italics. The lower ration prices for the small farmers compared to large commercial producers may be an indication of differences in nutrient

density, or inaccuracies in the reported bag prices. The bulk price is expected to be lower than the bagged price.

Table 14: *The average input costs of survey respondents: broiler producers*

Period	1H 2021	2H 2021
Day-old chicks (R/bird)	7.98	8.59
Broiler starter (R/t)	6 876	6 949
Broiler grower (R/t)	6 479	6 612
Broiler finisher (R/t)	6 315	6 324
Av. commercial broiler feed (R/t)	*6 856*	*7 121*

Figure 31 shows the average broiler feed prices for the two quarters for survey respondents (small commercial producers) and commercial producers. For the comparison, bag prices have been divided by 40 kg or 50 kg to change them to a R/kg price. The R/tonne bulk prices were divided by 1 000 to convert them to R/kg.

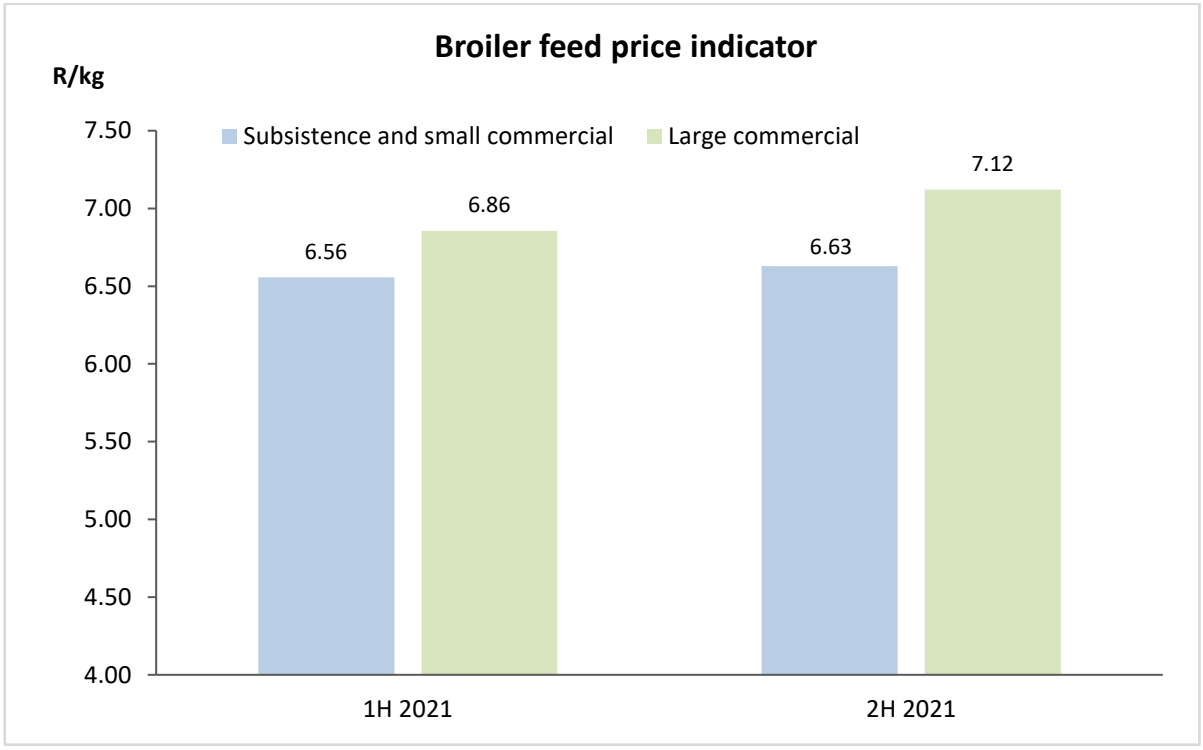


Figure 31. *Average broiler feed price indicator per quarter, for small and commercial farmers*

Production volumes and average selling prices for 1H 2021 and 2H 2021 are summarised in Table 15 below. In 1H 2021 there is a large difference in the selling prices of slaughtered birds (R/kg) between small-scale members and commercial producers. Smallholder broiler farmers tend to slaughter the birds themselves or pay an independent abattoir approximately R5.76 per bird to do the processing. These dressed birds are often sold directly to the end user at inflated

prices. Commercial broiler producers sell dressed birds to the wholesale or retail sector in bulk quantities at relatively low prices, after discounts and rebates have been deducted by the supermarket chains. In 2H 2021 the weighted average price of dressed birds for small farmers was pulled down by one large producer selling at R20/kg.

Table 15: *Production volume and selling prices of survey respondents: broilers*

Period	1H 2021	2H 2021
Live sales volume (birds)	415 100	524 000
Weighted average price (R/bird)	R60.29	R62.49
Live sales as a % of total sales	82.9	83.9
Slaughtered volume (birds)	85 500	100 300
Average price (R/kg)		
Small-scale	*R30.53 (R74.69/bird)*	*R23.65 (R78.92/bird)*
Commercial	*R24.62*	*R26.04*

The estimated margin over feed cost, for small-scale and commercial producers, is shown in Figure 32. In doing these calculations, it was assumed that the feed conversion ratio is 1.7 (that is, a broiler eats 1.7 kg of feed to put on 1 kg of body weight or meat), and the dressing percentage is 72 % (that is, 72 % of the carcass is edible meat and the other 28 % is bone, feathers and inedible offal).

