



SOUTH AFRICAN POULTRY ASSOCIATION 2016 INDUSTRY PROFILE



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INTRODUCTION

The poultry industry remains the largest single contributor to the agricultural sector in South Africa. Some 18 % of the total agricultural gross value in 2016 stemmed from poultry production and over 39.0 % of animal product gross value. The industry provides direct employment for over 47 000 people and indirect employment to a further 59 000 people; is the second largest consumer of maize; and supports many peripheral businesses as well as those downstream in the value chain. The poultry industry's influence on the success of the South African feed industry is considerable.

For South African poultry farmers, the year 2016 has to be the worst in living memory. At the root of much of this misery was the devastating drought wrought on the country by a powerful El Niño weather system. The total rainfall in the period January to December 2015 was the lowest since records began in 1904 (403 mm, compared to a long term average of 608 mm). In November 2016, a weak La Niña was reported to have developed, with average temperatures in the Pacific having dropped below -0.5°C for a period of several months. Wetter and cooler conditions were experienced over much of the summer rainfall areas of the country in spring and early summer 2016. However, the drought continues to bite hard in the winter rainfall areas and both the Cape Town and Nelson Mandela Bay metros have asked to be declared drought disaster areas.

The South African maize crop for the 2015/2016 season was estimated at 7.778 million tonnes (Crop Estimate Committee); 22 % down on the previous season's crop (9.942 million tonnes) which was already 30 % lower than the 2014 harvest. Maize plantings for the 2016/2017 season are up 35 % over 2015/16 levels (GrainSA). The 2016/2017 harvest is currently expected to exceed 15 million tonnes (Crops Estimate Committee) against a national consumption of 10.47 million tonnes (AgBiz). If these predictions hold, South Africa will be a net exporter of maize again in 2017. In the current season, South Africa continues to import yellow maize from Argentina and white maize from Mexico. By November 2016, 516 935 t of white maize had been imported, along with 965 236 t of yellow maize. Broiler feed price inflation has been driven by the exchange rate as the country seeks to import almost 17 % of its requirements for maize through the current season (2016/2017). It is expected that South Africa will import 3.5 million tonnes of yellow maize (USDA) through to April 2017 at a potential cost of about R12 billion.

During the year, maize futures soared to 20-year highs (R5 226/t for white maize and R3 954/t for yellow maize), pushing up the cost of production for broiler and egg producers. Local poultry producers struggled to remain profitable in the face of a flood of imports, a weakened consumer market and escalating feed costs. Several reacted by cutting back on production and announcing plans to retrench staff. A number of smaller independent broiler farmers closed down or went into business rescue. In a rare show of solidarity, union members and company managers staged mass action protests across the country.

In 2015, negotiations were eventually concluded between South Africa and the United States of America (USA) over the African Growth and Opportunity Act (AGOA). The agreement allows for the annual importation of 65 000 tonnes of US chicken into South Africa from January 2016, free of anti-dumping duties. These tonnes will add to the more than 150 – 200 000 tonnes of bone-in

portions received from the EU every year, under the duty-free terms of our Trade Development and Co-operation Agreement with the Europeans. These imports have resulted in stock build-ups and pricing pressure that may threaten the survival of the local broiler industry going into 2017. In 2016, the EU accounted for 48.1% of total poultry imports. The International Trade Administration Commission of South Africa (ITAC) conceded that we are suffering serious disturbances from these imports and introduced a safeguard tariff of 13.9%.

The media's focus through 2016 has been on the practice of brining, rather than on imports - creating negative perceptions of the poultry industry in the minds of consumers. The Department of Agriculture, Forestry and Fisheries (DAFF) announced new brining regulations this year and SAPA's review application failed in court. The new regulations came into effect in October 2016 and, whilst the impact on the bottom line is expected to be severe, with further consolidation of the industry, regulation of the brining practice will undoubtedly improve the relationship between producer and consumer.

The egg industry endured another tough year, attributable to the high cost of layer feed and low egg farm gate prices. This put margins under severe pressure while, to add insult to injury, the retailers' percentage mark-up continued to grow. Salmonella outbreaks increased financial burdens on producers because infected flocks either had to be vaccinated, treated with antibiotics or culled.

It is hoped that industry conditions will ease a little in 2017 as the maize price softens and dam levels slowly recover in the summer rainfall areas. A return to profitability is forecast for producers in most areas of the country, with the exception of the drought-ravaged western areas.



1. 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 primarily as a body of poultry hobbyists, catering 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.

As the industry 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, including the often contentious matters of area representation, management decentralisation and dispute resolution amongst producers.

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.

1.2 Milestones

Since 1904, as the fortunes of the poultry industry changed and a trend emerged of more formal enterprises with modern production processes underpinned by sound commercial practices, SAPA had to dynamically respond to meet the challenges of this increasingly influential agricultural sector.

This necessitated the need for improved controls and comprehensive record keeping, as well as greater co-operation among members to arrive at common objectives, especially in engagements with government and state agencies.

The pivotal role played by SAPA in the development of the commercial poultry industry is reflected in the Association's key initiatives which charted the course for modern poultry production. These included the establishment of a Record of Production Register, which was considered to be of great value at the time. At SAPA's request, the Egg Control Board was established in 1951, and the Association was also instrumental in making modern poultry equipment available when hen batteries were still a new concept.

Trade-wise, SAPA was instrumental in getting import tariffs approved; in passing the Livestock Improvement Act; influencing bilateral Trade Agreements; and in having GST on livestock removed, followed later by VAT on eggs.

To advance the industry's knowledge base, the association facilitated the introduction of SAPA, YTA and KZNPI courses; supported advanced veterinary training at the University of Pretoria's Onderstepoort facility; set up a central reference laboratory; and facilitated the reduction of surcharges on imported breeding material and equipment.

In 2009, SAPA introduced the industry statutory levy, a bold move that created a new primary funding mechanism for the Association's work. This initiative empowered SAPA to, amongst other things, make serious progress with the implementation of industry transformation for smallholder farmers; establish improved industry training and development activities; adequately fund disease and production research and development; implement the SAPA Poultry Disease Management Agency (PDMA; a vital function in association with DAFF); engage in professional marketing activities; interact with government on issues affecting the industry; deal with meat import threats; and deal with a number of legal challenges through the courts for the betterment of the industry as a whole.

The statutory industry levy came to an end in the third quarter of 2013, with predictable consequences on project funding. Voluntary funding of the organisation remains problematic if SAPA is to have sufficient funds to represent the interests of all its members. A strategic review of SAPA and the work we do was completed in 2014 and changes to the structure were implemented throughout 2015 and 2016 (see Chapter 10). For an organisation as old as SAPA, such periods of renewal are essential if we are to remain relevant to the needs of all producers.

In 2016, the Association proudly announced the first black chairpersons in SAPA's 112-year history. Achmat Brinkhuis and Willie Bosoga took the positions of chairman of the SAPA Board and the Egg Organisation, respectively.

1.3 SAPA's 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.

1.4 SAPA's mission

To create an enabling environment to achieve sustainable producer profits in the domestic and global village market.

As a representative association, SAPA serves the interests of the poultry industry in a number of ways. SAPA acts as a medium and catalyst for any matter the industry wishes to collectively address. It acts as the face of the industry, addressing and maintaining a presence in society, without which opposing groups could play havoc with the industry's interests.

The South African Poultry Association is controlled by a Management Committee (MC) that coordinates its activities and objectives, oversees administration, and looks after the collective interests of its members. 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, the SAPA Management Committee now operates with only two subsidiary committees: the Broiler and Egg Organisations. Producers from the Chick Producers and the Developing Poultry Farmers Organisations have been absorbed into their respective product value chains, falling under either the Broiler Organisation or the Egg Organisation. In addition, 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 and Agriculture, Forestry and Fisheries (DAFF), the Consumer Goods Council of South Africa, the South African Veterinary Association, academics and consultants.

1.5 The Egg Organisation

The role of the Egg Organisation in South Africa is to promote, develop and guide the commercial egg industry as an independent subsidiary branch of the South African Poultry Association, equal in status to that accorded other subsidiary branches of the poultry industry.

The Egg Organisation and its Committee strive to improve the egg industry and to promote it on a national level. This entails, amongst other things:

- A critical evaluation of the methodology of control structures
- Achieving a higher level of operational input
- Liaising with government and consumer bodies on matters of importance
- Striving to build a stronger image for the egg industry on an on-going basis.
- Supporting an industry Code of Practice.

Improvements in the industry can be measured by an increase in egg consumption per capita in South Africa.

1.6 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 objectives of the Broiler Organisation are to establish and maintain a national organisation in South Africa for the promotion, development and guidance of the broiler industry, as an independent subsidiary of the South African Poultry Association.

The purpose of the Organisation is to promote and advance all matters tending toward the improvement of the broiler and allied industries including production, grading, packing, transportation, storage and marketing by:

- Securing profitable production to provide adequate supplies of broiler products to the consuming public;
- Protection of the broiler producer and/or industry from adverse legislation or any other aggression, and initiating, fostering and assisting in obtaining legislation and regulations beneficial to the broiler and allied industries;
- Improvement in production, testing, grading, packing, transportation, storage, marketing and export of broiler products, and the means in this regard;
- Setting and revising of marketing standards;
- Encouragement of poultry education and training, conducting and/or assisting in investigational work of a practical and scientific nature, and the organisation of seminars or courses;
- Publishing literature, journals, pamphlets and circulars dealing with all matters pertaining to the broiler industry and conducting communication on behalf of this industry;
- Acting as arbitrators in the settlement of any dispute in the interests of members which may arise in any matter pertaining to the broiler or allied industries;
- Dealing with any matter which may be in the interest of the industry, the organisation and its members;
- Submitting individual data to the SAPA office for establishing a suitable statistical system to further the aims of the SAPA.

Up until mid-2015, the Chick Producers' Organisation operated to promote and develop the poultry-breeding and chick-production section of the poultry industry as an independent division of the South African Poultry Association. The purpose of the organisation was to foster, promote and improve the general welfare of those engaged in this sector of the poultry industry, by providing a vehicle through which group action could be taken on matters of common concern. As part of the strategic restructuring of SAPA, the Chick Producers' Organisation has been absorbed in to the Broiler and Egg Organisations from mid-2015.

1.7 Representation of the industry

The membership of SAPA's two organisations in 2016 was as follows:

Broilers	73
Eggs	87 (38 individual members and 49 members of co-operatives)

Please note that these figures now include the former members of the DPFO and CPO. The Association continues to speak for the industry as a whole in trade negotiations and interactions with government on a wide range of issues. Broiler pricing reports, distributed by SAPA's statistics team every month, were generated from data submitted by 53.4 % of the broiler industry, on the basis of kilogrammes of edible broiler meat and products sold (895 698 tonnes recorded from total annual production of 1 677 844 tonnes).

1.8 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.

With some guaranteed funding available through the statutory levy, the role of the DPFO in facilitating the participation of small scale farmers, individuals and collectives in the South African poultry sector was greatly enhanced and industry transformation looked to be assured. The termination of the statutory levy reduced the amount of money available for DPFO-specific projects and general organisational work and, from 2015, the organisation was absorbed into the Broiler and Egg Organisations as part of SAPA's strategic restructuring.

1.9 Engagement with stakeholders

It is through partnerships with the Departments of Agriculture, Forestry and Fisheries (DAFF), Economic Development, Rural Development and Land Reform, and 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, the media and the provincial and local governments.

DAFF has begun rolling out the Agricultural Policy Action Plan (APAP; Chapter 9). The poultry value chain, the feed industry and the maize and soya industries are part of the plan and are therefore beneficiaries. The plan aligns DAFF and other government funding with national strategic objectives. Transformation is one of the objectives. A value chain round table (VCRT) for poultry

feed and grains was established with the SAPA CEO as the co-chair of the body and held its first meeting in November 2015.

In the 2016 State of the Nation address, President Zuma introduced a “Nine Point Plan” to revitalise the flagging economy. Second on this list of nine goals was the “revitalisation of agriculture and the agro-processing value chain”; now known as RAAVC. Later in 2016, Government began the process of implementing Operation Phakisa for Agriculture, Land Reform and Rural Development. Operation Phakisa is derived from the Malaysian Big Fast Results methodology that has been successfully used to achieve rapid economic transformation in that country. SAPA participated in a 5-week Operation Phakisa laboratory, held in spring 2016 and was involved in the development of five initiatives under the livestock work-stream (Chapter 9).

The drive to export eggs and poultry meat continued in 2016, with DAFF dedicating a person to help open up markets, with the Department of Trade and Industry and the Department of International Relations and Cooperation (DIRCO) also assisting. Most of the intended export destination countries are not big poultry producers themselves. SAPA’s Export Forum has drawn up a priority list for export destinations for eggs and meat. The Export Forum held constructive meetings in 2016.

1.10 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 Software have provided statistical services to SAPA since February 2015.

The reports circulated include the following:

Monthly

Broiler pricing report	Broiler production report
Broiler trade report (tariff lines and country)	
Egg pricing report	Egg production report
Egg packaging report	

Quarterly

DPFO report
Key market signals report for eggs and broilers (trade and pricing)
Source data spreadsheets for eggs and broilers

In addition, the SAPA team produce bi-annual reports on the results of the Notifiable Avian Influenza Surveillance work conducted by the Department of Agriculture, Forestry and Fisheries, and an annual Industry Profile.

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 76 % of the birds in the South African poultry industry are used for meat production, while the remaining 24 % are used in the egg industry. The South African broiler industry went through a period of substantial growth, averaging over 7 % per annum, between 2004 and 2008. From 2009 to 2014, growth in the industry slowed down markedly to below 1 % per annum. In 2015, the industry grew by 4.0 % (based on tonnes of meat produced, including spent birds and non-commercial production) but, in 2016, the industry contracted by 2.9 %. The earlier growth period was associated with increased demand for product and well-contained input costs. During the past eight 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. The growth experienced in 2015 could not be maintained into 2016, given the lingering drought and ever-increasing broiler imports. In the egg industry, growth (in terms of the number of layer replacement pullets housed per annum and egg production) has averaged approximately 0.5 % and 2.6 %, respectively, since 2006. To put these numbers in perspective, annual population growth between 2004 and 2008 was 1.4 % and between 2008 and 2016 was around 1.6 % per annum.

2.1 Gross value

The gross value of primary agricultural production from poultry meat for 2016, as recorded by DAFF, was R36.670 billion (- 5.5 % on 2015 levels). The gross value of egg production was recorded at R10.192 billion (+ 3.6 %). Combined, the gross poultry farm income for 2016 was R46.861 billion, showing a yearly decrease of 3.7 %. According to DAFF estimates for 2016, total production of poultry meat, including spent hens from the broiler and layer sectors, was 1.678 million tonnes. The total production of shell eggs and eggs products was 0.448 million tonnes.

Broiler and egg producers are, in rand value, the largest sector of South African agriculture at 18.0 % of all agricultural production (down from 20.9 % in 2015) and 39.0 % of all animal products (down from 42.8 %). The 18.0 % contribution from poultry products breaks down into 14.1 % from poultry meat and 3.9 % from eggs. Our nearest competitor, the beef industry, contributed 12.7 % to turnover of all agricultural production and 27.5 % of animal products.

The total gross value of animal products was R120.129 billion and the total gross value of agricultural products was R259.771 billion in 2016. Total animal products contributed 46.2 % to the gross value of total agricultural products. The gross value of ostrich feathers and products was R438.9 million in 2016 (down from R516.6 million in 2015); this is 0.2 % of agricultural production and 0.4 % of total animal products.

2.2 Feeding the nation

The poultry industry continues to pride 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 continues to dominate the animal products sector, providing 63.1 % of locally produced animal protein (excluding milk) consumed in the country (down from 63.5% in 2015).

The per capita consumption of poultry meat and eggs in 2016 was 39.05 kg and 7.89 kg, respectively, with a combined per capita consumption of 46.93 kg (including backyard consumption). Per capita consumption of beef, pork, and mutton and goat were 19.47 kg, 4.69 kg, and 3.40 kg respectively (source: DAFF).

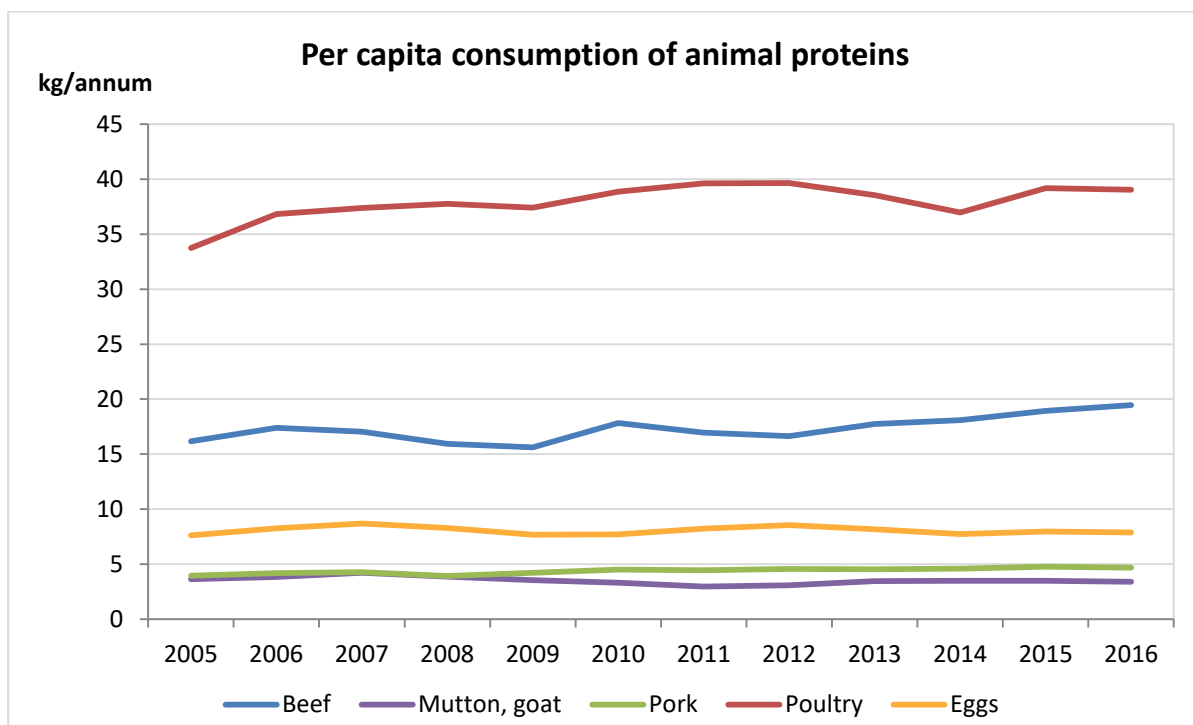


Figure 1. Per capita consumption of protein sources from 2005 to 2016 (DAFF)

The gap is widening between the total consumption of poultry meat and eggs and the total consumption of other types of meat (Figure 1). During 2016, the total consumption of poultry meat and eggs was 2.665 million tonnes; 71.3 % more than the combined 1.556 million tonnes of beef, pork, mutton and goat consumed over the same period. Of this, 2.200 million tonnes was poultry meat products (including imports) and 0.465 million tonnes was 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 R37.79 per kg in 2016, while the abattoir selling price for Class C2 / C3 beef was R31.11 per kg. The average price for pork (all classes) was R24.36 per kg.