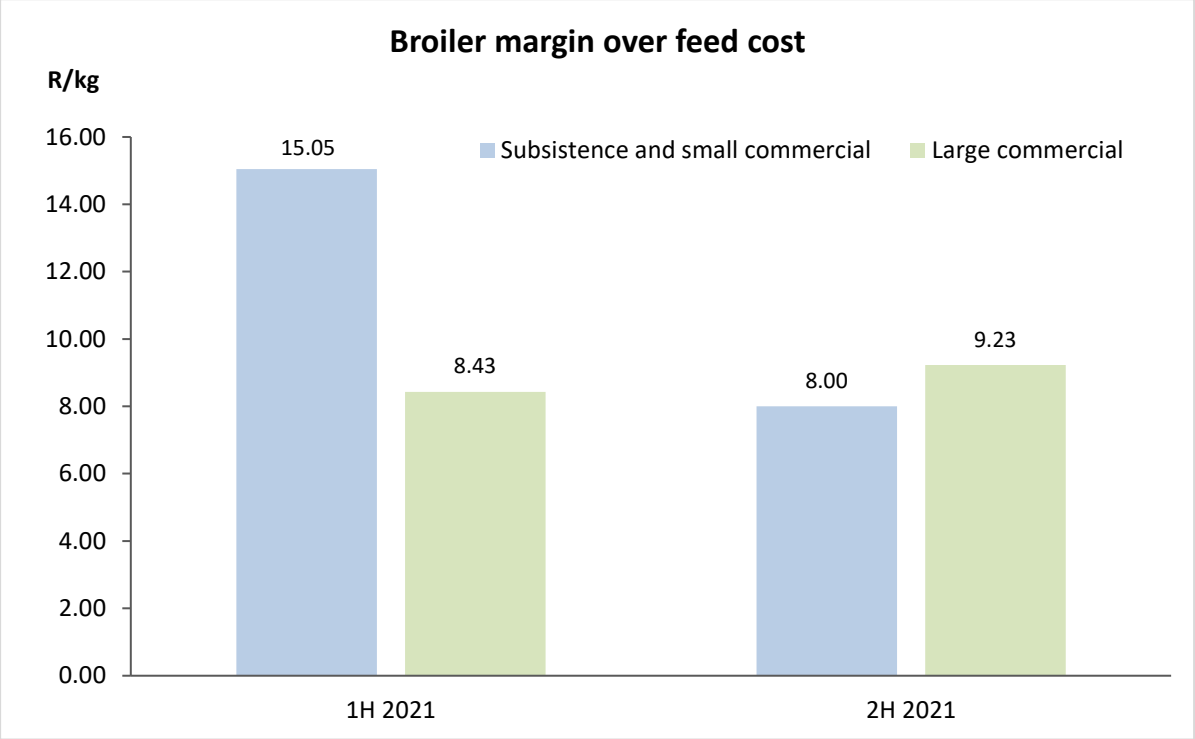


Figure 32. *Estimated margin over feed cost per quarter (broilers) for small and large commercial farmers*

As seen in Figure 32, in 1H 2021 the small-scale broiler farmers enjoyed a substantially larger margin than commercial farmers because of their higher selling price. This situation changed in 2H 2021.

In the broiler industry, the feed cost is approximately 70 % of total production cost. Other expenses that need to be taken into account before calculating the profit are gas, shavings, vaccines, cleaning materials, salaries, water and electricity, protective clothing, and the cost of day-old chicks.

Statistical survey: the egg industry

The statistical survey includes both pullet rearers and commercial egg farmers (Table 16). A small commercial egg farmer is defined as an enterprise which has between 500 and 50 000 hens, whereas subsistence farmers are those that have less than 500 laying hens.

Table 16: *Survey respondents and business activity: egg producers*

Period	1H 2021	2H 2021
Number of respondents	118	115
Completed questionnaires	94	104
Number that stopped farming	24	11
Number that resumed farming	8	1

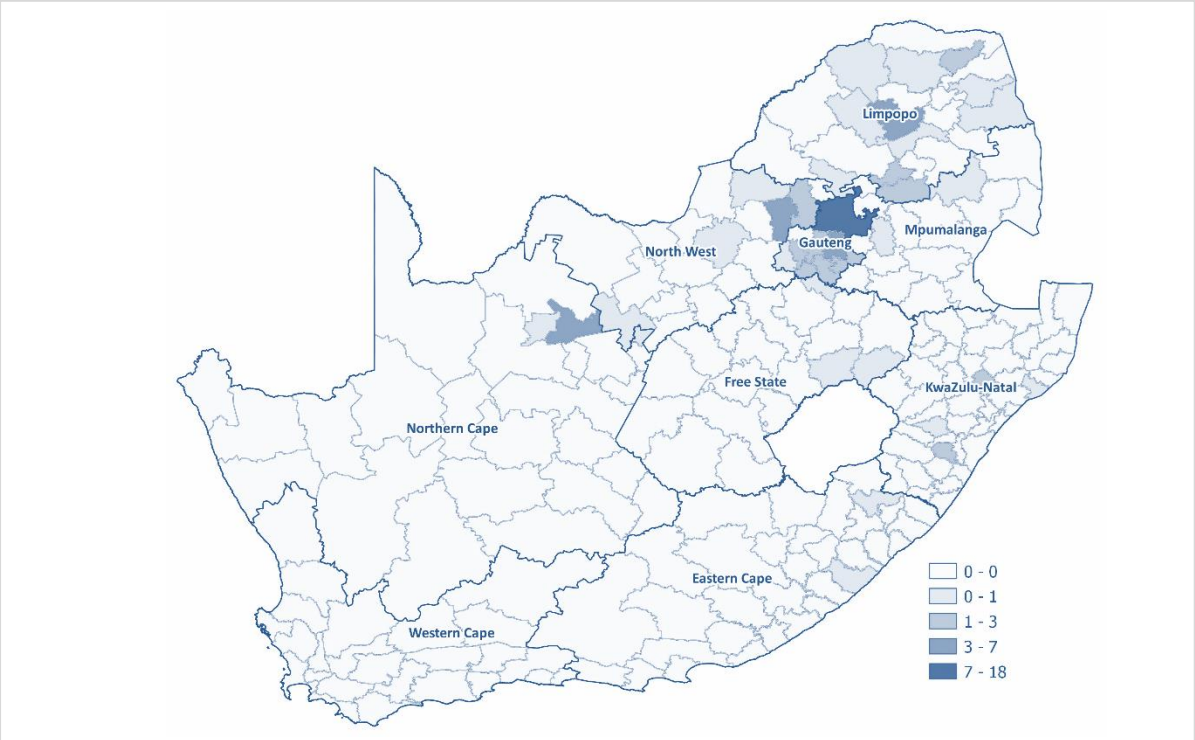


Figure 33. *Distribution of subsistence and small commercial egg producers surveyed*

Figure 33 (above) depicts the distribution of subsistence and small commercial egg producers in South Africa. The survey results are summarised in the tables below. All prices are exclusive of VAT and delivery costs. Where possible, comparisons are drawn between the input and output prices for small-scale members and commercial producers, as estimated by SAPA.

The cost of inputs is summarised in Table 17 below. The average feed price paid by large commercial egg producers is shown in italics (source: SAPA survey, published in *Monthly Egg Price Report*).

Large commercial farmers generally have an advantage because they buy in bulk and therefore qualify for volume discounts. Subsistence and small commercial producers buying small quantities are paying a bagging cost and a mark-up if they are located far from the feed manufacturer and are purchasing from a depot or co-op.

According to the 2H 2021 survey, 91 % of smaller egg producers bought their feed in bags while 9 % purchased in bulk.

Table 17: *The average input costs of survey respondents: eggs*

Period	1H 2021	2H 2021
Day-old pullet (R/bird)	11.64	12.07
Point-of-lay pullet (R/bird)	85.15	88.47
Laying mash (R/tonne)		
Small producers (buying bags)	6 185	6 580
Small producers (buying bulk)	4 614	4 711
Large commercial	*4 488*	*4 788*

The feed price in R/kg for the 1H 2021 and 2H 2021 is shown in Figure 34. The bag price is divided by 40 kg or 50 kg to give a R/kg price. For farmers buying in bulk, the R/tonne price is divided by 1 000. This allows us to compare feed prices for small and large egg producers.

There are substantial differences in the prices paid by smaller farmers buying in bags and large commercial producers. Expressed as percentages, these differences are + 37 % for both periods.

Table 18: *Pullet and hen numbers of survey respondents*

Period	1H 2021	2H 2021
Number of pullets being reared	48 500	48 900
Number of laying hens	124 500	106 300
Farm capacity	292 900	310 800
%	42.5	34.2

Bird numbers and egg production are shown below (Table 18, above). The large drop in the % utilisation of facilities is an indication of the extremely difficult conditions facing farmers, where profit margins are tight or even negative. The cost of purchasing layer replacements may be a factor because many smaller producers do not have adequate cash flow for a large purchase in one month.

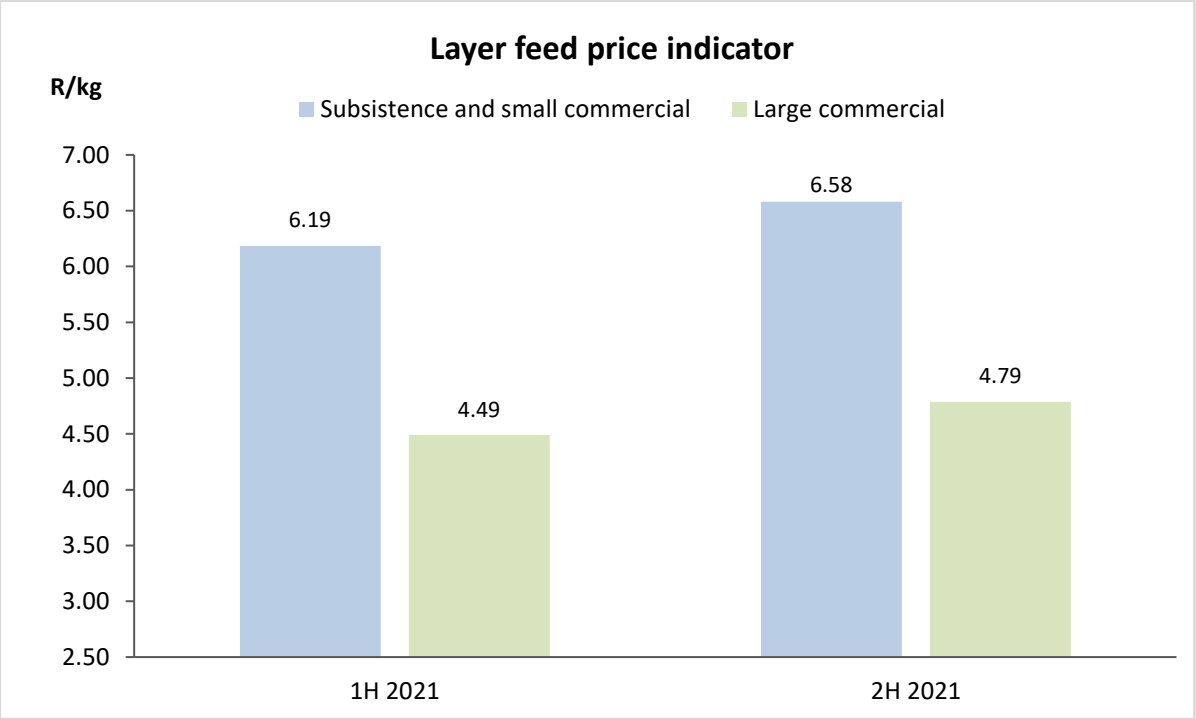


Figure 34. *Average layer feed price per quarter for small and large commercial farmers*

Average selling prices and the estimated margin over feed cost are given in Table 19. The average prices obtained by large commercial egg producers are shown in italics (source: SAPA survey, published in *Monthly Egg Price Report*).

Table 19: *Average selling prices and margin over feed cost: egg producers*

Period	1H 2021	2H 2021
Egg price (R/dozen)		
Subsistence and small commercial	16.54	17.38
Large commercial	*15.52*	*17.01*
Cull price (R/hen)		
Subsistence and small commercial	45.92	49.80
Large commercial	*28.01*	*34.67*
Feed cost (R/dozen)		
Subsistence and small commercial	9.90	10.53
Large commercial	*7.18*	*7.66*
Margin over feed cost (R/dozen		
Subsistence and small commercial	6.64	6.85
Large commercial	*8.34*	*9.35*

Figure 35 shows the average price for eggs for the 1H 2021 and 2H 2021. Small producers have fared slightly better than large commercial producers, probably because they often sell direct to the end user. Large scale producers supplying big cities and supermarket chains are price-takers. Expressed as percentages, these price differences are + 6.6 % and + 2.2 % for the two consecutive periods.

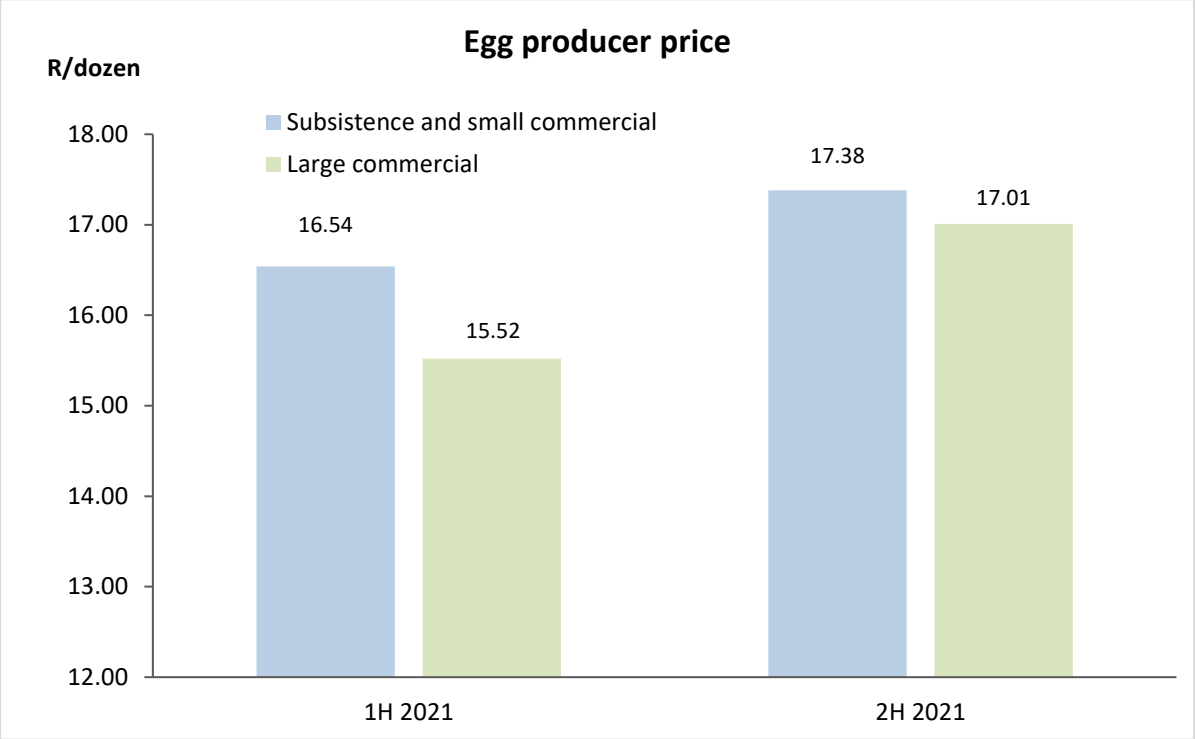


Figure 35. *Average producer price per quarter for small and large commercial farmers*

The high cull hen price obtained at the end of the laying cycle puts the small farmers in a strong position to purchase new point-of-lays. In 2H 2021, the average cull price of R49.80/hen was 56 % of the average point-of-lay price (R88.47).