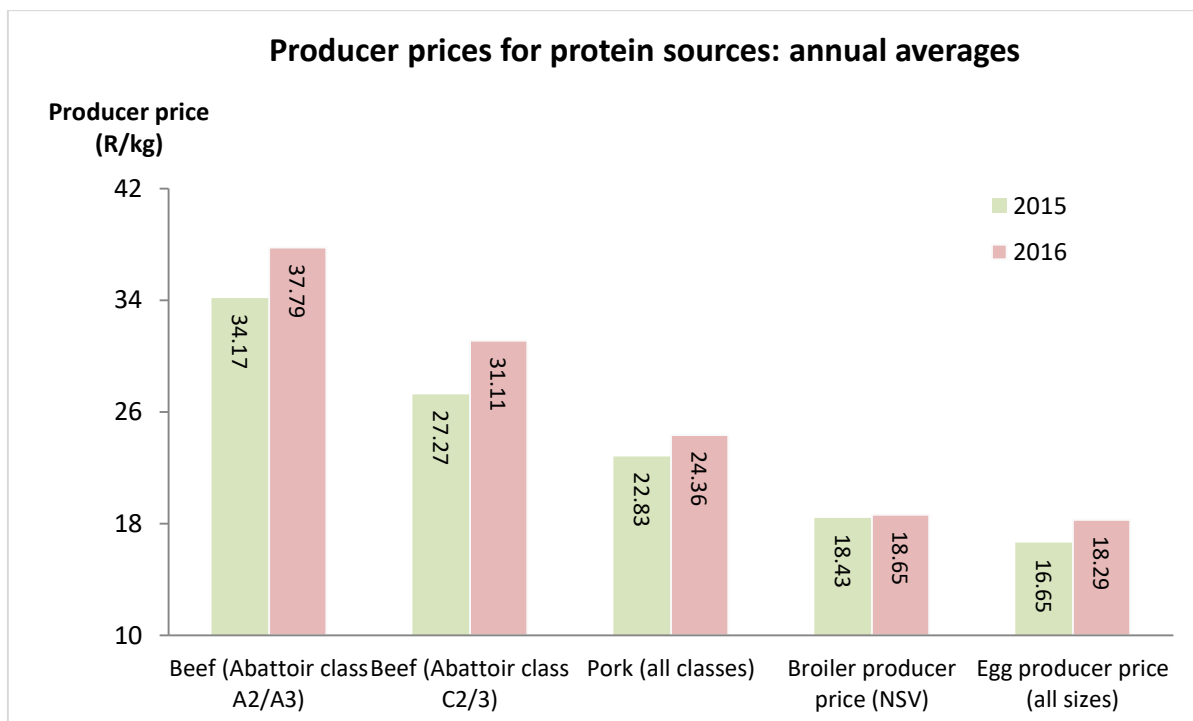


Figure 2. Average annual producer prices for different protein sources in 2015 and 2016

The total realisation producer price for broilers (less all discounts, rebates and secondary distribution) was R18.65 per kg in 2016. It should be noted that the broiler price is for finished product, whilst the other meat prices are ex-abattoir. Eggs are an even more affordable protein source than broiler meat, at an annual average producer price of R18.29 per kg. The average 2016 prices of animal proteins are given in Figure 2 and monthly prices since 2012 are shown in Figure 3.

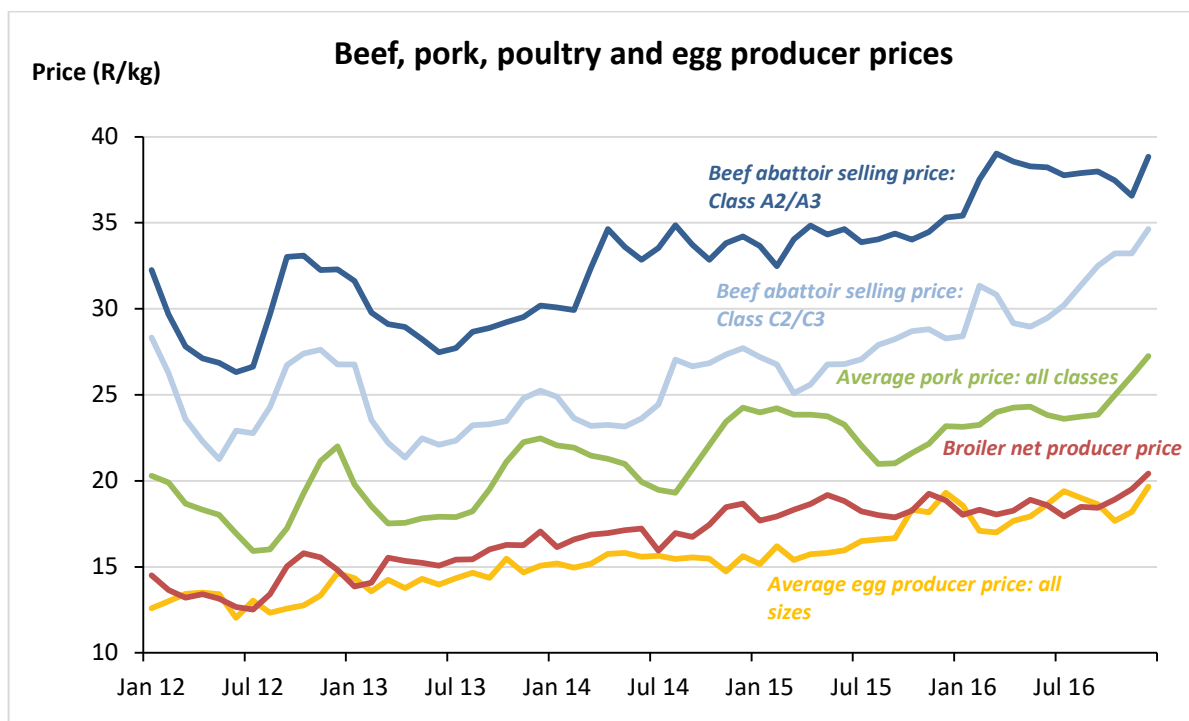


Figure 3. Monthly beef, pork, broiler and egg producer prices (source: AMT, SAPA)

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. The cost effectiveness of egg as a protein source needs to be communicated fully to the South African public. For decades, doctors, scientists and government agencies have warned against diets high in cholesterol. However, in the 2015 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 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 high quality protein, selenium (an anti-oxidant) and the vitamins in eggs (A, B₁₂, D, riboflavin and folate) may lower the risk of heart problems.

2.4 Employment

An employment survey was conducted in 2012 and estimates were made for 2016, based on negative growth in the industry. The estimated direct employment in the broiler industry in 2016 is 47 347. This number includes hatcheries, rearing, processing and distribution. If related industries are taken into account, another 58 782 employees can be added; totalling 106 129 employees. The poultry share of employees in the related field crops is 17 859 in 2016.

Table 1: *Surveyed direct employment in the broiler industry (2016; estimated)*

Number of employees (including contract workers)	Junior staff (Paterson A and B grades)	Supervisory and senior staff (Paterson C grades and above)	Total
Employment in the broiler, hatchery and rearing industries (including GPs)	12 683	1 567	14 250
Employment in the broiler processing industries	25 125	1 997	27 122
Employment in the broiler distribution industries	4 396	1 579	5 975
Grand total for direct employees	42 204	5 143	47 347
Total employees in support industries – indirect employees			58 782
Total direct and indirect employees			106 129
Total of related field crops i.e. white and yellow maize and soya			47 732
Poultry share of related field crops			17 859

With an estimated 8 008 workers nationwide in 2016, the egg industry is an important player in rural employment. In the last full survey undertaken in 2013, an estimated 6 870 workers, 722 supervisors and 416 managers were employed in the industry, covering support staff, processing, packing, laying, rearing-pullet hatching, parents, parent-rearing and hatching, GP laying and rearing.

2.5 Poultry feed: maize consumption

The total maize crop for 2014/15 was only 9.95 million tonnes, down from 14.25 million tonnes in the previous season. With the drought continuing to bite, the crop for the 2015/16 season reduced further to 7.778 million tonnes, a 22 % year-on-year decrease (source: SAGIS). White maize was recorded at 3.41 million tonnes and yellow maize at 4.37 million tonnes. The 2016/2017 harvest is currently expected to be 15.63 million tonnes (Crops Estimate Committee), of which 61 % will be white maize and 39 % yellow maize. South Africa will regain its status as a net exporter of maize this season, and is expected to export in excess of 3 million tonnes; the largest volume in two decades. This situation contrasts with the need to import over 3 million tonnes of maize in the 2015/2016 season; the first time imports had been necessary in seven years.

The South African poultry industry remains the biggest non-human consumer of locally produced maize (AFMA) and, in 2016, maize contributed R28.1 billion to the gross value of agricultural products (source: DAFF).

2.6 Poultry feed: sales of complete feed

According to AFMA estimates, a total of 6.63 million tonnes of animal feed were manufactured by its members in 2016. The poultry industry consumed 4.102 million tonnes, of which 2.713 million t was broiler feed, 0.901 million t was layer feed, 0.474 million t was breeder feed and 0.014 million t was ostrich feed. In total, a massive 62 % of AFMA's animal feed sales went to the poultry industry (Figure 4). National feed production during 2015/16 (April to March) was 11.737 million tonnes, a 0.7 % year-on-year increase in feed sales. AFMA sales represent 61.2 % of the national feed produced (source: AFMA).

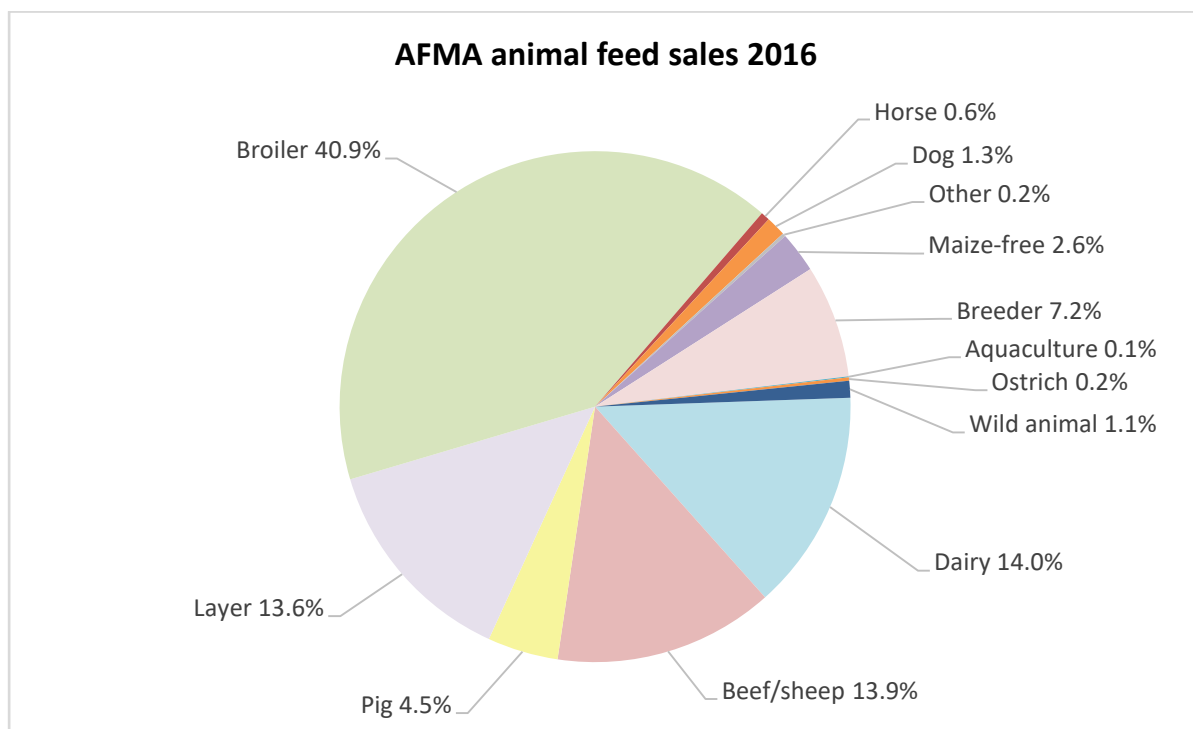


Figure 4. Animal feed sales by AFMA members in 2016

2.7 International price competitiveness

Although chicken consumption (local production + imports - exports) has increased by around 36 % in the period 2005 to 2016, local production has only increased by 21 % in the same period. Broiler imports, mostly from the Americas and the EU, increased by 179 % between 2005 and 2016. This raises the question: 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. 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. Brazil, Argentina and the US, amongst the most highly competitive poultry producing nations, are, in addition, all net exporters of both maize and soya beans. In a study on the competitiveness of the EU poultry sector (LEI Wageningen UR, 2017), EU feed-related production costs in 2015 were 11, 28 and 14 % higher than feed-related production costs in the US, Brazil and Argentina, respectively.

Whilst, in a year of good harvests, South African poultry producers may also enjoy export parity prices for maize, soya prices tend towards import parity because South Africa will only produce about 45 % of its requirements (2015/2016 season; Protein Research Council). 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. South African poultry farmers are therefore not in themselves technically inefficient producers; there is simply insufficient supply of locally grown, affordable feed inputs.

The Bureau for Food and Agricultural Policy's "Baseline (2017)" report indicates that the cost of primary production and slaughter in the EU nations is higher than in South Africa, the US, Brazil, Argentina and the Ukraine. Total production costs in the EU were higher than those in the US, Brazil and Argentina by 26, 39 and 20 %, respectively. In the 2015 drought years, the US and Argentina enjoyed production costs 4 % below those incurred by South African producers. Brazilian and Ukrainian producers were able to produce chicken for 17.5 % and 12.5 % less than their South African counterparts.

Figures from the Bureau for Food and Agricultural Policy's "Baseline (2015)" suggest that, in 2014, feed costs in South Africa were approximately 30 % higher than in Brazil on a €/tonne basis; and that the € cost per kilogramme live weight was approximately 13 % higher in South Africa. 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).

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 not matched with increased prices for local broiler products. Indeed, SAPA data suggest that while the feed price index increased by 87 % between 2010 and 2016, the producer price increased by only 52 %. High feed costs keep the domestic broiler price above import parity price even on 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.

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 8 % above South African levels (Poland) to 24 % in Denmark. The Netherlands, France, Germany and the UK produce chicken at 20 %, 23 %, 21 % and 17.5 % above South African production costs, respectively. Despite this, the EU nations are 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.), EU and US consumers have 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 in to 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 (before anti-dumping duties were imposed) from the US.

Figure 5 below illustrates how the amount of bone-in chicken imports, as a proportion of total poultry imports, has increased over the past 9 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) or boneless chicken portions (12 % tariff) in the imports has decreased in recent years; whereas the proportion of bone-in portions (37 % tariff; except for EU) is steadily increasing and exceeded 40 % of total imports from 2012 to 2016. Even with outbreaks of avian influenza disrupting trade in European poultry products, bone-in portions still accounted for 42 and 45 % of total imports in 2015 and 2016, respectively. The EU currently enjoys duty-free access to the South African poultry market, under the Trade, Development and Co-operation Agreement (TDCA). With anti-dumping legislation in place against the US on tariff lines 0207.1491 to 1499 (frozen bone-in chicken imports), most of these bone-in imports have originated from the EU. 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 has to allow 65 000 tonnes/annum of US frozen bone-in chicken portions in to the country from January 2016. South Africa applies a tariff of 37 % to imports of frozen bone-in portions, affecting all exporters except the EU, EFTA and SADC nations. In addition, the US has been paying an anti-dumping tariff on this line of R9.40/kg, which will not be payable on the 65 000 t quota.

The International Trade Administration Commission (ITAC) has accepted that imports of frozen bone-in portions from the UK, Germany and the Netherlands are causing downward pressure on domestic prices and that these imports are 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. Anti-dumping measures against these three countries have been legislated.

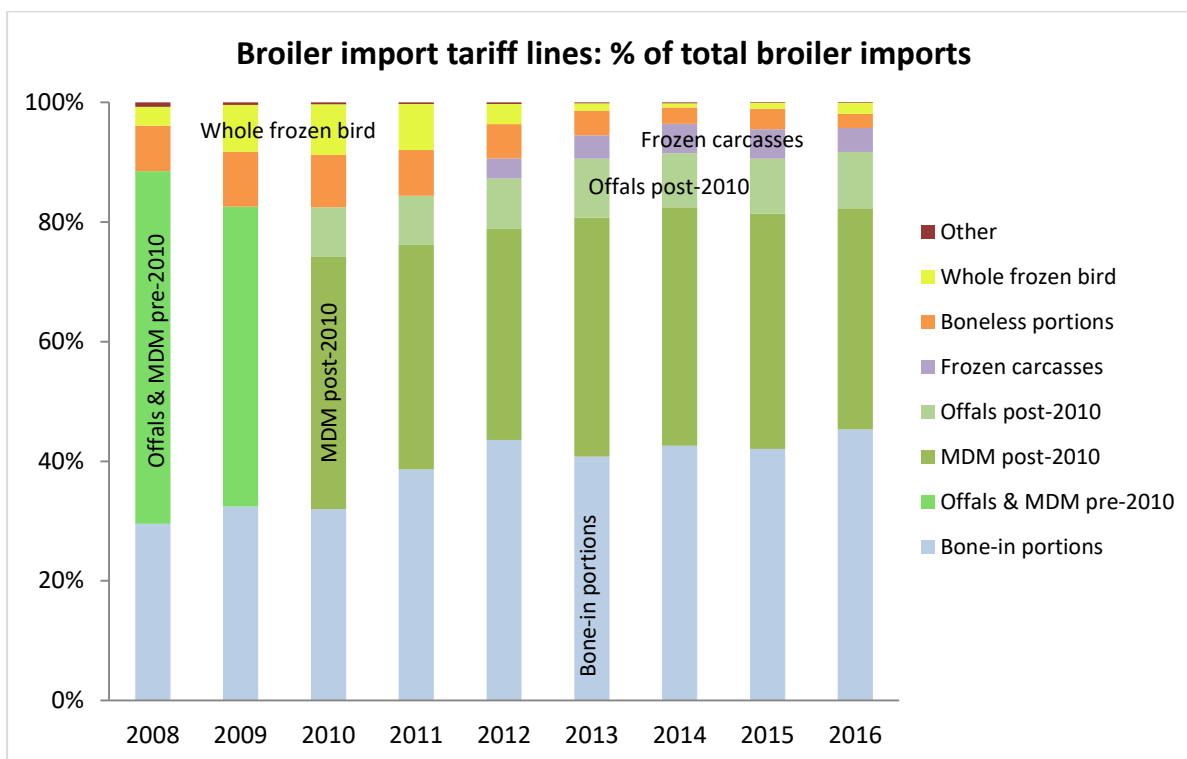


Figure 5. Annual broiler imports according to tariff line, expressed as a percentage of total broiler imports

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. 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. As the 2016/2017 maize harvest is expected to be a record breaking one, the chicken to maize price ratio is forecast to improve dramatically in 2017 but not to the levels seen in 2004, which spurred expansion in the industry (BFAP). Consumption of broiler products in South Africa is outstripping growth in the local industry which, as stated above, shows that the shortfall is being met through importation. A favourable chicken to maize price ratio and more effective measures to counter dumping would support expansion in the local industry. The drought is easing, the rand continues to be unstable and avian influenza may return regularly to disrupt EU exports to South Africa. Under these conditions, and with suitable measures in place against US and Brazilian exports, growth in the local poultry industry could be supported from 2017 onwards.

While cheap imports may benefit consumers if the cheap import prices are passed onto consumers, something 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 and 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. Where the poultry industry has the capacity to significantly increase employment opportunities in South Africa, import companies do not employ many staff.

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 in 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 soya beans 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, Food and Fisheries have alluded to the soya bean development strategy in their Baseline reports and Agricultural Policy Action Plan (Chapter 9), respectively, and this capacity is steadily being increased.



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, 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, calls 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 FANRD 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 co-ordinated 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.

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

Commodity: chicken meat (FAO)

According to the Food and Agriculture Organisation (FAO), the total production of chicken meat in the SADC countries during 2014 was 2.153 million tonnes (Table 2). FAO production figures for 2015 and 2016 are still not available. While the accuracy of these figures may be questionable, they do offer an insight into regional production trends over the last decade. There has been substantial growth in broiler production levels in Angola and Malawi 10 years to 2014, and good growth in Mauritius, Mozambique, Namibia, Zimbabwe, Tanzania, Zambia and South Africa. However, with the exception of South Africa, this growth has 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.

South Africa dominates regional production of chicken meat, accounting for 79.7 % of total production in the SADC bloc in 2014 (FAOstats). Malawi and Zimbabwe are the next biggest producers, but each account for less than 4 % of the total regional production of broiler meat. Contraction of the industry occurred in Lesotho, the Seychelles and Swaziland over the past decade.

Table 2: *The production of chicken meat in the SADC member countries in 2014 (FAOstats).*

SADC Country	Production		% Growth	% of Total production		Population
	2004	2014	(10 yr)	2004	2014	
Unit	Tonnes	tonnes	%			M
Angola	8 280	34 152	+ 312	0.69	1.59	26.92
Botswana	6 400	6 443	+ 0.7	0.53	0.30	2.17
Dem. Republic Congo	10 604	10 905	+ 2.8	0.88	0.51	73.72
Lesotho	2 000	1 622	- 18.9	0.17	0.08	2.15
Madagascar	35 520	38 480	+ 8.3	2.95	1.79	23.59
Malawi	15 840	85 973	+ 443	1.32	3.99	17.08
Mauritius	33 000	47 500	+ 44.9	2.74	2.20	1.26
Mozambique	19 935	24 839	+ 24.6	1.66	1.15	27.21
Namibia	9 480	12 894	+ 36.0	0.79	0.60	2.37
Seychelles	751	310	- 58.7	0.06	0.01	0.09
South Africa	905 870	1 717 181	+ 89.6	75.3	79.7	54.54
Swaziland	8 100	6 258	- 22.7	0.67	0.29	1.30
United Rep. of Tanzania	63 000	54 360	+ 13.7	5.24	2.52	52.23
Zambia	38 500	47 810	+ 24.2	3.20	2.22	15.62
Zimbabwe	46 115	64 625	+ 40.1	3.83	3.00	15.41
Total for SADC	1 203 395	2 153 352				315.65

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 2013 (the most recent trade estimates), total production of “chicken meat” in the region at that time was 2 124 440 tonnes, total imports amounted to 770 622 t and exports to 49 712 t. Using a 2013 population estimate of 307.08 million people, per capita consumption of chicken meat is approximately 9.3 kg (2013). 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 6.54 kg (2013) and 6.82 kg (2014).

Commodity: hen eggs (FAO)

The total production of hen eggs in the SADC region was 751 213 tonnes during 2014 (Table 3). Based on these figures, ignoring any imports and given an average egg size of 58 g, the average per capita consumption of hen eggs in shell was 41.0 eggs in 2014. This was down from 45.6 eggs per capita in 2013. Per capita consumption ranges from approximately 2 eggs per person per annum in the Democratic Republic of the Congo to approximately 240 eggs per year in the

Seychelles, if production figures are accepted. 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 remains considerable scope in the SADC region to increase local per capita consumption. The egg continues to be a cheap source of high quality protein source when compared to other animal proteins.

As with broiler production, South Africa dominates the egg industry in the SADC region; accounting for 66.5 % of total production in 2014 (FAOstats). With the exception of Mozambique (which has increased its capacity by over 360 % in the 10 years to 2014) and South Africa, all the SADC nations have lost percentage points in the market compared to 2004 figures, despite some growth in many of these countries.

Table 3: *The production of chicken eggs in the SADC member countries in 2014 (FAOstats).*

SADC Country	Production		% Growth	% of Total production		Population
	2004	2014	(10 yr)	2004	2014	
Unit	Tonnes	tonnes	%			M
Angola	5 000	5 100	+ 2.0	0.92	0.68	26.92
Botswana	4 100	4 645	+13.3	0.75	0.62	2.17
Dem. Republic Congo	6 850	9 200	+34.3	1.26	1.22	73.72
Lesotho	1 550	1 714	+10.6	0.29	0.23	2.15
Madagascar	15 000	17 037	+13.6	2.76	2.27	23.59
Malawi	19 850	24 000	+20.9	3.65	3.19	17.08
Mauritius	14 000	11 500	-17.9	2.58	1.53	1.26
Mozambique	11 521	54 077	+369	2.12	7.20	27.21
Namibia	2 880	3 530	+22.6	5.30	0.47	2.37
Seychelles	1 440	1 290	-10.4	0.26	0.17	0.09
South Africa	356 665	499 233	+40.0	65.6	66.5	54.54
Swaziland	1 210	1 300	+7.4	0.22	0.17	1.30
United Rep. of Tanzania	36 306	33 089	-8.9	6.68	4.40	52.23
Zambia	41 400	55 497	+34.1	7.62	7.39	15.62
Zimbabwe	25 200	30 001	+19.1	4.64	3.99	15.41
Total for SADC	543 422	751 213				315.65

4. DAY-OLD CHICK SUPPLY INDUSTRY

4.1 Overview

The day-old chick supply industry supplies inputs to both the egg and broiler industries. 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.

The broiler industry in South Africa makes use of predominantly two breeds: the Cobb 500 and the Ross 308. The Arbor Acres breed holds a much smaller share of the market. 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 predominantly 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 (Amberlink), Hyline (Silver Brown and Brown) and Lohmann (Lite). Producers use the Hyline W36, a Leghorn-type bird, to produce 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:

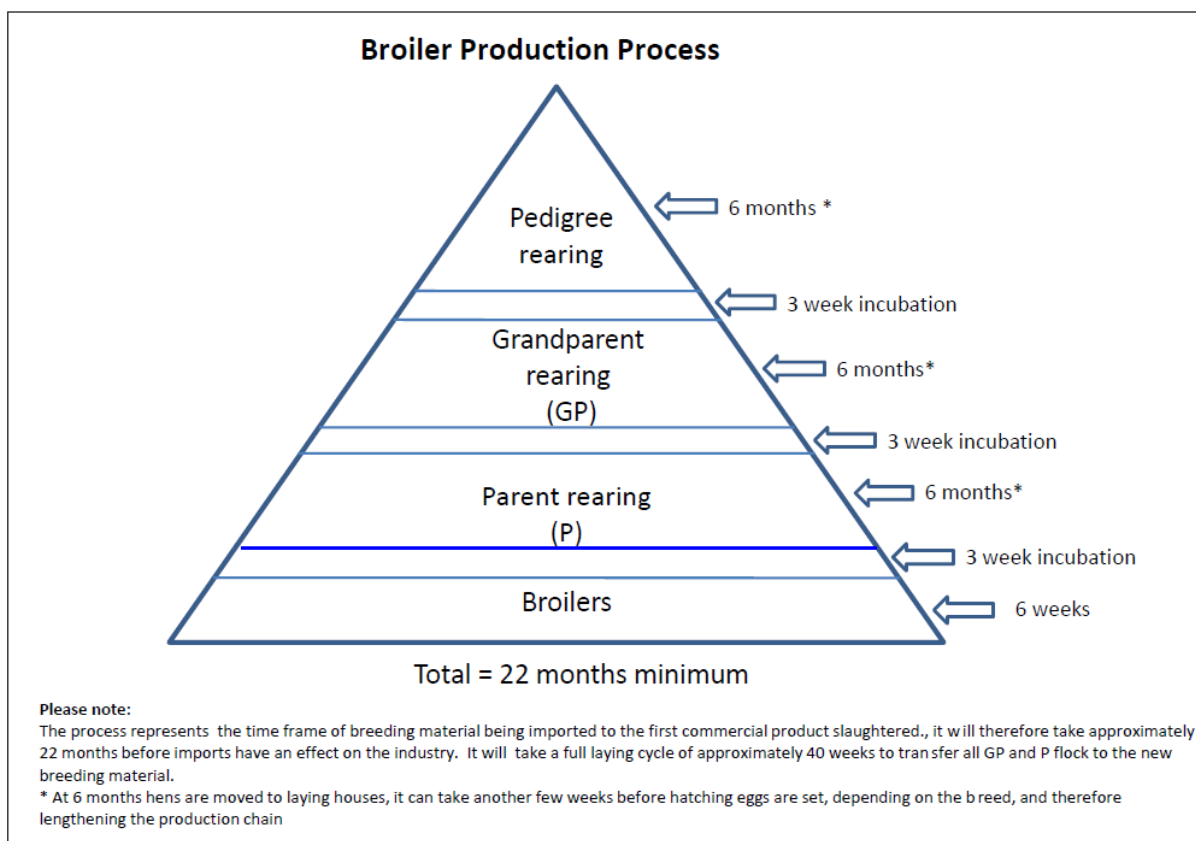


Figure 7. *The broiler production process, from importation of breeding stock to slaughter*

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.

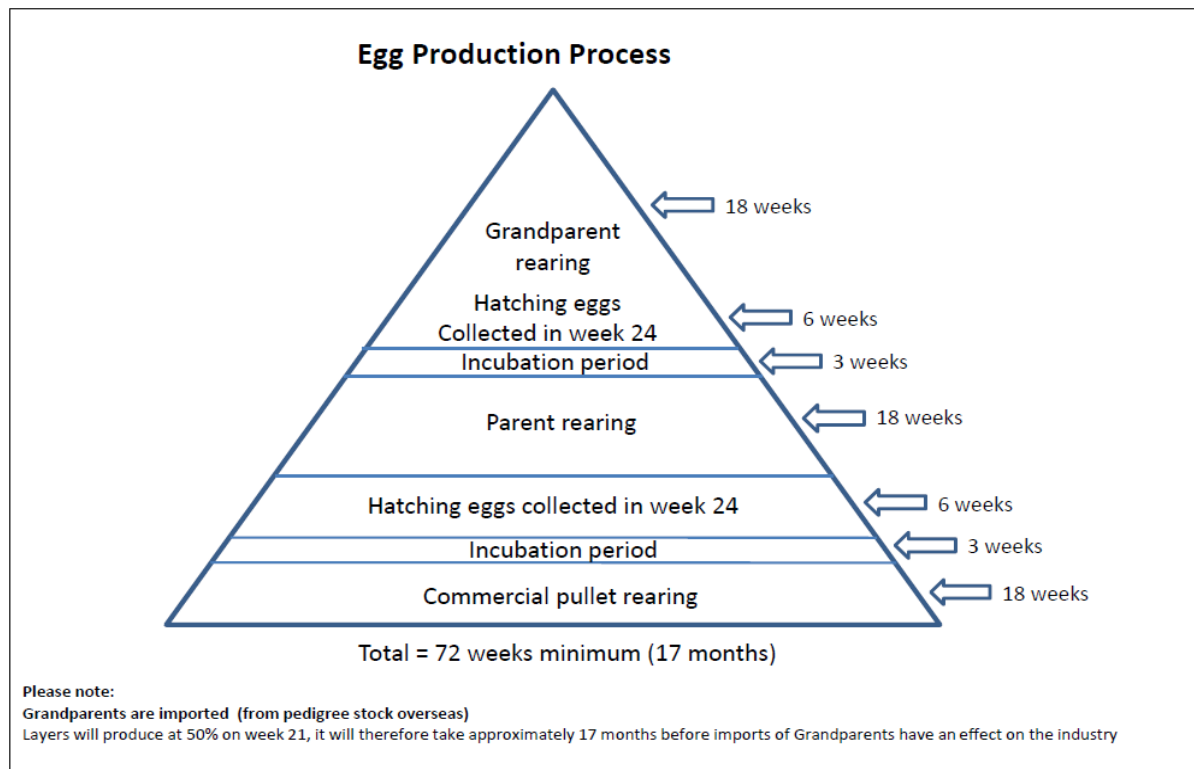


Figure 8. *The egg production process, from rearing of grandparent stock until point of lay*

4.2 Turnover

The estimated egg industry chick production turnover on a day-old pullet basis decreased from R209.9 million in 2015 to R207.3 million in 2016, a decrease of 1.2 %. During the same period, the broiler industry day-old chick supply (not including day-old parent pullet supply) increased from an estimated turnover of R4.31 billion to R4.53 billion, an increase of 3.6 %.

4.3 Production: Chick placement numbers per annum

Layer breeders

In 2016, there was an estimated 9 800 layer breeding birds in grandparent operations producing layer parents and a further estimated 327 000 layer breeding birds in parent operations producing layers. From the breeding stock, 24.02 million day old pullets were produced, a decrease of 3.5 % compared to 2015 (Figure 9).

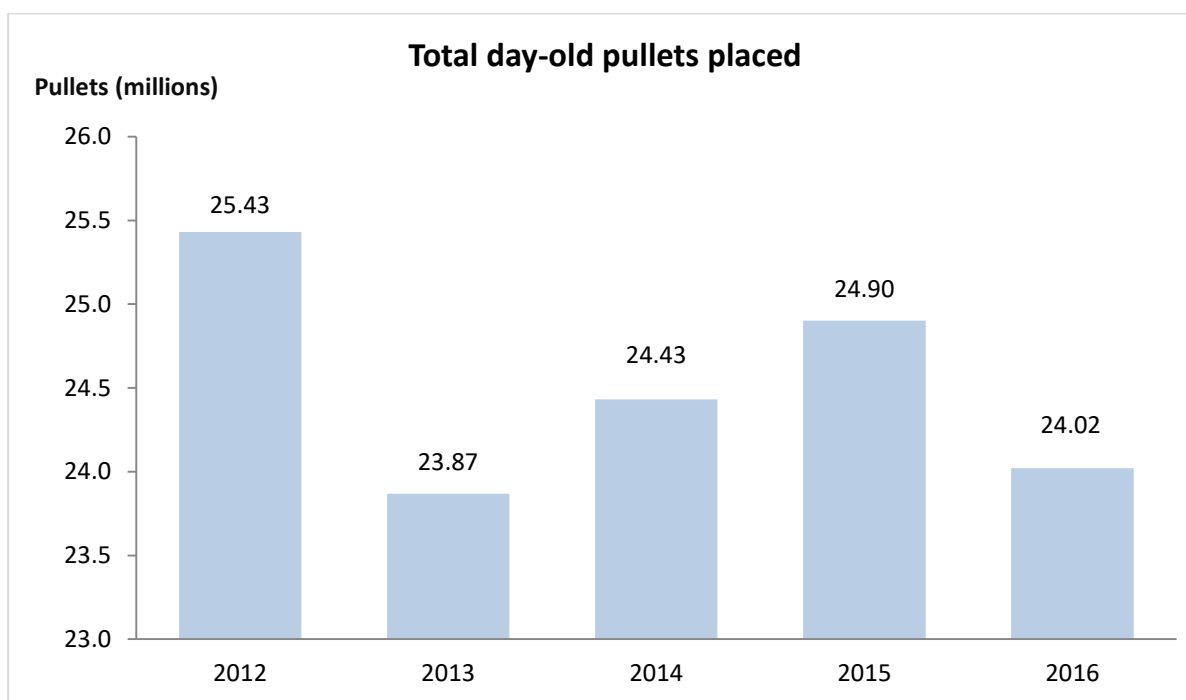


Figure 9. The total day old pullets produced per annum in South Africa

Broiler breeders

The average number of parent males and females in rearing during 2016 was 3.921 million per week, from an estimated grandparent and great-grandparent stock of 242 000. This is a decrease of 27 400 parent birds (- 0.7 %) compared to 2015.

Table 5: The broiler flock in South Africa (2016)

Year	Av. broiler parents (m)		Breeding stock (m)	Day-old broiler chicks produced (m)	
	in rear	in lay	av. / week	av. / week	total / annum
2015	3.95	7.00	10.95	19.44	1 014
2016	3.92	7.13	11.05	18.97	991
% change	-0.7	+1.8	+0.9	-2.4	-2.3

Note: The number of breeding birds in Table 5 includes males and females.

A total of 9.44 million day-old parent pullets were placed in 2016; 413 500 (- 4.2 %) less than in 2015. Based on the number of parent pullets placed, an average broiler breeder flock of 7.126 million hens was estimated for 2016 (Figure 10). This showed an increase of 126 000 hens (+ 1.8 %) compared to 2015. An average flock size of 6.990 million breeder hens was forecast for the first four months of 2017.

Note in the figure below, the national flock size (blue 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.