In Table 19 (above), the estimated feed cost in rand per dozen is a calculation based on the feed price (R/kg) multiplied by a feed conversion of 1.6 kg/dozen. In the 2H 2021, every one dozen eggs produced cost the smaller farmer R10.53 in feed.

The estimated margin over feed cost is calculated by subtracting the feed cost from the egg price. For small-scale farmers in the 2H 2021:

R17.38/dozen – R10.53/dozen = R6.85/dozen

Figure 36 shows that subsistence and small commercial farmers realised lower margins over feed cost than their larger counterparts. There is an opportunity here for smaller farmers to focus their efforts on marketing strategies that will increase their selling price.

Other monthly expenses, such as salaries, packaging material, electricity, water, vaccinations, cleaning materials and the cost of new point-of-lay pullets still need to be taken into account before working out the profit per dozen.

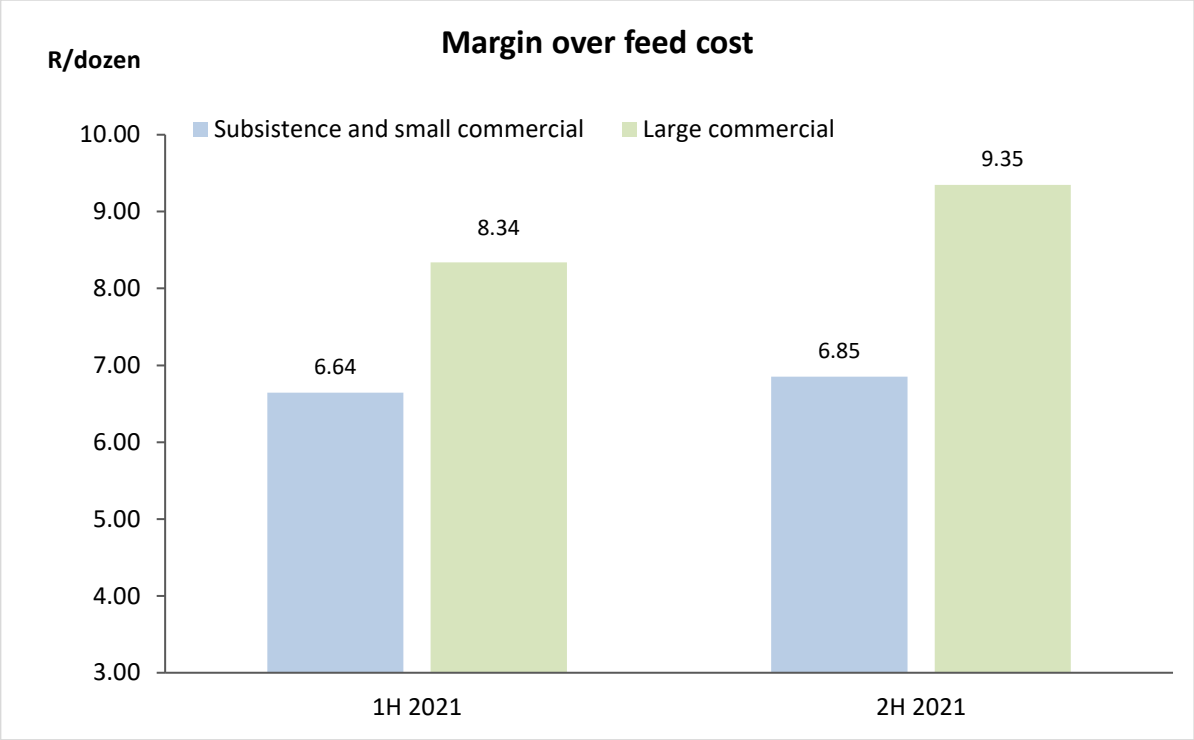


Figure 36. *Average margin over feed cost per quarter for small and large commercial farmers*

There is a real opportunity for both smallholder broiler and egg farmers to make profits and develop sustainable businesses. It may not be possible to reduce the cost of inputs, but by focusing on improving farm efficiencies (reducing wastage and mortalities, and increasing production and growth rates), as well as securing reliable markets, the outcome could be very positive.

These results emphasise the importance of reliable statistics for the industry and small commercial farmers in particular. Agricultural statistics are key to measuring the performance in a sector. Data are used for decision making, planning, research, etc. The data presented in this report are obtained from the analysis of the small-scale farmer survey results. Grateful thanks go to Silverpath Consulting for the excellent job they do and to all the small commercial farmers who patiently contribute to the telephonic surveys.

These statistics are the best available in South Africa but can get better with stakeholder involvement. We encourage all emerging farmers, whether SAPA members or not, to participate in these statistical surveys, so that we can present a better picture of the issues that confront this sector to the rest of the industry and other stakeholders. We need your assistance in this matter.

7.3 Industry transformation

A transformation committee was established during 2014 to facilitate transformation activities within SAPA and amongst the SAPA members, and to monitor progress and provide reports to the key stakeholders in transformation. More information can be found in Chapter 9.1.

Clearly the idea behind any transformation agenda is to give people who have been excluded from the mainstream economy an opportunity to successfully participate, but the solution is not always straightforward. Specific markets are needed for smaller new entrant farmers that will allow development projects to succeed and grow - but in recent years the industry as a whole has found itself under huge financial pressure. High levels of imports and soaring feed costs have put small businesses to the sword and only large, integrated operations, with economies of scale are likely to survive in the current environment. This is a worldwide trend in broiler and egg production. Meaningful transformation therefore can prove difficult. On the one hand, Government is throwing significant resources at bringing small scale producers into the poultry value chain, in order for them to contribute to food security and rural development, but, on the other hand, it continues to expose the industry to open and often unfair market forces. Government could stimulate much greater levels of industry transformation by ensuring the unfair competition from dumped imports is removed from the market.

SAPA should be better placed to drive transformation projects over the next few years. The reintroduction of the statutory levy on egg producers comes with provisos. Twenty percent of the monies collected must be spent on industry transformations initiatives. In addition, NAMC has approved SAPA's evergreen transformation trust fund, created from the historical levy surplus, and this fund will be used to support transformation projects.

It remains of critical importance to integrate smallholder farmers and larger new-entrant commercial producers into the poultry value chains. They have a vital role to play in poverty alleviation, ensuring food supply and creating jobs in South Africa.