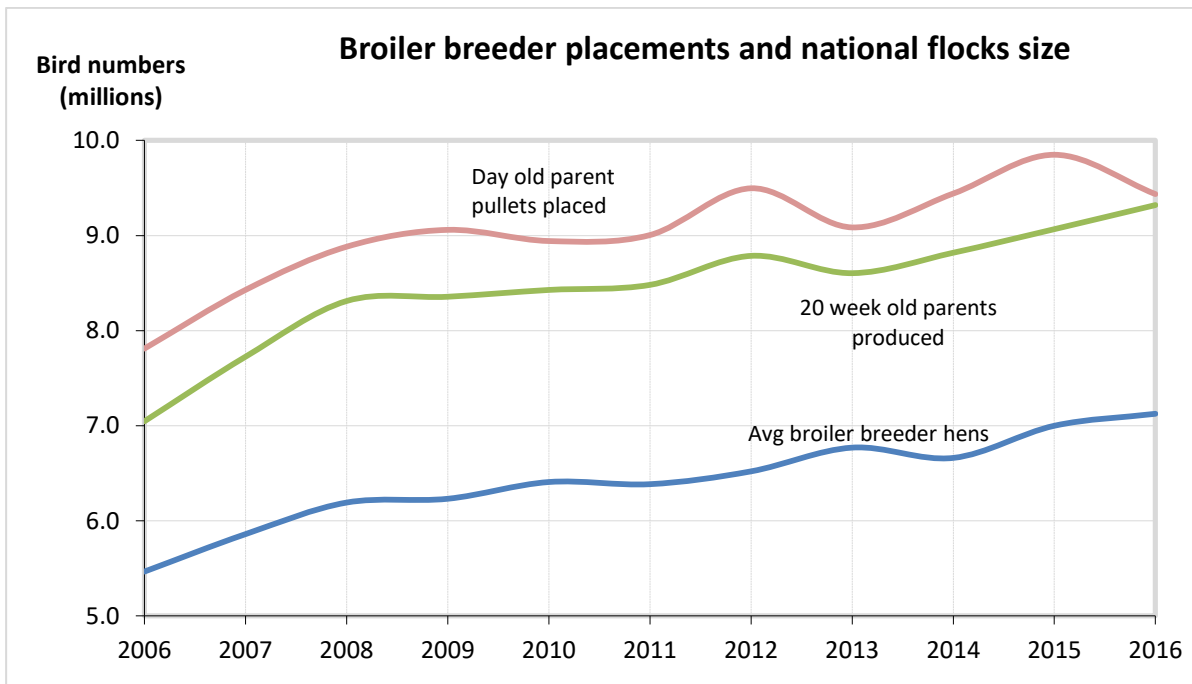


Figure 10. Number of day old and 20 week parents placed per annum and average size of the national broiler breeder flock

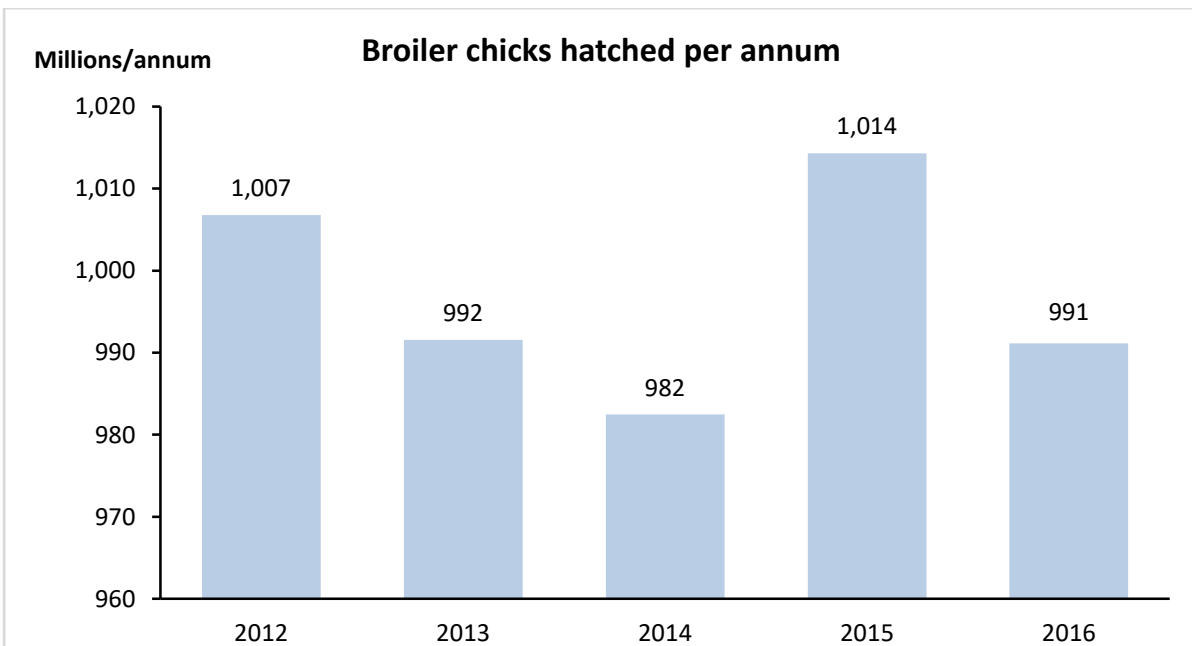


Figure 11. Broiler chicks hatched per annum (millions).

In total 991 million broiler chicks were placed during 2016; 23.2 million (- 2.3 %) less than in 2015 (Figure 11, above).

4.4 Feed usage (broiler breeders)

In terms of feed usage, broiler breeding stock consumed 543 985 tonnes during 2016 (Table 6).

Table 6: Feed usage (tonnes) in parent and breeding operations

Year	Parent rearing t/yr	Parent laying t/yr	Total broiler breeding stock	
			t/yr	t/week
2015	100 853	434 398	535 250	10 265
2016	100 522	443 463	543 985	10 433
Change	- 330	+9 065	+ 8 735	+ 168
% Change	-0.33	+2.1	+1.6	+1.6



5. EGG INDUSTRY IN SOUTH AFRICA

5.1 Overview

The year 2016 has been an incredibly difficult one for South African egg farmers. Poultry feed prices soared as the drought forced mills to import maize, while farm-gate prices remained low and retail margins increased. Disease outbreaks, most notably *Salmonella gallinarum*, caused devastation amongst laying flocks, forcing some egg producers to cull early. Sadly, many small-scale to medium-sized farmers exited the industry.

The signs of stress shown by the South African consumer have put downward pressure on farm gate prices in recent years. In 2016, egg prices increased in line with general inflation (+ 6.4 %) over the year but, in the 4Q 2016, when food price inflation had soared to 11.7 %, egg prices were lower than in the same quarter in 2015. Last year saw a small increase in the number of layers in production and the size of the national flock has stabilised in 2016. The number of eggs produced increased by only 0.03 %; reflecting the lack of growth in the industry.

A 2013 survey representing 45% of the industry indicated that the weighted average age at depopulation was 74 weeks. The production forecasting model was adjusted from December 2013 to take this lengthening of the laying cycle into account. A survey was conducted in the fourth quarter of 2015 to determine the current culling age, but the response from producers was mediocre. In view of this, the forecasting model will continue to use 74 weeks as the age at depopulation.

5.2 Turnover

With a gross turnover of R10.19 billion at producer level, eggs remain the fourth largest animal product sector in agriculture in South Africa, after poultry meat, beef and milk (source: DAFF). The turnover increased by 3.6 % compared to 2015. Eggs' share of the gross value of animal products was 8.5 % and of all agricultural production 3.9 %, down from 8.6 % and 4.2 % the previous year.

The total value at retail level was R16.3 billion for 2016. About 656 million dozen eggs were consumed in South Africa in 2016.

5.3 Production

Laying flock

The size of the national layer flock decreased during 2016 (Figure 12). An average flock of 24.80 million hens was projected; a decrease of 51 000 hens (- 0.2 %) compared to 2015. An average flock of 24.26 million hens is projected for April 2017; a decrease of 792 000 hens (- 3.2 %) compared to April 2016.

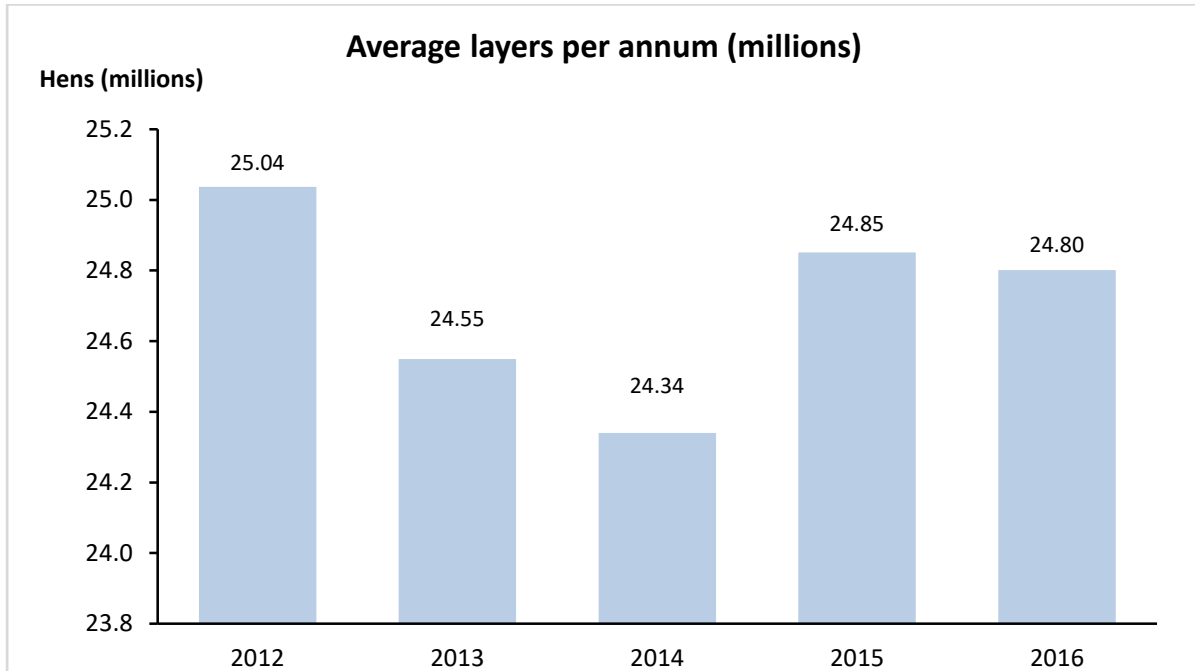


Figure 12. The national layer flock since 2012 (millions)

Egg production

This year, 2016, saw a stabilisation in egg production (Figure 13).

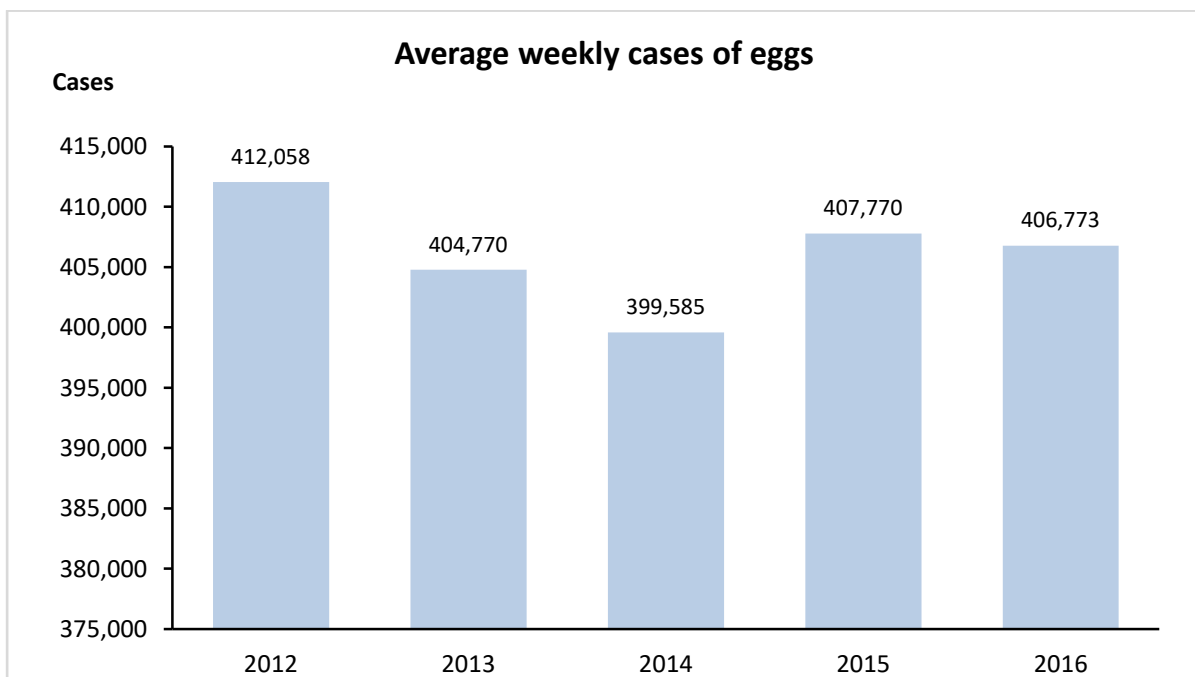


Figure 13. Cases of eggs produced annually in South Africa

The average number of cases produced per week was 406 773, a decrease of 996 cases (- 0.2 %) per week. Total egg production in 2016 amounted to 21.27 million cases, or 638 million dozen eggs; an increase of 0.03 % compared to 2015.

Of the forecasted marketable graded eggs (Grade 1) that were sold in 2016, 8.4 % were size medium, 43.8 % were large, 43.7 % were extra-large and 4.1 % were jumbo. There was a 3.4 % increase in extra-large and jumbo eggs compared to 2015, due to a decrease in the percentage of silver birds in the national flock. The percentage of silvers has decreased from 66.2% in 2014 to 59.2% in 2015 and to 58.4% in 2016.

Table 7, below, summarises bird numbers and egg production and shows the changes for 2016 compared to the previous year. The downward trend in day-old pullet placements during 2012 and 2013 turned from January 2014, increasing steadily through 2015 and stabilising in 2016.

Table 7: Bird numbers (millions) and egg production (million cases) for 2015 and 2016

Year	DOPs	LRPs	Laying hens		Cases of eggs	
	Placed	Placed	Av. no.	Depopulated	Av./week	Total
2015	24.901	23.645	24.851	21.641	0.4078	21.262
2016	24.021	23.393	24.801	21.975	0.4068	21.268
Change	-0.880	-0.251	-0.050	0.334	-0.001	0.005
% Change	-3.53	-1.06	-0.20	1.54	-0.25	0.03

DOP = Day-old pullets LRP = Layer replacement pullets

Figure 14 depicts the relationship between egg volume and producer price. To February 2013, oversupply due to positive growth in egg production reflected in negative year-on-year increases in both producer and PPI-deflated producer prices for eggs (PPI: producer price index). The high year-on-year increases in producer prices of 2013/14 were associated with a tightening supply of eggs (negative growth in egg production). However, in 2015, there was some growth in egg production and, in the second half of the year, year-on-year increases in producer prices were pleasingly high. Year-on-year increases in producer prices dropped again from January 2016, recovered through the autumn and winter months and dropped back to neutral territory by December 2016 (i.e. 4Q 2016 producer prices were no higher than 4Q 2015). Please note: the percentage changes in egg prices presented in the graph are three-month moving averages. (PPI: producer price index).

The number of point-of-lay pullets placed is expected to increase by 4.4 % during the first four months of 2017, compared to the same period in 2016.

An average flock of 24.3 million layers is projected for the first four months of 2017. This will be a decrease of approximately 700 000 layers (- 2.8 %) compared to the same period in 2016. Consequently, egg production is expected to decrease by 2.8 % (an average of 11 270 cases per week) to an average of 398 000 cases per week in the first four months of 2017.

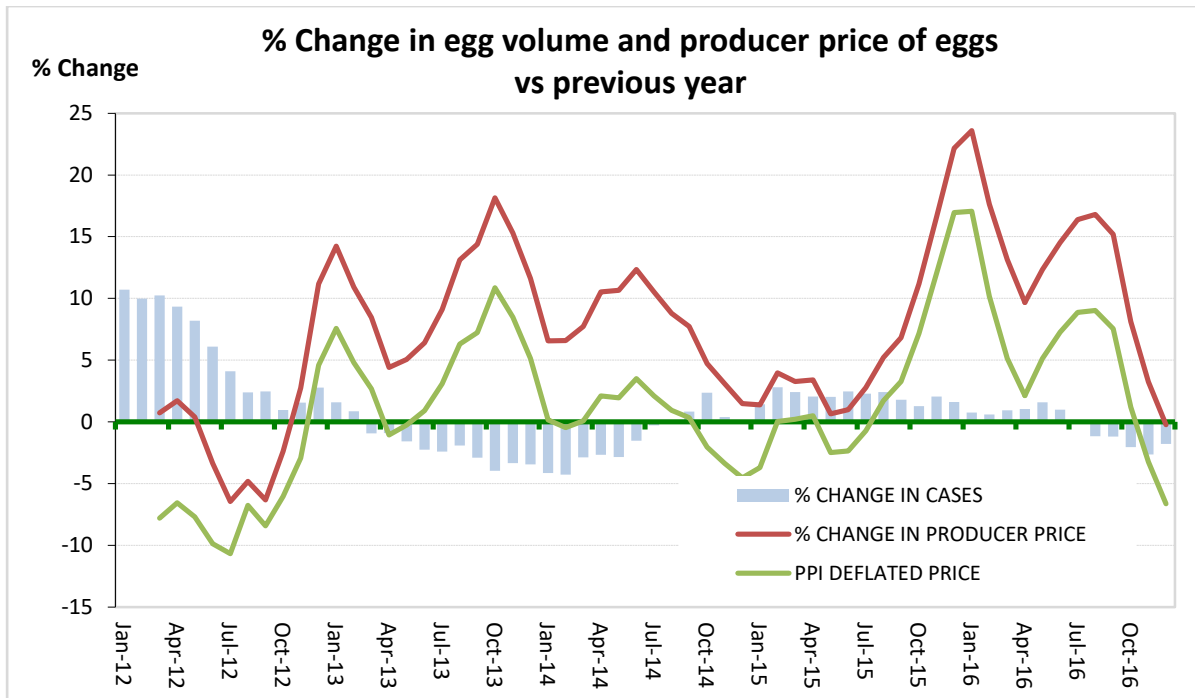


Figure 14. Percentage change in egg volume and producer price (egg price after discounts, rebates and advertising)

5.4 Producer egg prices

The average *producer* egg price (weighted) for 2016 was R12.84 per dozen; an increase of 6.4 % over the average price for 2015 (R12.07). Graded eggs have averaged R13.61 per dozen and ungraded eggs have sold at R11.16 per dozen. During 2016, 70 % of eggs were sold graded and 30 % ungraded. The average retail price for eggs, size large, was R24.60 per dozen in 2016 (Stats SA). In 2016, the retail and producer price increased by 6.5 % and 6.4 % over 2015 prices, respectively.

Quarterly weighted producer egg prices, for caged production, are shown in Figure 15.

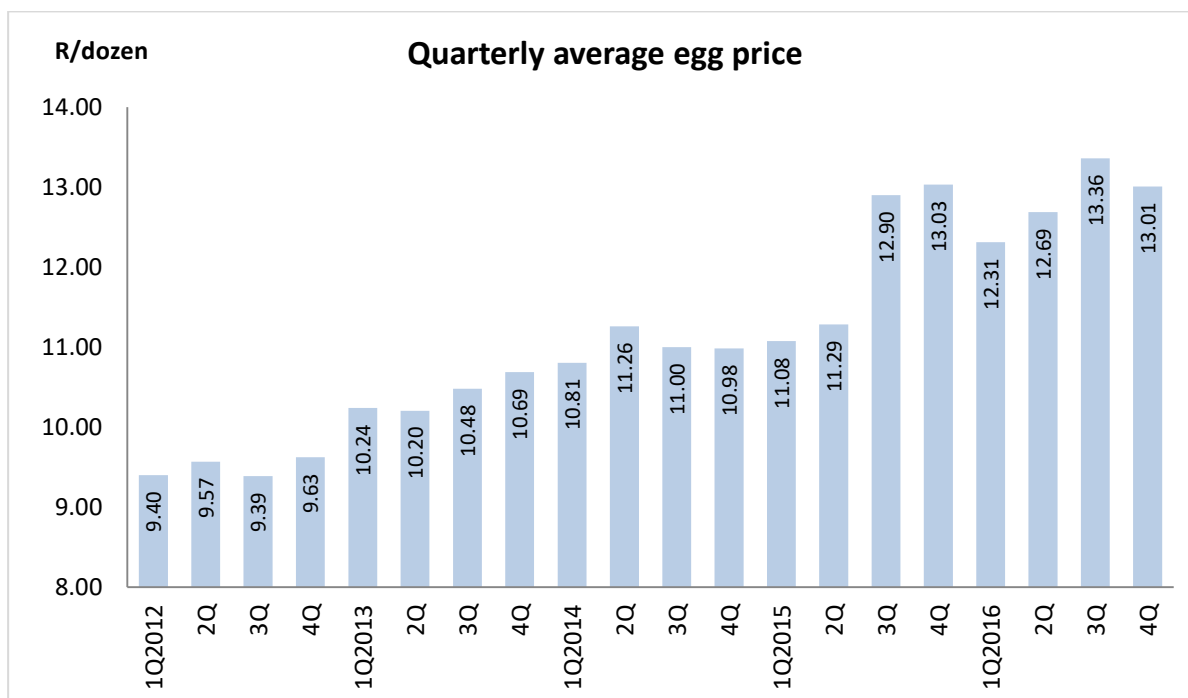


Figure 15. Quarterly weighted producer egg prices from 1Q 2012

5.5 Feed usage and cost

Layers, in all stages of the production cycle consumed 1.175 million tonnes of feed in 2016 (SAPA). Of this total, layers in rearing consumed approximately 0.141 million tonnes and hens in lay consumed approximately 1.034 million tonnes.

The feed usage for layers and pullets in 2016 is summarised in Table 8 below.

Table 8: Feed usage in the egg industry in 2016 (Source: SAPA)

	Feed usage (tonnes)			
	Rearing per annum	Laying per annum	Total per annum	Total per week
2015	145 051	1 032 999	1 178 049	22 144
2016	140 811	1 034 185	1 174 996	22 534
Change	- 4 240	1 186	- 3053	- 59
% change	-2.92	0.11	-0.26	-0.26

According to the Animal Feed Manufacturers Association (AFMA), national sales of layer feeds to their members amounted to 900 483 tonnes from 1 January to 31 December 2016, a 6.1 % decrease over 2015 levels.

The average layer feed price indicator for 2016 increased by 18.9 % compared to 2015, to R4 069 per tonne. This followed year-on-year increases of 12.0 %, 4.8 % and 0.5 % in the previous three years. The layer feed price indicator includes distribution, but excludes medication, additives and VAT. The movement in the feed price is shown in Figure 16.

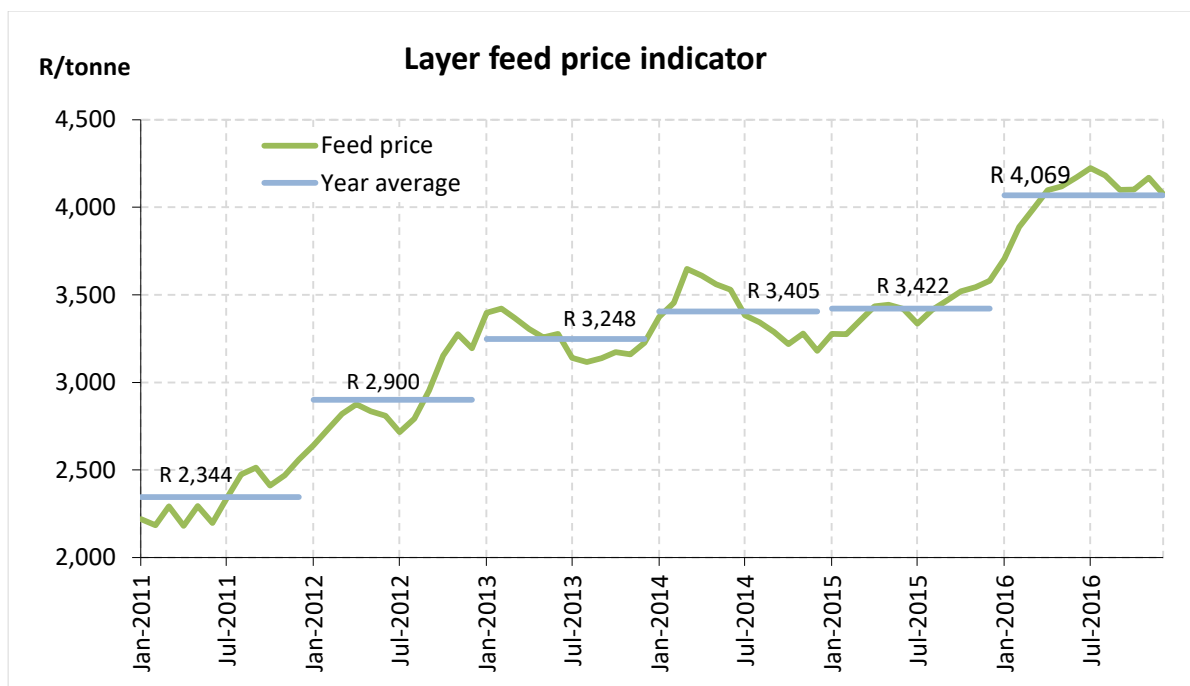


Figure 16. The layer feed price indicator since January 2011

Year-on-year percentage changes in the feed price index and the egg producer price are presented in Figure 17.

For almost two years, from the 2010 until September 2012, egg producers were forced to accept monthly egg prices lower than achieved in the same month of the previous year, although lower feed prices through 2010 would have eased the situation somewhat. Then, from October 2012 to December 2014, both feed and egg prices escalated year-on-year but only from April 2013 were these increases in egg prices in excess of feed price increases.

Negative year-on-year increases in feed prices in the first half of 2015 allowed positive year-on-year increases in egg prices which continued into the second half of 2015, even with escalating year-on-year drought-related increases in feed prices from July 2015 onwards.

In 2016, feed prices only started to reduce relative to 2015 prices from July onwards but egg prices also tracked downwards from mid-year so that, by 4Q 2016, egg prices were back to 4Q 2015 levels.

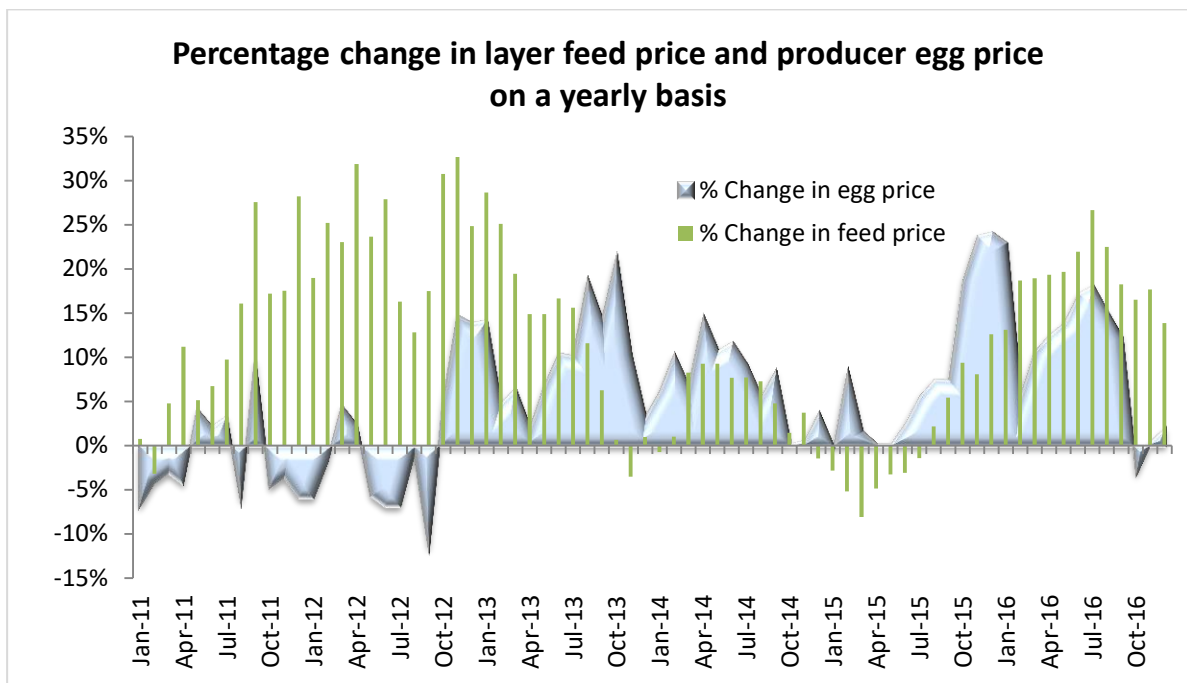


Figure 17. Year-on-year percentage change in egg feed price and producer price

5.6 Consumption

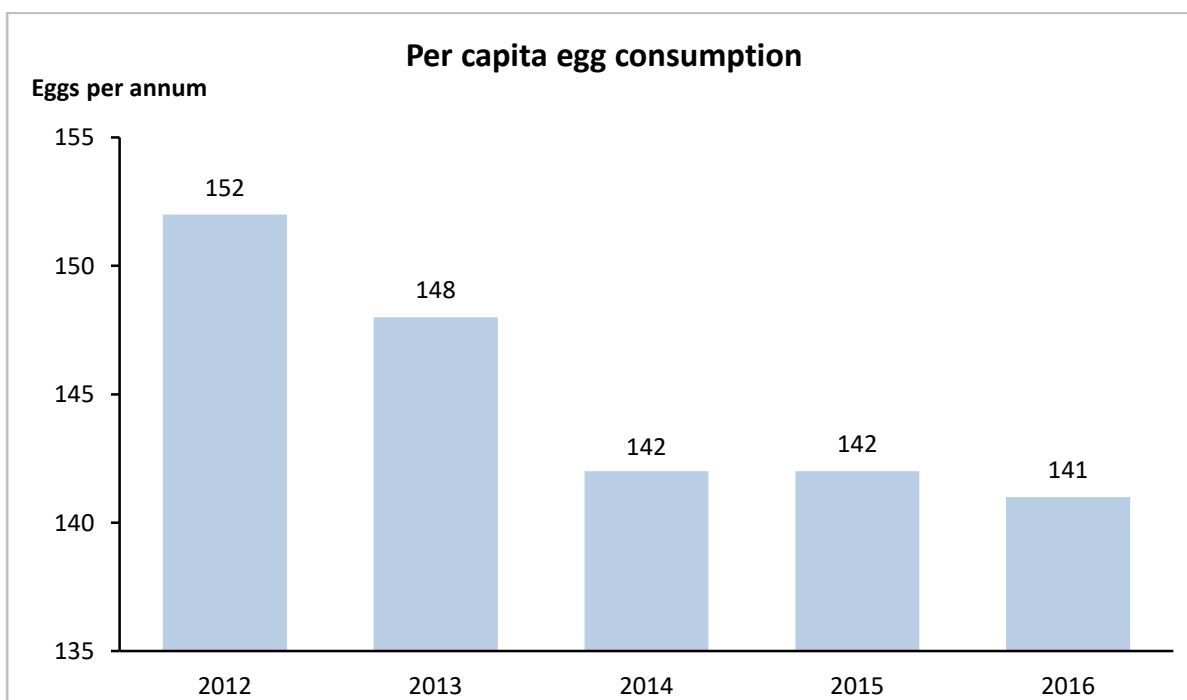


Figure 18. Per capita egg consumption in South Africa from 2012

The per capita consumption for 2016 was 141.4 eggs or 8.05 kg, compared to 142.4 or 8.12 kg in 2015 (source: SAPA). While the population increased by a midyear estimate of 1.3 %, the total consumption of eggs decreased by 0.7 %. Peak egg consumption in South Africa occurred in 2012 at 152.5 eggs per person (Figure 18).

The annual per capita consumption of eggs for some of the top egg-eating nations is shown in Figure 19, for 2015. Considerable scope still 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.

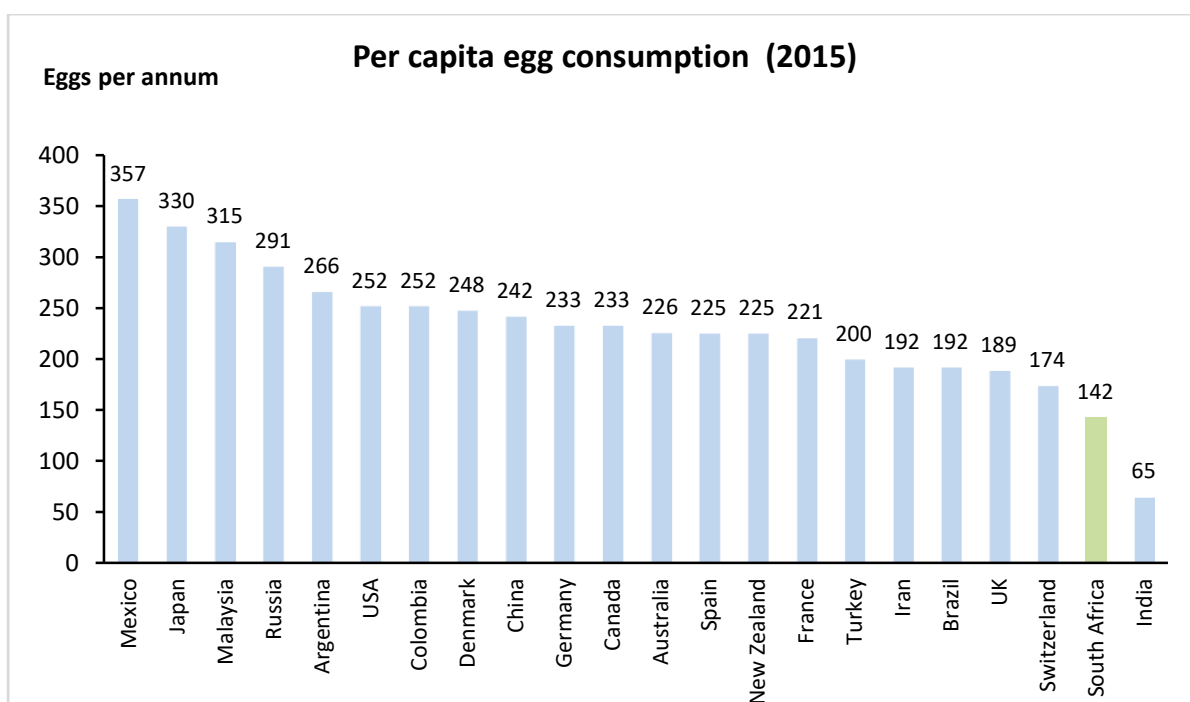


Figure 19. Global per capita consumption of eggs in 2015 (source: IEC)

5.7 Trade

Egg exports

Egg exports for 2016 totalled 16 181 tonnes, a decrease of 15.4 % compared to 2015. The total value of all egg exports was R421.0 million.

Of the 16 181 tonnes exported, fertilised eggs accounted for 9 373 tonnes (57.9 %: 8 941 t chicken; and 432 t other species) at an FOB value of R255.6 million (fertilised chicken eggs: R249.5 million; fertilised eggs of other species: R6.12 million).

Besides fertile eggs, 6 807 tonnes of shell eggs and egg product were exported, at a FOB value of R165.4 million, as detailed below. Fresh shell eggs contributed 1 790 tonnes to exports (11.1 % of total: 1 409 t chicken; and 382 t other species) at an FOB value of R63.8 million (chicken shell eggs: R52.7 m; shell eggs of other species: R11.1 m).

Cooked or preserved shell eggs accounted for 3 963 tonnes of egg exports (24.5 %: 3 958 t chicken and other species, and 0.46 t ostrich) at an FOB value of R75.4 million (chicken and other species: R75.1 million; ostrich: R263 945).

South Africa exported 1 054 t of egg “products” in 2016 (6.5 % of total exports). Dried products accounted for 931 t of the exported egg products (14.4 t dried yolks, 915 t dried egg (not yolks) and 1 478 kg dried egg albumins). Liquid egg products totalled 123 t of the exported egg products (106 t liquid egg yolks, 15.7 t raw egg pulp (chicken and other) and 1.21 t of liquid egg albumins). The FOB value of dried egg products was R21.18 million and the FOB value of liquid egg products was R5.07 million.

Hen egg exports (*Gallus gallus domesticus*; fresh and preserved/cooked and egg products) continue to operate from a low base, being only 1.28 % (5 754 t) of total egg production (448 067 t) in South Africa in 2016.

The main destinations for South African egg exports in 2016 were Mozambique (68.3 %), Swaziland (8.7 %), Zimbabwe (7.9 %), Lesotho (7.0) and Côte d’Ivoire (4.1 %). Exports to Angola, Botswana and Namibia have dropped by 88.7 %, 40.8 % and 62 % since 2015, respectively.

Egg imports

Total imports of eggs, including shell eggs and egg products (liquid and dried), amounted to 216.5 tonnes in 2016; 126.2 tonnes less (- 37 %) than in 2015. Imports had a free-on-board value of R26.9 million. The egg product component accounted for all but 5 kg of the imports (fertile eggs) and dried egg product made up 215.7 tonnes of the total imports. The main countries of origin of egg imports were France (46.4 %), Italy (42.1 %), Denmark (10.2 %) and Germany (1.0 %). Imports of eggs and egg products (216.5 tonnes) represented only 0.047 % of total egg consumption (456 585 tonnes) in 2016.

5.8 Provincial distribution of layers on layer/layer breeder farms

In a recent Notifiable Avian Influenza (NAI) 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).

Table 9: Provincial distribution of layers in South Africa

	Layer birds	% of total layer birds
Eastern Cape	855 783	3.2 %
Free State	3 659 903	13.8 %
Gauteng	6 408 490	24.2 %
KwaZulu-Natal	2 736 118	10.3 %
Limpopo	1 795 360	6.8 %
Mpumalanga	2 046 742	7.7 %
North West	2 608 882	9.8 %
N & W Cape	6 423 408	24.2 %
GRAND TOTAL	26 534 686	100 %

A total of 202 farms reported in the NAI survey, of which 21 were layer breeder farms, 28 were layer rearing farms and 153 were commercial laying hen farms. We continue to try to improve the representation of producers in this survey for disease control and management purposes.

5.9 Challenges and prospects for the South African egg industry

With signs that the drought is easing, local egg producers are perhaps, for the first time in many years, in a stronger position to rise above the challenges they face than their counterparts in the broiler industry. Good rains in the maize-growing regions of the country will support a bumper harvest in the coming season and with global soybean prices also under pressure, animal feed costs should drop gradually from last year's highs. Egg prices are expected to rise on tighter stocks, as operations take time to repopulate after the perfect storm that was 2016.

McDonalds SA has come under pressure this year to follow the example set by their parent company in the US and to “uncage the Egg McMuffin”. The company initially indicated that it would spend six months investigating the feasibility of transitioning to cage-free purchasing in South Africa but, by spring 2016, had yielded to media pressure. The company has negotiated with its supplier to increase the cage-free content of its eggs by 10 % every year, to be cage-free by 2025.

The cage-free revolution is rapidly becoming a “horizon issue” for South African producers – an issue which could have profound consequences for producers if they do not recognise it, evaluate it and respond, effectively, in time. The speed with which all major US and UK corporations announced their commitment to cage-free production (after McDonalds US had made the initial pledge in 2015) has demonstrated how quickly a market shift can be imposed on an industry that has not paid enough attention to the external landscape – or acknowledged the power of social media campaigns. The good news about eggs (the end of cholesterol fears, nutritional and health benefits, etc.) is so often outweighed by all the articles criticising production systems. Although good welfare science may point towards enriched cage systems rather than cage-free systems as the optimum solution, consumer perceptions will ultimately determine what constitutes acceptable welfare conditions. Dr Temple Grandin, a world renowned and pragmatic welfare researcher

counsels that farming operations need to be YouTube-ready – cell phone cameras are omnipresent and social media platforms are unforgiving. South African producers have an excellent product and the resourcefulness to develop production systems which will meet corporate and consumers' demands for both price and welfare – but the time for forward planning is now. Walmart, Nestlé, Sodexo, Unilever and McDonalds all have footprints in South Africa and can expect to come under pressure to implement their cage-free pledges in every country of operation. The issue is no longer on the horizon for South African producers – within 18 months of the revolution starting in the US, it has found its way to our shores. Some local producers are already restructuring their businesses to take advantage of this change in the global industry.