7.4 Prospects going forward

It is not easy to enter mainstream markets. A definite minimum size exists, below which a broiler farm will struggle to sustain its profitability. In addition, the farm must be close to a feed mill, veterinary services, and abattoir and cold-chain facilities. Egg producers face slightly fewer constraints, and it is a little easier for emerging farmers to enter this market. However, egg producers, even at the commercial level, are consistently under strain in South Africa because demand for the product is weak (compared to global levels) and does not increase at the same rate as broiler meat demand when consumers' disposable income increases. The Transformation Committee will continue to push for meaningful transformation within the industry to allow for much improved market access and to support its members with advice, training and mentoring.

8. POULTRY HEALTH / DISEASE AND WELFARE

8.1 Introduction

Outbreaks of poultry disease in recent years, such as Newcastle disease and highly pathogenic avian influenza, have demonstrated the vulnerable position which the South African industry is in in terms of disease control. Outbreaks of HPAI have disastrous consequences for both the poultry industry and the consumer (in terms of the nation's protein supply, food security and food pricing). In the event of a catastrophic disease outbreak, the cost of restocking and disinfection programmes can run into billions of rands. To mitigate this risk, a number of programmes has been developed to safeguard the industry and to 'Protect the Flock'.

Since the first outbreak of Newcastle Disease (NCD) in the late 1960s, veterinary authorities have delegated implementation of control measures for this disease to the poultry industry. In the absence of a strong national veterinary service, the industry increasingly has to rely on its own initiative to put in place disease control measures against other challenges. The Poultry Disease Management Agency (PDMA) was established in 2012 to protect the national poultry flock through disease surveillance, monitoring, control and management of diseases which threaten the health of the flock - and thus food security. The work of the PDMA is very important in achieving the required disease control compliance for export markets; especially for notifiable diseases such as NCD, salmonella infections (e.g. *Salmonella enteritidis*), HPAI and any other low pathogenic AI infections.

The PDMA's strategic goals are to have direct involvement in poultry disease control measures through:

- Influencing policy for controlled diseases;
- Disease surveillance of commercial and non-commercial sectors of the poultry sector;
- Reduction of disease levels nationally, including microbials;
- Rapid response mechanisms to local and exotic disease threats;
- Improving veterinary and animal health training within South Africa;
- Collaboration with the ostrich industry for mutual benefits from improved disease control;
- Achieving and maintaining export status for the benefit of both industries;
- Establishing a formal public/private partnership (PPP), where the state delegates certain regulatory functions to the PDMA;
- Reducing the levels of residues in poultry meat through the residue monitoring programme.

The strategic priorities are to:

- Engage national and local government on issues of disease control in the South African poultry industry;
- Make use of the database of poultry farms in South Africa to assist DALRRD with monitoring of notifiable diseases such as avian influenza, salmonella and Newcastle disease, while using it to develop monitoring programmes for important diseases such as infectious bronchitis;
- Appoint or designate veterinarians with expertise in poultry diseases in each province who would be available to assist state veterinarians in the event of disease outbreaks in commercial, smallholder and subsistence poultry in these provinces;
- Investigate the role of the PDMA in training state veterinarians and/or animal health technicians so as to improve service delivered by the state in the event of disease outbreaks on poultry farms;
- Consider developing a residue monitoring programme for poultry products nationally, or at least a database of residue monitoring data which is available;
- Deliver improved technical and veterinary support to smallholder poultry farmers so they can achieve greater production success in collaboration with state veterinary services or through the PDMA's own initiatives;
- Collaborate with the ostrich industry.

The PDMA and SAPA work in close conjunction with the Department of Agriculture, Land Reform and Rural Development, the Department of Health, the National Animal Health Forum, government and private laboratories, state and private veterinarians and the National Agriculture Marketing Council.

The establishment of the PDMA and its successful implementation during 2012 was a major step forward in ensuring that the industry's flocks of commercial chicks, layers, broilers; indigenous and smallholder birds are protected.

8.2 The Poultry Disease Management Agency (PDMA) in 2021

The PDMA aggregates AI data on a monthly basis for export compartments and bi-annually for non-export compartments. All surveillance submissions are done using a web-based application with multiple security levels, giving users different security clearances to access the database. The PDMA quality assures the data, consolidates it, and then reports to the industry and other stakeholders. This framework has enhanced risk analysis and developed an early reporting system.

The year 2021 saw an outbreak of HPAI H5N1 in South Africa (a new variant for the country), despite enhanced biosecurity measures on poultry farms (Figure 37). During the four quarters of 2021 the number of samples tested for AI were 45 460, 43 076, 42 016 and 28 474. The PDMA encouraged all producers to participate in surveillance monitoring in efforts to contain the spread of the disease.

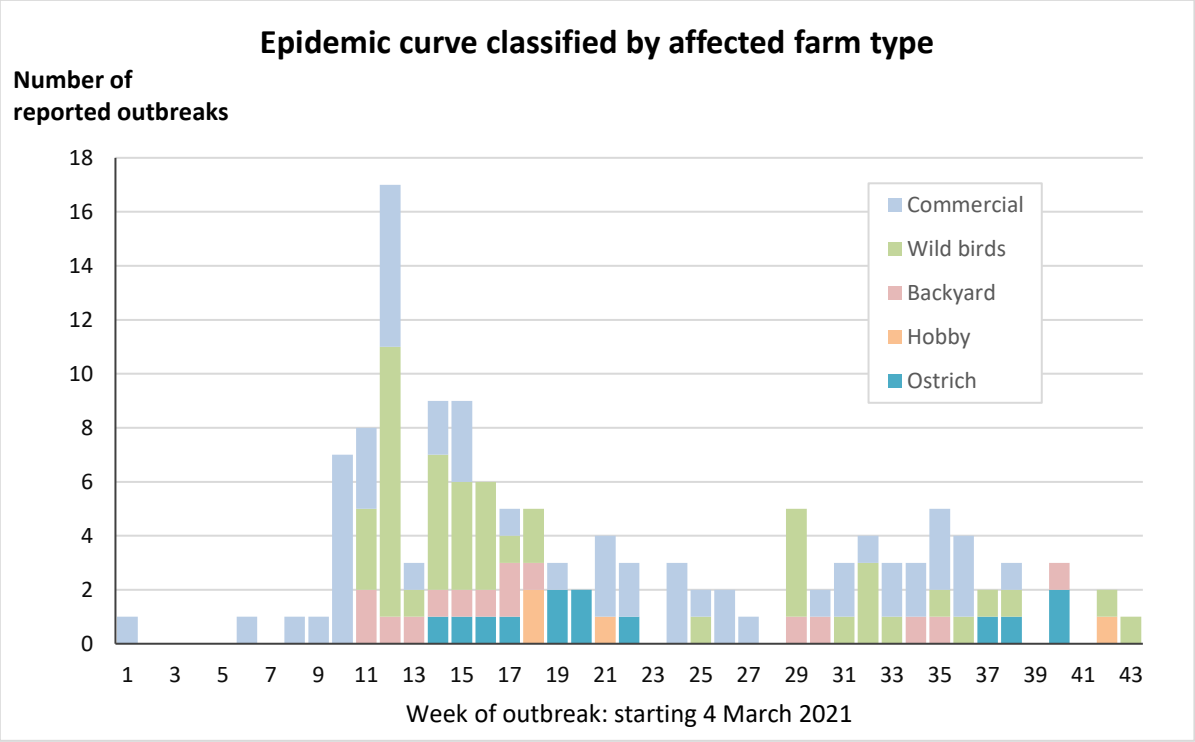


Figure 37. *South Africa 2021: H5N1 HPAI epidemic curve, by farm type*

Of the 55 outbreaks in commercial flocks in 2021, 22 were in laying hens; 6 in broilers; 9 in broiler breeders; 2 in pullets; and 16 in flocks belonging to small scale farmers.