Local demand for eggs remains disappointingly low (141 eggs per person per annum (2016)), despite 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. The world average for per capita consumption is approximately 210 eggs. The Mexicans eat a staggering 357 per person per year (IEC).

South Africa's consumption of eggs in 2016 is 32 % higher than in 2001; against a population increase of 23.4 %. Consumption of chicken meat has increased by 80 % in the same period. 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

In some African cultures (including Swaziland, 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 exists in local cultures. 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.

It is estimated that for every 10 000 tonnes of eggs or egg products exported, 318 jobs would be created in the egg industry. 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. The UK has increased egg consumption by over 7 % in two years by making use of social media and the pull of celebrity endorsements and food-fads. Social media is undoubtedly a powerful tool in influencing consumer

behaviour and a growing number of free range farmers in the UK are using Twitter and Facebook accounts to advertise and reassure their customers. If the egg industry begins to move into more profitable waters in 2017, now might be the time to look at how social media, egg printing, etc., could be used to reinforce in the public's mind all that is good about eggs (selenium, vitamins A, B₁₂, D, riboflavin, folate, high quality protein, choline, etc.) and to further dispel any lingering cholesterol concerns and cultural egg-eating taboos.



6. BROILER INDUSTRY

6.1 Overview

Although 2015 saw a level of recovery in the South African broiler industry, the industry ended 2016 under catastrophic pressure, facing an unprecedented threat from dumped broiler imports and dealing with a barrage of drought-related and political challenges. In summary, the challenges were:

High feed costs as a hangover of one of the severest droughts on record

Imports of frozen broiler meat

New brining regulations

Reduced consumer spending and high food prices in a recessionary environment

An embattled South African rand

Looking at periods in which the annual rainfall in consecutive years has been below the long term average of 608 mm, the four-year period from 2012 to 2015 is one of the three most severe dry spells to hit South Africa in the past one hundred years. The average rainfall from January 2012 to December 2015 was just 544 mm (South African Weather Service). As a result, the average broiler feed price index (SAPA) for 2016 was R5 602 per tonne; an increase of 13.5 % in comparison with 2015. Percentage year-on-year increases in broiler producer prices during 2016 were not as high as the year-on-year feed price increases, impacting negatively on profit levels in the industry.

South Africa imported yellow maize from Argentina through 2016 to meet local demand. Broiler feed price inflation is driven by the exchange rate. Between January 1 and December 15 2016, the rand appreciated by 9 % from post-Nenegate levels of over R16 to the dollar (December 2015). However, the rand's value at the end of 2016 was still 22 % below its value on 1 January 2015 (R11.56 to the dollar).

Whilst importers continue to accuse the poultry industry of protectionism, it is proving increasingly difficult for local producers, including large corporations, to survive the onslaught of cheap European poultry imports in a business environment hit hard by drought-elevated feed prices and constrained consumer spending. Imports of broiler products from the EU reached record levels in the 2Q 2016 (60 043 tonnes of bone-in portions *cf* 34 802 tonnes in 2Q 2015). The drop in imports in 2H 2016 is simply because of AI-related trade bans against a large number of EU countries, and not because of any measures applied by the South African government to protect its farmers from illegal dumping – and not because the EU has recognised the illegality of these exports and limited the practice. As soon as the AI-related trade bans are lifted, EU imports will again flood into the country.

In 2016, almost 240 000 tonnes of bone-in imports arrived in South Africa from the EU. In June 2016, a deal was signed with Poland to allow importation of bone-in portions, mechanically deboned meat and offal to South Africa for the first time. The deal, negotiated since 2013, gives

one of Europe's top poultry producing countries unlimited access to our markets from 20 June 2016. The first shipments arrived on our shores in August. In September, SAPA appealed to the government to stem the flow of imports from the EU, as agri-businesses cut back on production, warned shareholders of declines in profits and issued a threat of retrenchments. During the year a number of small- and medium-sized independent broiler farmers went out of business as unfair trade practices created major imbalances in supply and demand.

Although final anti-dumping duties of between 3.86 % and 73.33 % were gazetted in 1Q 2015 against imports from the UK, Netherlands and Germany, the effectiveness of these anti-dumping measures seems questionable given the volumes currently being imported. The industry made further representations to the International Trade Administration Commission (ITAC) in relation to EU bone-imports in July 2016. The industry has pushed to have further safeguard measures put in place. In response to this application, ITAC issued a second essential facts letter which states that SA is suffering a threat of serious disturbance from imports, that the main cause of the disturbance is from EU imports, and that exceptional circumstances exist. They imposed a safeguard tariff of 13.9 % to correct the imbalances in December. However, SAPA and the industry feel this tariff is too low and are working with ITAC to have it raised to the MFN (most favoured nation) tariff of 37 %.

The import tariffs agreed on in 2013 are also up for review with ITAC. SAPA argues that the tariffs set in 2013 have failed to provide more than 5 % average protection to the industry and have had no effect because a) they are too low; b) they do not apply to the EU because of the TDCA between South Africa and the EU; and c) dumping of mechanically deboned meat in the South African market causes far-reaching distortion of the whole value chain. Imports as a percentage of broiler consumption increased to 24.9 % in 2016. Had the AI-related trade bans not taken effect in December, this figure would have been 25.6 % (if December tonnages are based on a six month average). If mechanically deboned meat (MDM) is excluded from the imports, imports still account for 15.7 % of local broiler consumption (16.4 %, had December's imports not been reduced by the trade bans). Leaving MDM out of the calculation ignores the effect that 195 000 tonnes of chicken entering the market at R4.22/kg has on overall pricing.

Although the South African poultry industry does not export to the US, the continued participation of South Africa in the African Growth and Opportunity Act (AGOA) became coupled to the issue of dark meat broiler imports. The renewal of this preferential trade agreement in September 2015 was to the detriment of the local broiler industry because a compromise quota for US leg quarters had to be settled on to satisfy the American negotiators and to secure continued access to the US markets for the country as a whole. South African producers were forced to accept 65 000 tonnes of US bone-in imports per annum from January 2016. These portions are not subject to the anti-dumping tariffs that have been in place against US leg quarters for more than a decade. In March and April 2016, US imports of bone-in portions averaged 3 856 t per month but for much of 2016 lower volumes than had been expected were imported. By December 2016, the Americans had imported 22 018 tonnes of bone-in portions (34 % of quota).

South Africa's 2016 trade deficit looks set to be considerably lower than in recent years, at an estimated R2.912 billion, compared to an average of R48 billion in the four preceding years.

Imports of poultry products into South Africa in 2016 (imports less exports; R3.038 billion) exceed the accumulated trade deficit for 2016 (including BLNS nations). These are products which *could* be produced in South Africa, creating South African jobs - spare capacity for production and job creation in both the poultry and feed industries is being wasted, along with opportunities for rural development and national food security.

In December 2013, DAFF published new draft brining regulations by way of an amendment notice to the Agricultural Product Standards Act, Act 119 of 1990. These draft regulations set the maximum amount of flavoured water, salts and/or colourants that may be injected into individual poultry portions at 15 % and into whole birds at 10 %. The regulation was due to be introduced in September 2015 but was retracted as premature. Some role-players in the broiler industry felt that 25 % would be a more realistic brine level for IQF portions. Following discussions between the parties during the course of 2015, SAPA submitted revised proposals to DAFF early in 2016, with the hope that the matter could be resolved during the year. Minister Zokwana gazetted the amendment to the Regulations Regarding Control over the Sale of Poultry Meat on 22 April 2016. SAPA issued a statement in May to the effect that they would contest the new regulations, for the reason that DAFF had essentially ignored economic, technical and scientific information on brining that had been supplied by SAPA. In September, SAPA's legal application to prevent the introduction of the proposed regulation was dismissed by the High Court. The Court also ruled against delaying the new regulations by eight weeks to allow companies to change their packaging. The legal limits to the percentage of brine were set at a maximum of 10 % in whole carcasses and 15 % in poultry portions. The new regulations came into effect on 22 October 2016. Producers were given six months to adjust their brine levels and bring product labelling into line with the new regulations. According to the new regulations, brine levels need to be disclosed on the product packaging. Regular compliance testing needs to be done by producers and a record of tests and compliance needs to be kept for at least a year for auditing purposes.

SAPA had also launched a second, parallel legal action in mid-2016, asking for an extension of the new law to allow its members to sell existing stock already in the distribution chain. It was estimated that R500 million to R2 billion worth of product with higher brine levels, produced prior to the promulgation of the law, might have to be dumped. In September, the Pretoria High Court ordered DAFF to set up an appeals board within a week to hear SAPA's request for an extension so that food would not be wasted. DAFF granted exemptions to some producers to allow them to sell off stock brined at the old levels. SAPA remains in discussion with DAFF regarding the interpretation of the regulations, as gazetted. The poultry industry will be adjusting to business under these regulations in 2017.

6.2 Turnover

The gross value of primary agricultural production from poultry meat (inclusive of all types of poultry) for the period 2016 was R36.67 billion, reflecting an annual decrease of 5.5 % (source: DAFF).

Poultry meat production is the largest product sector in agriculture in South Africa, ahead of all other animal sectors (beef production (R33.0 billion), milk (R15.7 billion) and eggs (R10.2 billion) and ahead of all field crop and horticultural sectors. The maize sector, for example, had a gross value of R28.1 billion and deciduous and citrus fruit were valued at R21.2 and R17.7 billion, respectively. Poultry meat's share of the gross value of all agricultural production was 14.1 %, and of all animal products 30.5 %.

6.3 Production

A total of 935.6 million broilers were produced for slaughter in 2016; 29.4 million (- 3.1 %) less than in 2015 (Table 10).

Based on the number of day-old parent pullets placed to December 2016, the size of the breeder flock is expected to decrease by 1.9 % to 6.99 million during the first four months of 2017. The forecasting model predicts a potential production of broilers to July 2017 of 21.41 million per week. These figures do not take exports into account, nor the possibility that some fertile eggs may not be incubated as the industry attempts to adjust to the oversupply situation.

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	1000/year
2015	9 849 436	6 999 563	1 014 292 266	964 994 269
2016	9 435 872	7 125 697	991 136 544	935 572 025
Change	- 413 564	126 134	-23 155 722	- 29 422 244
% change	- 4.2	1.80	-2.3	-3.1

6.4 Feed usage and cost

In 2016, approximately 3.34 m tonnes of feed were used by the broiler industry. Approximately 2.8 m tonnes of feed were used to grow broilers while the remaining 542 985 tonnes were used in the broiler breeder industry.

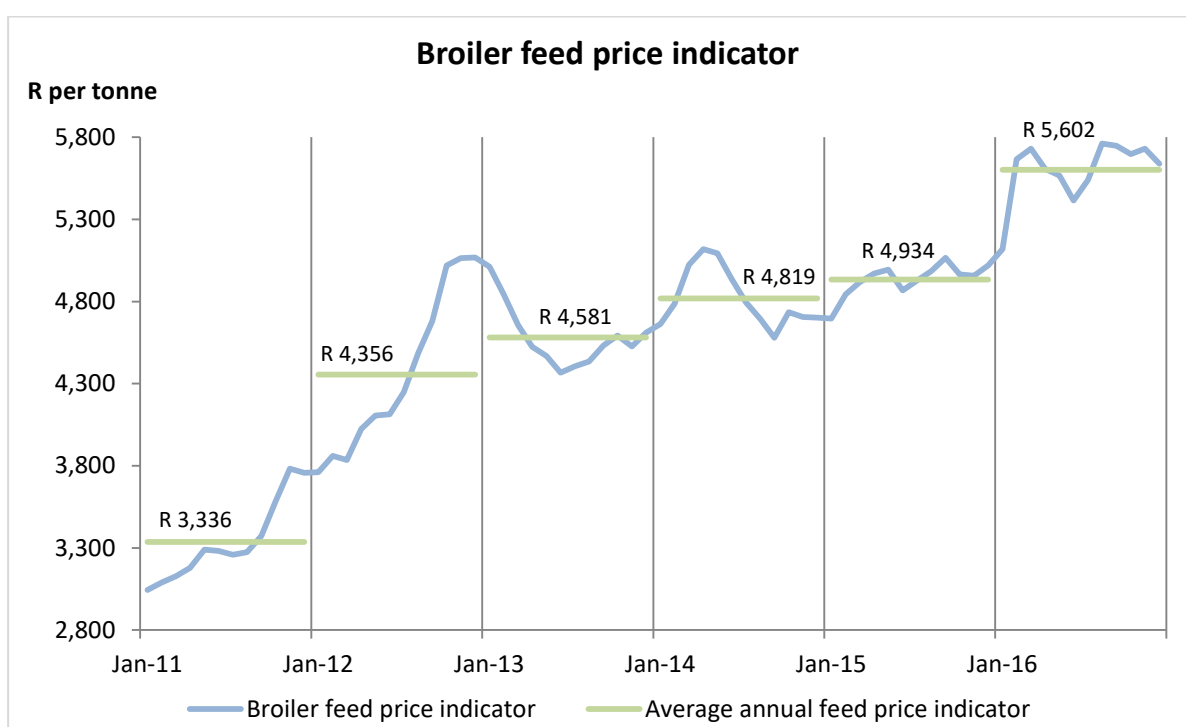
The feed usage for broiler breeders and broilers is summarised in Table 11 below.

According to the Animal Feed Manufacturers Association (AFMA), national feed sales for broilers from 1 January to 31 December 2016 amounted to 2 713 097 tonnes and, for breeders, 474 282 tonnes. These figures exclude non-members of AFMA.

Table 11: Feed usage for broiler breeders and broilers in 2016 (tonnes)

	Broiler parents		Total broiler breeding stock		Broiler production		Broiler industry	
	rearing per annum	laying per annum	per annum	per week	per annum	per week	per annum	per week
2015	100 853	434 398	535 250	10 265	2 878 576	55 206	3 413 826	65 471
2016	100 522	443 463	543 985	10 433	2 795 675	53 616	3 339 660	64 048
Change	-330	9 065	8 735	168	-82 901	-1 590	-74 166	-1 422
%	-0.33	2.09	1.63	1.63	-2.88	-2.88	-2.17	-2.17

The average broiler feed price for 2016 was R5 602 per tonne; an increase of 13.5 % in comparison with 2015. This followed year-on-year increases of 5.2 %, 5.2 % and 2.2 % in 2012, 2013 and 2014, respectively. The broiler feed price includes distribution, but excludes medication, additives and VAT. The movement in the index feed price is shown in Figure 20.

**Figure 20. Broiler feed price indicator (average across feed phases) from 2011**

The year-on-year percentage changes in broiler feed price and chicken price are shown in Figure 21. The graph clearly indicates why margins were under enormous pressure during 2012. From January 2011 to July 2013, feed prices escalated year-on-year, with particularly high increases

during most of 2012. The graph shows clearly that percentage year-on-year increases in broiler producer prices during this period were not as high as the year-on-year feed price increases, which would have impacted negatively on profit levels in the industry.

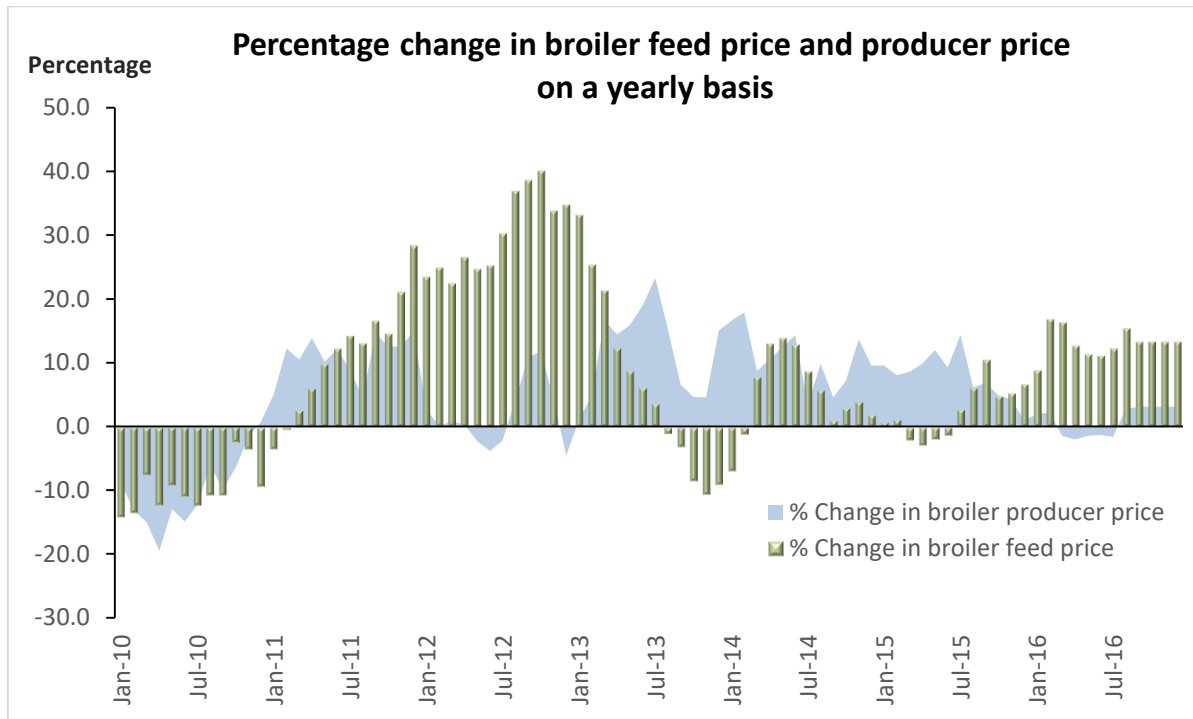


Figure 21. Year-on-year percentage change in broiler feed price and producer price

Only from January 2013 have producers been able to maintain some level of year-on-year increase in the broiler producer price, even when feed prices are rising (e.g. March to August 2014). From August 2014 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 again for broiler producers from August 2015, with annual increases in feed prices outstripping annual increases in broiler revenues. Year-on-year percentage increases in broiler producer price moved into negative territory between March and July 2016 but returned to positive territory in August 2016 and have remained there to the end of 2016; albeit it below feed price increases.

6.5 Consumption

Poultry consumption

According to DAFF estimates for 2016, total production of poultry meat (including turkey, ducks, geese and guinea fowl) was 1.6779 million tonnes whereas consumption (including backyard consumption) amounted to 2.1998 million tonnes. The per capita consumption of poultry meat for

2016 was 39.05 kg per annum, down 0.33 % from 39.18 in 2015 (Figure 22). This includes the sale of spent hens from the broiler breeder and commercial layer industries, the sale of all the edible offal, as well as other poultry species.

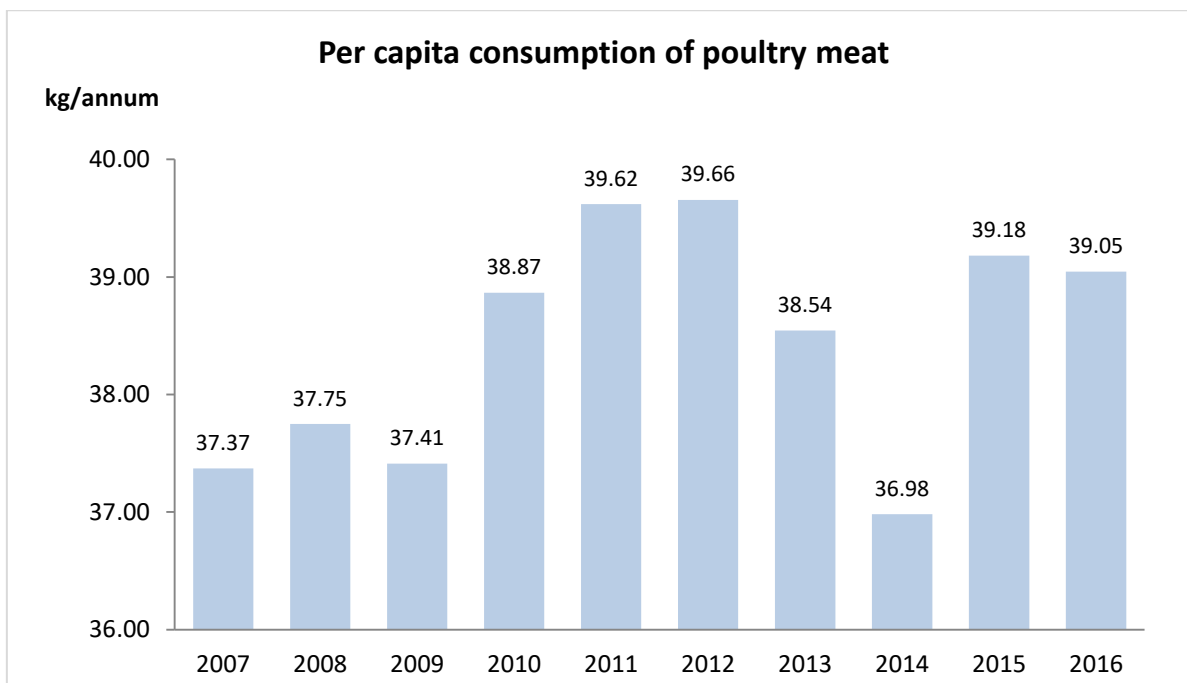


Figure 22. Per capita consumption of poultry meat in South Africa from 2000

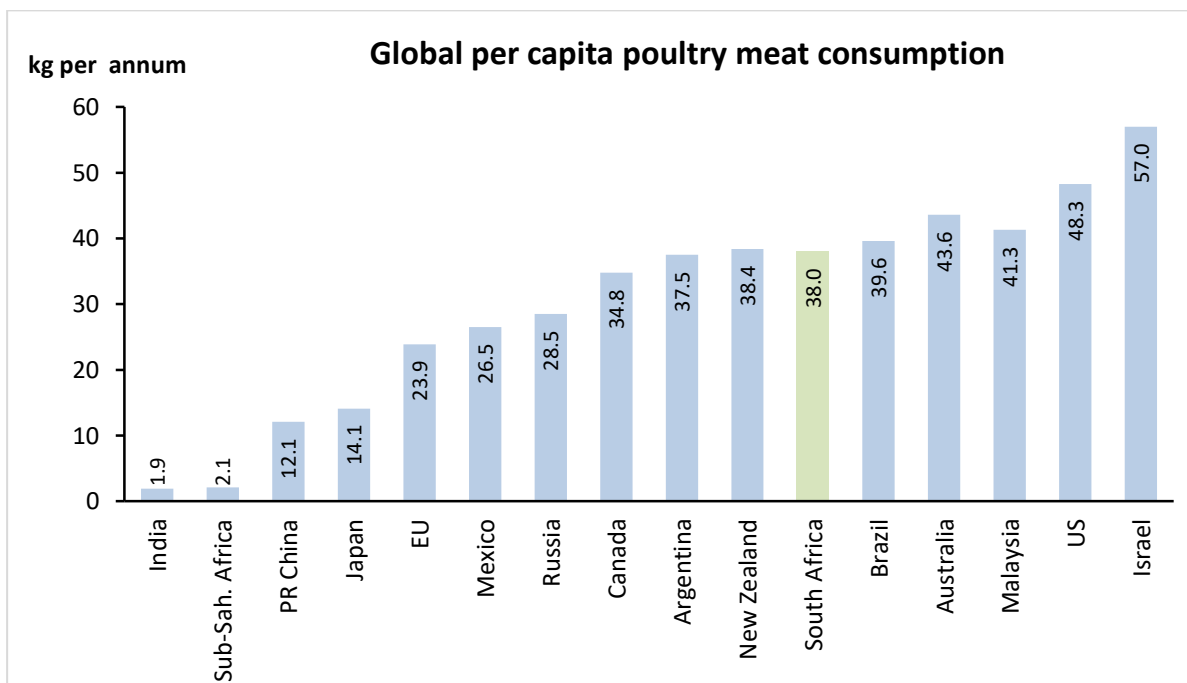


Figure 23. Approximate per capita consumption (kg) of poultry meat worldwide (OECD-FAO Agricultural Outlook 2016)

The annual per capita consumption of chicken around the world, according to OECD-FAO data for 2016, is shown in Figure 23.

Chicken consumption

Chicken production, including subsistence farming and depleted breeders in the broiler and egg industries, was 1.792 million tonnes (99.9 % of total poultry production). Consumption of chicken meat amounted to 2.119 million tonnes in 2016. The per capita consumption of chicken meat for 2016 was 38.07 kg per annum, up from 38.21 kg in 2015 (source: SAPA).

6.6 Trade

South Africa is among the most unprotected markets in the world, resulting in countries such as Brazil, and the EU, taking advantage of this to dump substantial quantities of cheap chicken here. In contrast, Nigeria, Kenya and Swaziland do not allow imports at all; Botswana and Mozambique issue very few import permits and Namibia restricts chicken imports through a quota system. Worldwide, countries impose very large tariffs to protect their industries while others use sanitary conditions to stop imports into their home markets. For example, the EU, a massive exporter of chicken to South Africa, imposes a tariff of €1.02 (plus a safeguard levy of €0.10 to 0.20) per kilogramme of uncooked breast meat (\pm R18.25/kg). Canada controls imports under a tariff rate quota (TRQ) and applies a 238 % tariff on whole chickens imported over and above agreed quotas. The tariff increase on leg quarters – the bulk of imports – is only 37 %, with no increase in the tariff on mechanically deboned meat (MDM) which is used in sausages and polonies. Since 81 % of imported leg quarters came from the EU in 2016 (81% in 2015 and 93 % in 2014 (before the AI-related trade bans)), there is in effect almost no duty on leg quarters at all (because of the free trade agreement). Tariffs have no direct effect on the price of local chicken. The average 2016 producer price of chicken was lower, *in real terms*, than it was in the previous two years.

Annual broiler imports

According to the audited figures of SARS (verified), the annual broiler imports for 2016 totalled 528 506 tonnes; a 15.6 % increase over 2015 levels despite anti-dumping duties in place against imports from the UK, the Netherlands and Germany, and despite the Germans and French suffering from outbreaks of avian influenza through much of 2016. Had temporary AI-related trade bans against the Netherlands and other EU countries not reduced December's expected imports drastically, total broiler imports for 2016 would have been approximately 19 % higher than in 2015.

Broiler imports represent 93.4 % of the total poultry products imported (560 155 t; includes turkey, ducks, geese and guinea fowl). Turkey imports in 2016 amounted to 31 474 t (5.6 % of total poultry imports). The broiler imports for 2016 had a free on board (FOB) value of R5.021 billion.

The local industry has, for years, been placed under severe financial stress because of the effect of imports on local pricing. A number of smaller producers closed their doors in the period under review, leading to further concentration of the industry, job losses and less competition in the marketplace. At the end of 2016, several large, integrated poultry businesses announced downscaling of their operations and associated retrenchments. Poultry imports contributed 26 % to poultry consumption in South Africa in 2016.

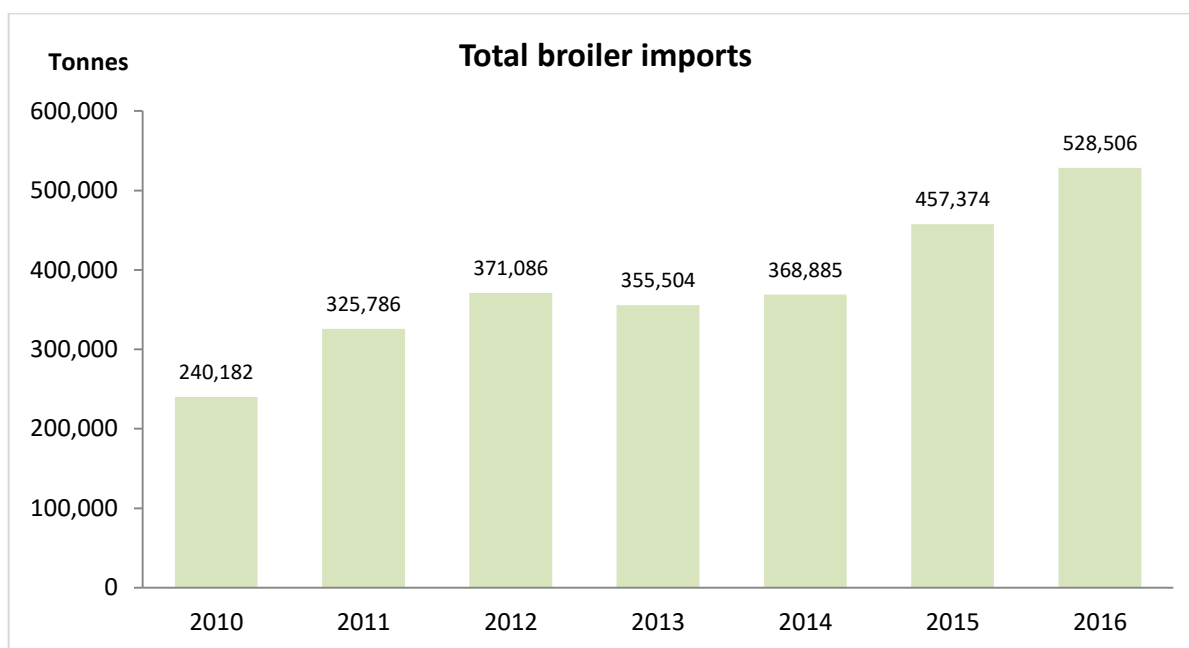


Figure 24. Total annual chicken imports since 2010 (tonnes)

Frozen broiler meat imports

Of the total broiler meat imported through 2016, 99.9 % was frozen (528.108 t). Frozen broiler meat imports increased by 15.6 % in 2016 over levels imported during 2015 (456 954 t). Broiler imports contributed 24.9 % of broiler consumption in South Africa in 2016; up from 21.5 % in 2015. If frozen mechanically deboned meat (MDM) imports are excluded, then broiler imports contributed 15.7 % of broiler consumption; up from 13 % in 2015.

Mechanically deboned meat (MDM) contributed 37.0 % to frozen broiler meat imports (195 253 t), while bone-in broiler portion imports contributed 45.4 % (239 589 t); whole broilers 1.8 %; carcasses 4.1 %; boneless portions 2.4 %; and offal 9.4 %.

Annual imports of frozen mechanically deboned meat (MDM), frozen whole chickens and frozen bone-in portions are given in Figures 25 (a) to 22 (c); illustrating the increase in importation of MDM and frozen bone-in portions and a two-year, substantial increase in the importation of whole frozen chickens.

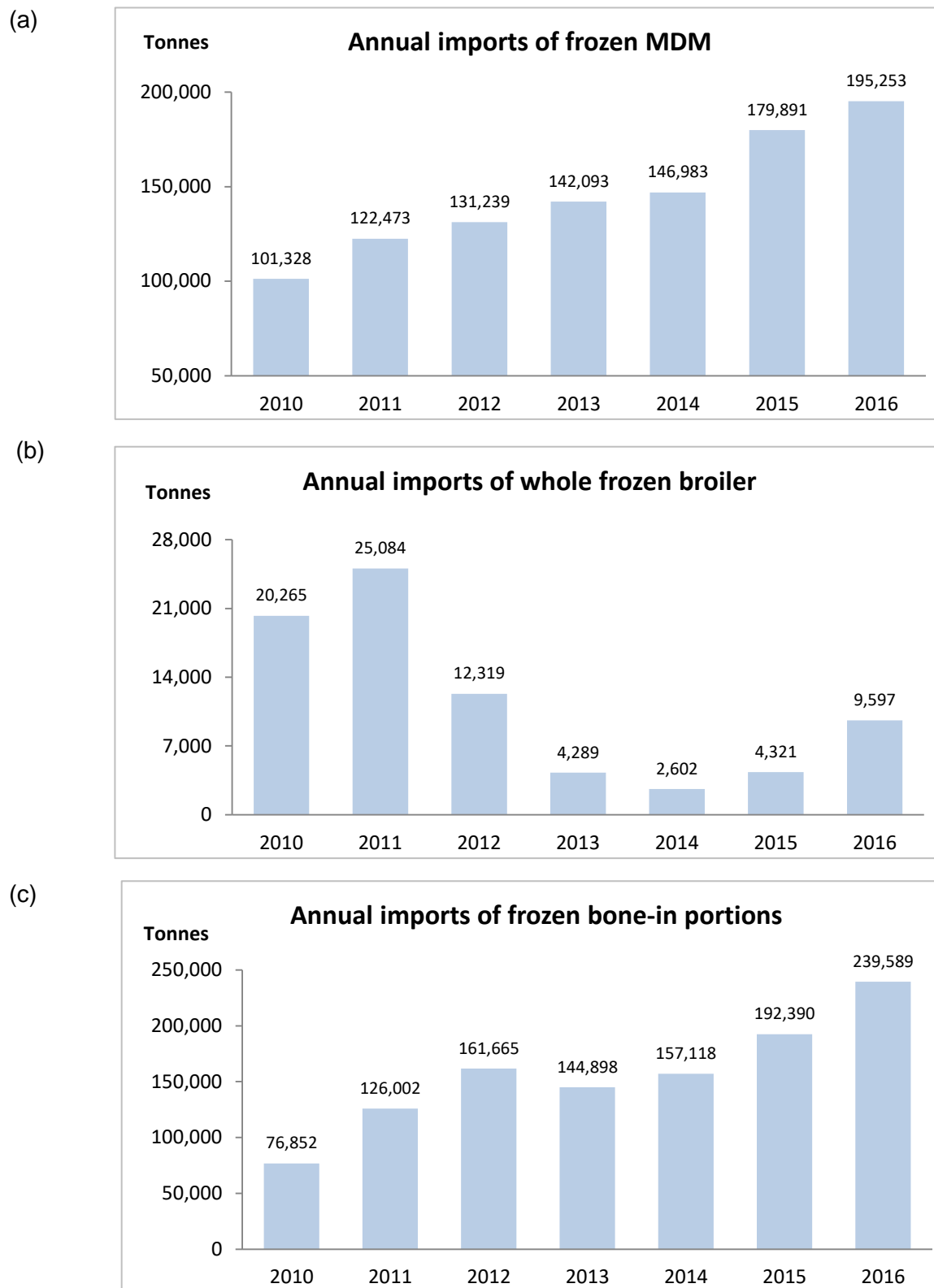


Figure 25. Annual imports of mechanically deboned meat (MDM), whole frozen chickens and frozen bone-in portions

Origin of imports

The origin of imports has changed over the past few years, with a significant increase in tonnage from the European Union, which enjoys a free trade agreement with South Africa.

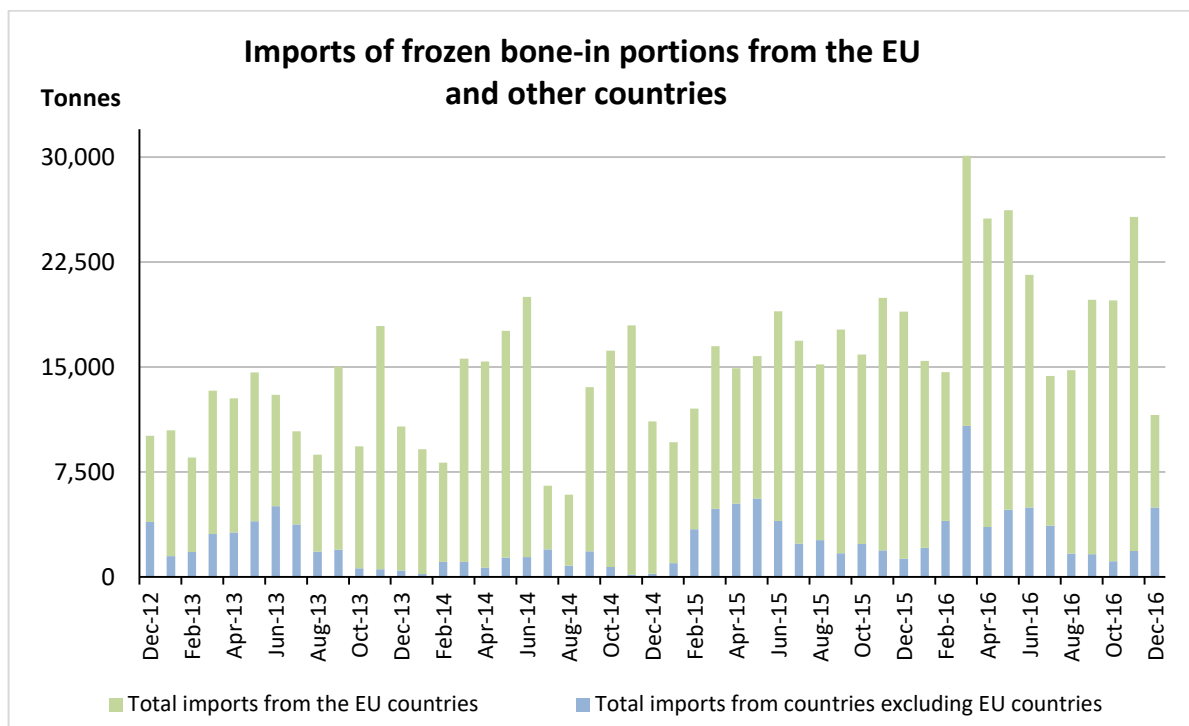


Figure 26. Imports of frozen bone-in portions from the EU (presented as a single entity) in comparison with the rest of the countries combined

Brazil remained the main country of origin in 2016, largely because it is the main source of MDM imports into South Africa. Avian influenza related trade bans against several EU countries were in place through some of 2016. Brazil accounted for 41.7 % (from 50.4 % in 2015), or 233 787 t, of total poultry imports into the country in 2016; down 3.1 % on 2015 levels. The EU is the major supplier of bone-in portion imports (Figure 26), with the Netherlands being the second largest individual importer, at 19.7 % or 110 344 t; a 78 % increase over 2015 levels (which were low because of an AI-related trade ban) and 49 % increase over 2014 levels. The UK also recovered from the effects of AI-related trade bans in 2015, to account for 8.2 % of imports in 2016 (45 657 t). Spain holds on to 4th position on the imports table with 39 620 t (7.1 %). The US re-entered the South African poultry market in January 2016 and has exported a total of 26 573 t of poultry products to our shores in 2016 (4.7 %). In 2015, Belgian poultry imports into South Africa increased by 198 % over 2014 levels to account for 7.4 % of total imports, but account for only 4.3 % in 2016 (24 256 t). Argentina finished 2016 in seventh position with 3.3 % of total poultry imports (18 713 t). All other importing countries contributed less than 3 % each to imports of poultry into South Africa in 2016.