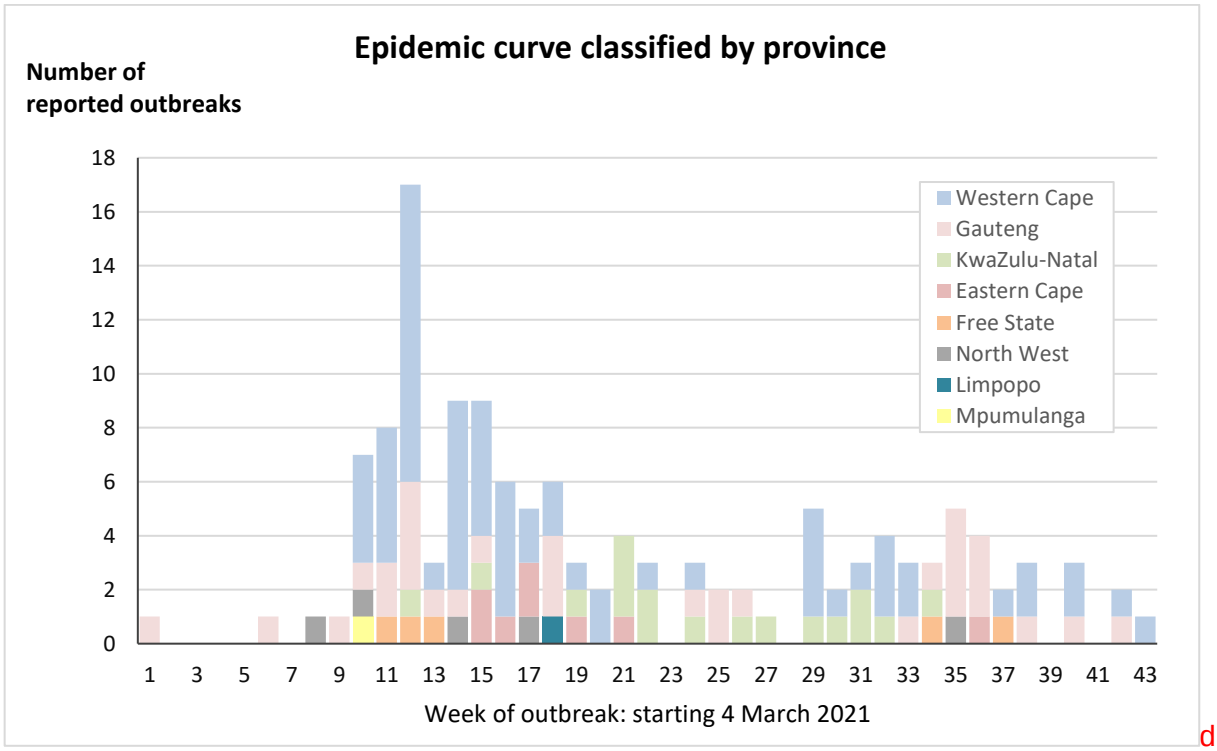


Figure 38. *South Africa 2021 H5N1 HPAI epidemic curve, by province*

Since the index case in March 2021, most of the outbreaks occurred in Western Cape, Gauteng and KwaZulu-Natal (Figure 38, above).

With no compensation available for culled birds, SAPA requested a more lenient approach from DALRRD when ordering the culling of birds and the destruction of eggs from facilities in close proximity to AI-infected facilities (but with no infections).

In 2021, Minister for the Department of Agriculture, Land Reform and Rural Development (DALRRD), Thoko Didiza, announced the strengthening of partnerships between the state and the private sector to manage commercially important diseases such as HPAI. Where state resources are lacking, the minister agreed to form a public-private partnership with the agricultural industry so that private veterinarians can be recruited. DALRRD agreed to the principle of using private veterinarians to assist with inspections at ports, management of HPAI outbreaks on farms and negotiation of export certificates.

Tracking the sale of live birds

After the recording of the first outbreak of H5N8 HPAI in South Africa in June 2017, DALRRD regulated movement of live birds in an effort to manage the risk posed by their transportation. The task of monitoring the movement of live birds was delegated to the PDMA. This was achieved by the registration of commercial farmers and cull buyers and the consolidation of monthly transactions to improve traceability.

An online database to enable the tracking of the sale of live birds was completed and is in use. This database was migrated to a web-based application which enables improved data analysis and quality assurance. The online portal is accessible on the website address *http://www.poultrydiseases.co.za.* Producers are encouraged to assist traders with online registrations where needed.

During 2021 an average number of 3 191 traders and 1 006 producers were registered on the system. The PDMA called for continued compliance with the regulations in the face of the 2021 H5N1 outbreak.

8.3 Animal welfare

Over the years, the poultry industry has been sensitive to the animal welfare aspects of poultry farming practices and, therefore, the existing Code of Practice (COP) has been updated to give the necessary guidance for certain methods of production and in the handling of chickens. The document addresses the sensitive issues of cage density for commercial layers, drinker systems in cages, maceration and euthanasia of chickens, transportation of chickens, and the treatment of end-of-lay birds on the farm and at cull outlets.

A resolution was passed at Congress in June 2018 to keep cage floor space at 450 cm^2 per hen and feed trough space at 8.5 cm per hen until 1 January 2039. For new cage installations after 1 January 2019, the feed trough space should be increased to 10 cm per hen and the floor space to 550 cm^2. The decision to extend the deadline was based primarily on the prohibitive cost implications of adapting existing layer facilities. These recommendations have been incorporated in the Code of Practice document dated June 2018.

SAPA engaged the services of the National Agricultural Marketing Council (NAMC) to conduct scientific research into the effect of different housing systems on bird welfare and health and consumer demand patterns for the various systems. The research aims to inform decision-makers regarding amendments to the poultry welfare legislation of South Africa. By the end of 2021, the study was 95 % complete and the first draft of the report was expected early in 2022.

SAPA continued to engage with the South African Bureau of Standards (SABS) to develop local standards for the welfare of laying hens. The SABS published a 53-page draft standard entitled 'Welfare of chickens (*Gallus gallus domesticus*)' (SANS 1758:201X) in January 2021. The standard provides guidelines for the adoption of good management practices throughout the life cycle of the chicken, while being mindful of the contribution of the poultry industry towards food security in South Africa. It was available on the SABS website for public comment until 22 March 2021. The Egg Organisation provided feedback on several points to the technical committee at the SABS. The various role players, which included animal welfare lobbyists, failed to reach a consensus and the process was reverted to the working group committee.

Parallel to this, the Egg Organisation is also collaborating with the IEC and the OIE to develop a chapter entitled 'Animal welfare and laying hen production systems'. The first draft was withdrawn by the OIE following fierce criticism by the IEC and its member countries, based on the fact that conventional cages would be virtually outlawed. The recommendation was made that the chapter takes into account the social, economic and cultural diversity of OIE member countries, and issues of food security. A revised version was published in 2019 and egg producing nations were again invited to comment. The OIE had planned to discuss the chapter at the General Session in Paris in May 2020, but this was cancelled owing to the COVID-19 pandemic. Subsequently, the OIE opened a further window for comments. In July 2021, a letter containing eleven proposed amendments was sent by the Egg Organisation to the OIE through the state's Chief Veterinary Officer and the IEC. With increasing global pressure from animal welfare groups for the discontinuation of caged housing systems, it is of vital importance that a compromise is reached.



9. SAPA STRATEGY

Following years of disinterest and dissent, producers pulled together behind SAPA in 2018 and committed to building a strong representative body for the industry. Agreement was reached on the way forward involving a new organisational structure, collection models, and key activities.

A special general meeting was held on 12 April 2018 to approve the changes to the constitution. The new constitution was registered with the South African Revenue Service on 1 June 2018. The amendments were ratified at Congress on 12 June, allowing for the replacement of the CEO with two general managers and the removal of provincial structures.

SAPA now consists of two independent organisations, each with its own board and general manager. The Broiler and Egg boards take full responsibility for their administrative functions, and the two general managers report to the board of directors. The SAPA Board retains the governance and fiduciary responsibilities of SAPA. A new category of membership was introduced in 2020 for organisations in allied industries.

After analysing feedback from exhibitors and attendees of the 2018 Congress, the decision was taken by the Board to hold the AviAfrica Congress every second year. In the years in between, the AGMs will be held at different venues around South Africa. Owing to the global coronavirus pandemic, the 2020 Congress was cancelled and the AGMs were hosted via a video conferencing platform. The plan to host Congress in 2021 was also thwarted by COVID-19 concerns and the AGMs were once again held using video conferencing, with a small number of delegates attending in person.

The *Poultry Bulletin* was successfully relaunched in printed and electronic format in April 2021. The magazine serves as the official mouthpiece of the organisation, with six editions being published per annum. The editor, Melinda Shaw, received recognition for the outstanding work of her team at the prestigious SA Publication Forum awards ceremony in November 2021. This ceremony is an annual event which recognises excellence in corporate publications. Entries were judged on writing, communication, design and photography in various categories. *Poultry Bulletin* received a silver award for runner-up in the category Best Internal Magazine and a bronze award for second runner-up in the category Best Communication. It also featured as a finalist in the categories Best Design and Best Corporate Publication and received merit awards for Excellence in Writing and Excellence in Design.

The SAPA website was redesigned during the course of the year and will be launched in 2022. The SAPA Facebook page continues to be used effectively to target smaller farmers. Other social media platforms, such as Twitter, Instagram and WhatsApp, are being investigated by SAPA as options to increase the organisation's social media presence.

It is important that SAPA broadens its reach and becomes more inclusive so that the organisation represents commercial and informal poultry producers across South Africa, particularly when dealing with government.

9.1 Industry transformation

The key tasks of the Transformation Committee are:

- To align government's economic empowerment policy with the actions and policies of SAPA and to help close economic gaps between black and white poultry farmers. The emphasis is on facilitating and overseeing transformation for all SAPA members through identifying business opportunities and enabling processes, as well as recording and reporting on transformation outcomes;
- To ensure that government is fully informed of transformation activities in the poultry sector through a two-way communication process, which will allow government to advise on policy developments, funding criteria, and related transformation opportunities;
- To mobilise resources at a strategic level for enterprise development, as per the AgriBEE scorecard, by providing advice and guidance to developing farmers, as well as facilitating the initiation and completion of development projects;
- To deploy specialist resources and project management to support development projects.

Effective transformation of the broiler industry is a key pillar of the Poultry Master Plan. Remote assistance to subsistence and small commercial farmers accelerated in 2021, with 411 producers receiving various forms of support from SAPA. An additional 172 black farmers received training during the year. Since the signing of the Master Plan in November 2019, 79 poultry houses, to the value of R355 million, have been constructed by emerging farmers. A black-owned broiler hatchery has been able to expand from hatching 7 000 chicks per week to 28 000, with a target of 50 000.

During 2019, SAPA worked collaboratively with DALRRD to assist with the revitalisation of 19 existing land reform poultry farms identified by the Department as part of the government's economic stimulus package. This work continued in 2020. SAPA utilised its transformation levy to assist the identified farms with business development services, which included business planning and financial modelling, water use license applications, and environmental impact assessments, as all these farms need to expand their operations. The completed documents were then submitted to the Department to process and determine the level of support they would provide to the entrepreneurs in terms of infrastructural investments and costs of operations.

These producers were then encouraged to join as members of SAPA so that they can benefit from other support measures offered by the Association. Additionally, SAPA utilised funding sourced from AgriSETA to roll out a capacity building programme on biosecurity for these farms and SAPA members.

In order to upscale transformation initiatives during 2020, SAPA received an offer from the National Agricultural Marketing Council (NAMC) to second one of their officials to the association, for a period of three years, to serve as a transformation officer and provide the required capacity and technical support. The main function of the transformation officer is to run SAPA's newly developed financial modelling tool which tests the viability of broiler and layer business plans and the debt carrying capacity of poultry projects. The financial models were demonstrated to the Land Bank and other commercial investors, who indicated their approval. The models are run on behalf of financial institutions to assist them with their decision-making processes.

The year 2021 saw the launch of the Egg Organisation's new transformation model, Amakip-kip. The model aims to bring about measurable change in the egg industry by drawing historically disadvantaged small egg farmers into the mainstream economy. NAMC's transformation guidelines are to be applied in the implementation of the model. These guidelines recommend that 60 % of a loan is spent on enterprise development in terms of infrastructure, equipment, various inputs such as feed and vaccines, and professional services. Eighteen percent may be spent on skills development, 17 % on management control (the employment of an industry transformation manager), and 5 % on socio-economic development.

Two to four beneficiaries with 5 000 hens or less are to be identified annually and funded intensively, via the provision of soft loans to a maximum value of R500 000. Seventy-five percent of the loan will be repayable within 24 months; of the remainder, 20 % will be in the form of a grant and 5 % will be used for administration purposes (development of a business plan). An additional number of farmers will be able to access funding for other purposes.

It is envisaged that the gradual repayment of loans will facilitate the support of a growing number of black egg producers who will, in turn, become economically viable.

10. TRAINING AND SKILLS DEVELOPMENT

The year 2020 was characterised by unprecedented periodic lockdowns of all non-essential businesses due to the COVID-19 pandemic. One aspect that was severely affected was the farmer training offered by SAPA through the KwaZulu-Natal Poultry Institute (KZNPI). Fortunately, the KZNPI managed to quickly adapt to an effective online platform. Through this platform they were able to successfully run two courses for SAPA: Poultry Business Skills with 12 delegates, and Profitable Egg Production with 19 delegates.

In 2021, training continued to be heavily impacted by the coronavirus pandemic and service providers mainly opted for online learning solutions. As the COVID-19 infection levels decreased, providers started opening up again for in-person training. Courses in hatchery management, abattoir management, poultry production and commercial layers were held at the KZNPI. The attendance fees were sponsored by the World Poultry Foundation, with the delegates' travel costs being subsidised by SAPA through the old levy surplus fund. This fund is earmarked exclusively for transformation activities.

Prior to the national lockdown being enforced, the KZNPI completed the last batch of biosecurity training; a programme funded by AgriSETA that was initiated in 2019 with 80 farmers participating. The programme was followed up with an additional initiative which involved biosecurity audits and training. Animal health company Afrivet assisted the Transformation Committee with this initiative. A pilot programme was run in the Western Cape in November 2020. Despite being interrupted by the pandemic, the biosecurity training and audits of small poultry farmers were further rolled out during 2021, with a number of regional workshops and various audits taking place. Over 1 000 farmers and extension officers have benefited to date and the programme will continue in 2022.

In terms of funding applications sent to AgriSETA, SAPA is still awaiting the outcome of the requests for training in egg production, as well as training in how to manage a poultry abattoir. Together these represent just under R1 million worth of training.

The International Egg Foundation was set up by the International Egg Commission in 2014 (IEC). The independent charity works to create sustainable food supply and self-sufficiency in developing nations, in line with the United Nations 'Zero Hunger' goal. In September 2021, the Foundation released an online production manual for aspirant egg farms covering farm setup, housing systems, farm management, lighting, water, biosecurity and pest control, disease, etc. The manual can be downloaded at the following link:

https://www.internationaleggfoundation.com/projects/production-manual.

11. CONCLUSION

After a relatively good year for egg farmers in 2020, this past year has been a much harder one, with egg prices slipping relative to feed costs and heavy bird losses to outbreaks of avian influenza. While the culls have balanced supply and demand to some extent, profitably has slumped because of rising input costs. Broiler producers have also been feeling the pinch, even though quick serve restaurants and the hospitality industry steadily opened up again through 2021.

Both egg and broiler producers enter 2022 under sustained pressure from these rising feed costs, which are unlikely to be tempered by another strong domestic maize harvest. The global maize price looks set to remain high and will underpin domestic pricing. Shipping is still disrupted after the worst of the COVID-19 lockdowns and global demand for biofuels is dragging feed prices ever higher. Poultry farmers the world over will be hoping for favourable weather in the important production regions so that global stocks of maize and soya can be replenished. It is likely to take more than one season to restore stocks.

In its October 2021 *World Economic Outlook*, the International Monetary Fund estimates global growth of 4.9 % in 2022, following rebound growth of 5.9 % in 2021. In South Africa, domestic growth will be hindered by loadshedding, policy uncertainty, corruption, inflation and investor caution. Record levels of unemployment and a stalled economy reduce disposable income, and a forecast growth rate of 2.2 % from a contracted base will not be enough to improve employment figures and drive spending. The year ahead promises to be a challenging one for local poultry farmers if GDP growth cannot be improved.

Egg prices are likely to remain under pressure in 2021 even though the supply and demand balance has improved. Per capita consumption of eggs in South Africa has firmed over the past few years but, while this is a promising development for egg producers, the increase may be short lived if egg prices rise in response to escalating feed prices. Consumers have, in the past, directed scarce resources to white meat rather than eggs. The industry needs to sustain and improve per capita consumption to grow the industry. With egg consumption in countries such as the US, Russia, Mexico, Japan and China exceeding 220 eggs per person per annum and, in some cases, approaching an egg a day, there is considerable scope in the SADC region to increase local per capita consumption. Egg producers will also have to continue to fight retailers for a fair share of the price consumers pay for eggs.

It will be hard for South African poultry farmers to avoid further H5N1 HPAI infections, given the continuing movement of the avian influenza virus around the world. Domestic outbreaks of the disease will reduce export opportunities for both the broiler and egg industry and farmers will need to tighten biosecurity measures to protect their own flocks, since no government compensation is available for culled birds. With so much HPAI circulating in Europe and Asia, farmers must not let down their guard as the 2022 winter arrives.

In the broiler industry, 2022 will see the EU EPA safeguard fall away completely from March. Volumes of imports from the EU will largely be determined by the number and severity of HPAI outbreaks on the continent. However, there is reason to be hopeful that anti-dumping duties

will soon be introduced against four more EU nations (Denmark, Ireland, Spain and Poland) and against Brazilian processors, which should give local producers the space they need to grow production and expand processing capacity. Imports from the US should remain stable, with higher *ad valorem* tariffs and the AGOA quota in place. The broiler industry will be looking to push on with the investment and job creation fostered under the Poultry Master Plan and this will allow for continued focus on the sector's transformation agenda.

The local poultry industry faces challenges ahead in terms of bird welfare legislation, plant-based alternatives to eggs and broiler meat, regulations governing the use of antibiotics in production, and environmental sustainability issues. SAPA is committed to representing the interests of both large and small producers and to protecting the egg and broiler industries from further contraction in the face of these challenges. SAPA is dedicated to realising its vision: to create a viable and sustainable industry, contributing to economic growth and development, employment, and food security based on successful producers adhering to environmental and ethical production norms and generating sustainable profits.

Poultry producers will hope that 2022 brings a rapid post-COVID recovery in economic growth, and further concrete steps to protect local farmers from the predatory strategies of meat importers. Government at last seems to be recognising that, for every tonne of egg and meat product *not* imported, a significant number of local jobs can be created – localisation is becoming a buzzword in the corridors of parliament. A much stronger partnership between the industry and government in the past few years is something to be celebrated.

The South African broiler and egg industries have weathered another difficult year, but it is likely there will be further challenges on the road ahead as food price inflation climbs and international trade continues to be hindered by sporadic lockdowns and resurging demand for goods and commodities. Our producers are efficient and resourceful but buffeted by external forces which serve to push up domestic feed prices and reduce local consumer spending. It has to be hoped that some of these factors align in the producers' favour in 2022 so that the poultry industry will continue to contribute so significantly to South Africa's agricultural economy.

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