If the EU countries are considered as a single entity, 48.1 % of poultry imports (including turkey, geese, ducks and guinea fowl) entered SA through the EU in 2016 (Figure 27), compared to 41.7 % in 2015 and 48.5 % in the 2014. The dip in 2015 reflects the impact of the bans on EU countries affected by avian influenza. Imports of frozen broiler meat from the EU as a whole continue to rise with a 34.8 % increase in volumes over 2015 levels, following on from a 35 % increase between 2014 and 2015. In 2016, 49.7 % of frozen chicken imports came from the EU.

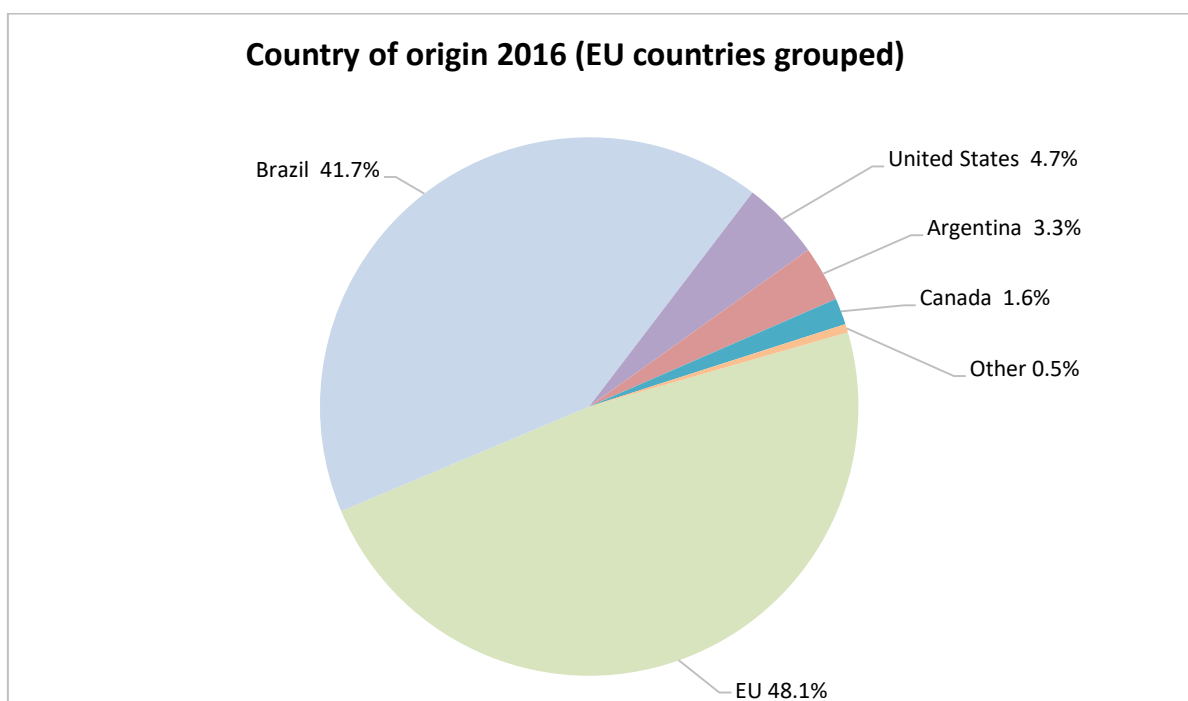


Figure 27. Poultry imports into South Africa in 2016: EU countries combined

In tonnage terms, a total of 262 352 t of frozen broiler meat was imported from the EU in 2016, compared to only 4 139 t in 2009. South Africa is now the single largest export destination for EU poultry meat exports.

The main product imported from the EU in 2016 was frozen bone-in portions, accounting for 77.9 % of total broiler imports from the Union and 81.1 % of the bone-in portions imported into South Africa this year. This was followed by offal, mechanically deboned meat (MDM) and carcasses at 9.9 %, 8.1 % and 4.4 %, respectively. The main product imported from Brazil was mechanically deboned meat (80 % of Brazilian broiler imports); with bone-in chicken portions at 8.6 %, offal at 7.9 % and boneless chicken portions at 5 %.

Value of imports

The value of broiler imports into South Africa amounted to R5.021 billion at the free on board (FOB) level in 2016; a 16.8 % increase over 2015. Frozen bone-in portions were imported at an FOB value of R3.362 billion (67 %) and frozen MDM at R825 million (16.4 %). The value of total poultry imports into South Africa, including broilers, turkeys, geese, ducks and guinea fowl totalled R5.480 billion, a 17.2 % increase in comparison with the value of total poultry imports for 2015.

Poultry exports

A total of 74 021 tonnes of poultry products (chicken, turkey, ducks, geese and guinea fowl) were exported at an FOB value of R 1.36 billion during 2016. This is an increase of 2.2 % over 2015 tonnages. Chicken exports accounted for 93.2 % of total poultry exports in 2016 (68 958 t), and 87 % of the rand value (FOB; R1.18 m) of total poultry exports. Turkey exports totalled 2 510 t in 2016; geese exports 1 709 t; duck exports 201 t; guinea fowl 1.2 t and mixed product (ducks, geese or guinea fowl; not specified) 641 t.

Of the total 74 021 t of poultry exports, 56 153 t were frozen products (including 16 123 t of frozen bone-in portions; 16 845 t MDM and 11 678 t of whole frozen chicken; and 14 054 t were fresh poultry products (including 11 549 t of fresh chicken cuts and offal). There were also 3 814 t of products which might either be fresh or frozen (e.g. pâtés, sausages and value-added products).

The main destination countries for *poultry* exports were Mozambique at 18 984 t, Lesotho at 17 112 t, Namibia at 16 815 t, Botswana at 4 049 t, Zambia at 5 231 t, Zimbabwe at 4 587 t, and Swaziland at 2 013 t of the 74 021 total tonnes exported.

6.7 Provincial distribution of broiler farms

In a recent Notifiable Avian Influenza (NAI) surveillance survey, the location of broiler farms was recorded. Table 12 gives the provincial distribution of broiler farms (breeder and rearing).

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

	Broiler birds	% of total broiler birds
Eastern Cape	7 453 087	7.4 %
Free State	5 903 000	5.8 %
Gauteng	10 222 449	10.1 %
KwaZulu-Natal	10 424 404	10.3 %
Limpopo	2 893 780	2.9 %
Mpumalanga	20 518 765	20.3 %
North West	22 675 376	22.4 %
N & W Cape	21 151 743	20.9 %
GRAND TOTAL	101 242 604	100%

The survey covers broilers, broiler breeders and breeders in rearing. A total of 540 farms reported in the NAI survey, of which 121 were broiler breeder farms and 419 were broiler rearing farms.

6.8 Performance efficiency

Feed conversion ratio (FCR) and performance efficiency factor (PEF) values will depend on the management of each enterprise. However, top South African broiler farms are capable of achieving FCR figures of around 1.61 and PEF figures of around 304. Average slaughter age is now 33.5 – 34.0 days at a weight of 1.8 kg.

6.9 Challenges and prospects

In November 2016, a weak La Niña effect developed bringing wetter and cooler conditions to much of the summer rainfall area of South Africa. With the crippling drought easing in the maize-planting areas of the country and avian influenza taking hold in several European nations, the year ahead should be a little easier for South African broiler producers. Food price inflation is forecast to reduce considerably through 2017 which should, in turn, stimulate consumer spending. However, the industry remains vulnerable to high levels of imports from the US and South American markets and will have to adjust to the new bringing regulations in force from October 2016.

The oversupply of dark chicken meat in Brazil, the EU and the US drives prices down to levels which may, in a market such as South Africa which favours dark meat, be below-cost and impossible to compete with (see Chapter 2.7). Some temporary relief from EU imports may be experienced in the months ahead as highly pathogenic avian influenza spreads across Europe, brought in by wild birds on migratory routes. Of the ten EU countries with the right to export to South Africa, only Ireland, Belgium and Spain had not suffered outbreaks of highly pathogenic avian influenza by December of the 2016 European winter. Experience suggests that, when the Europeans are banned from the South African poultry market, the Americas step in. It is to be expected that tonnages from the US, Brazil, Argentina and Canada will increase; at least in the first half of 2017. Whilst avian influenza in European flocks may bring a welcome reduction in the level of broiler imports from affected countries, it is also likely to present challenges in terms of the movement of breeding stock and in protecting the national flock from HPAI.

The EU and local meat importers have pedaled two tired narratives in defence of the illegal dumping of bone-in portions in South Africa. The first, a favourite of AMIE spokesmen, is that the South African poultry industry is inefficient and the second, articulated to the dti by the EU Commissioner for Trade Cecilia Malström, is that the industry “is suffering from structural problems affecting competitiveness”. On the contrary, the South African broiler industry *is* very efficient and has been demonstrated to compare well internationally in terms of the cost of production. In a study by the University of Wageningen, in the Netherlands, South African producers ranked fifth in terms of cost-efficiency out of the 16 countries surveyed - falling behind the US, Brazil, Argentina

and the Ukraine, which are all big grain and soybean producers, but beating *all* the EU countries (by an average of 25 %) and Russia. The biggest constraint to the industry's cost efficiency remains the price of maize and soybeans. Most of the soybeans used in South African poultry feeds have to be imported and, during drought years such as those recently experienced, maize may also have to be imported, putting the industry at the mercy of currency fluctuations and global pricing. Efficiencies can be improved in industries which are thriving and able to invest in new technologies and innovations – not in industries which are under the cosh from dumped imports and struggling to stay afloat. The long term effect of high volumes of dumped poultry products will be plant closures, job losses and a gradual drop in cost-effectiveness in comparison to better-supported poultry industries worldwide.

And what about the structural issues the EU accuses the South African poultry industry of suffering? South Africans enjoy chicken - the whole chicken. The EU, on the other hand, produces mountains of bone-in portions (surplus to requirement) because of the distorted eating preferences of its own populace. Brown meat doesn't sell in the EU. Quite apart from the devastating effect the sale of these cheap, surplus portions has on poultry industries in developing countries, there is also an indefensible environmental cost to this preference for white meat. The production and exportation of all these "waste" portions has a significant energy cost in terms of fertiliser use, harvesting, grain transport, feed manufacture, feed transport, broiler production and slaughter, refrigeration, cold storage and shipping to far-flung corners of the world. It seems the EU poultry industry has its own structural issues. "Buy local" is the environmentalists' mantra – but it resonates too with local unions. It is estimated that for every 10 000 tonnes of meat imported, 1 000 direct and indirect jobs will be lost in the local industry.

Linked to US imports, SAPA remain involved in a legal challenge over the weakening of Salmonella testing standards as part of the terms of the AGOA deal. A supplementary affidavit, outlining the risks that lowering these standards pose to local production, was submitted in November 2016 and DAFF is expected to respond early in 2017. DAFF are yet to present a full record to the court of how they came to the decision to relax sanitary and phyto-sanitary testing standards.

Despite a promising increase in exports of 162 % in 2014, exports have only grown by 9.2 % in 2015 and 2.2 % in 2016 – and from a low base. The industry's inability to export any significant quantities of product continues to be a challenge. Achieving a level playing field in international trade remains difficult: South Africa is a first world country in World Trade Organisation terms and therefore has open borders. Export to African neighbours is limited since, as developing economies, these countries protect their local producers. Europe and the USA block South African imports on the basis of non-tariff barriers, such as the presence of Newcastle Disease and AI in ostriches. In the EU, local producers receive subsidies in various forms, making it harder for South Africa to compete.

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. In this regard, the 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 DAFF, in order to allow competition in international markets.



7. SMALL-SCALE POULTRY FARMERS

7.1 Overview

Emerging and contract broiler farmers contribute perhaps 2 % of the South African production of chicken meat. Emerging egg producers constitute less than 0.5 % 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 (see Chapters 10.2 and 12.2 for more information).

7.2 Small-scale poultry farmers: statistics

SAPA continues to play a major role in the collection of statistics by conducting quarterly 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.

Figure 28 shows the distribution of survey respondents in South Africa for the period October to December 2016.

Survey respondents have cited a number of challenges confronting them. These challenges included a lack of knowledge of many aspects of poultry farming; lack of access to markets; poor farm infrastructure; outbreaks of disease; high mortality rates (especially in hot weather); lack of funding for expansion or renovation; and problems in sourcing reasonably priced quality inputs. There were also issues with water quality; the cost of vaccinations; theft and vandalism; rat infestations; hatchery supplies; and abattoir availability and cost. Respondents felt that continual support and mentoring is needed to make small businesses sustainable. Amongst the small-scale broiler farmers, specific issues included difficulties in sourcing good quality chicks at an affordable price, and a lack of relevant business skills. Many producers were selling their product below cost

because of problems with their business model and soaring feed prices. This has forced many aspirant farmers to stop production. Small-scale egg farmers are experiencing problems with diseases, the high cost of feed and point-of-lays, low production, and lack of transport, water and electricity.

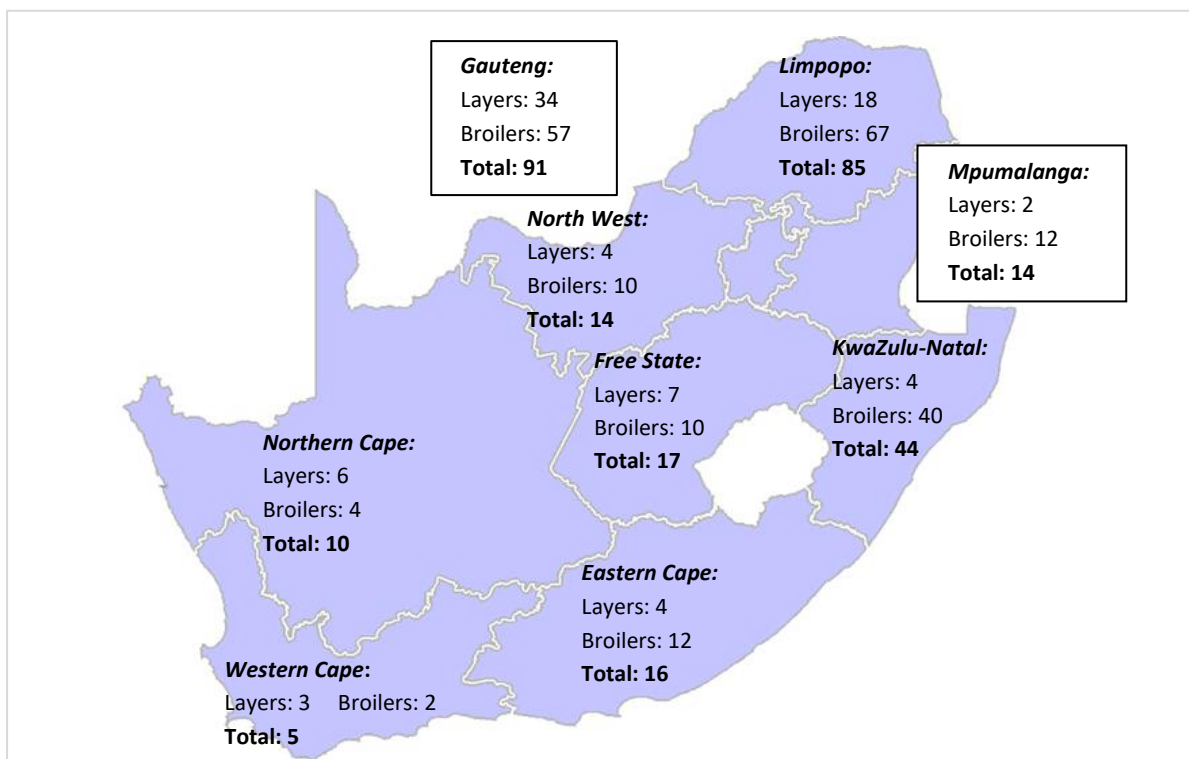


Figure 28. *Distribution of survey respondents (October to December 2016); excluding contract growers*

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 broiler smallholder farmer is defined as a broiler farmer producing less than, or equal to, 120 000 birds per cycle. Figure 29 depicts the distribution of small broiler producers in South Africa in 2016. The survey results are summarised in the tables below.

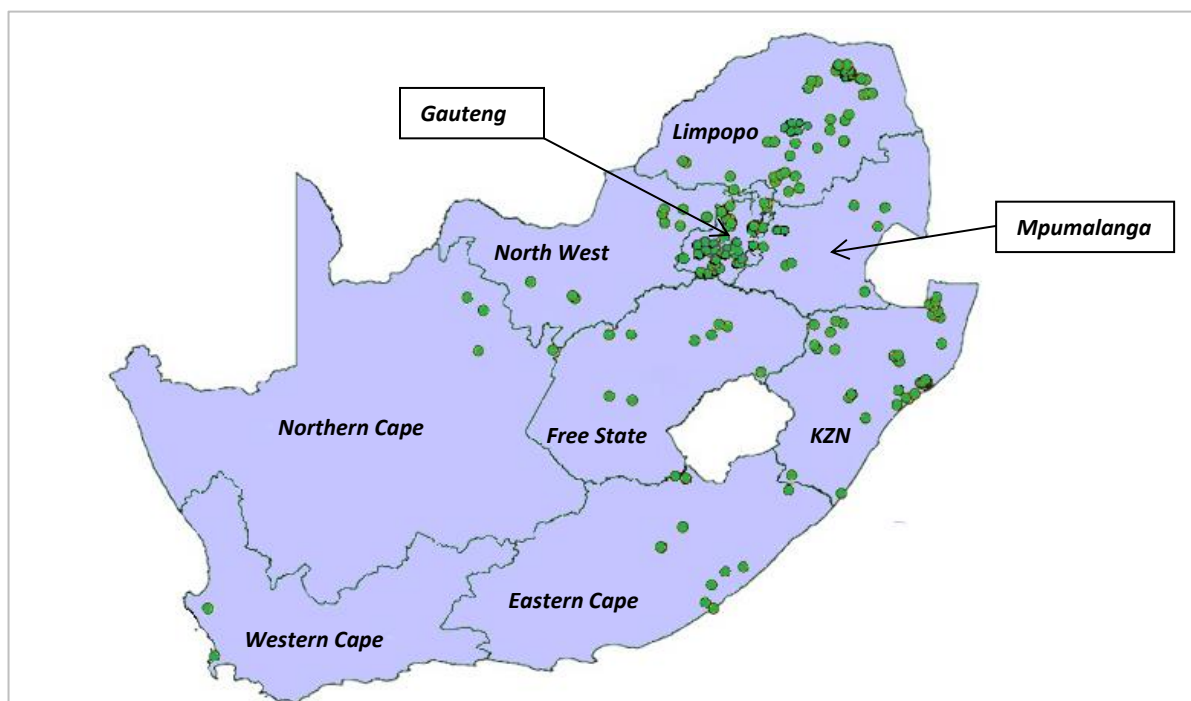


Figure 29. Distribution of broiler producers surveyed in 2016

A large number of broiler producers exited the market in the first half of 2016, possibly owing to high feed prices in relation to the demand for live birds (Table 13).

Table 13: Small broiler producers: survey respondents and business activity in 2016

Period	Small commercial broiler farmers 2016			
	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Number of respondents	272	220	237	250
Completed questionnaires	227	177	218	214
Number that stopped farming	45	43	19	36
Number that resumed farming	7	3	13	16

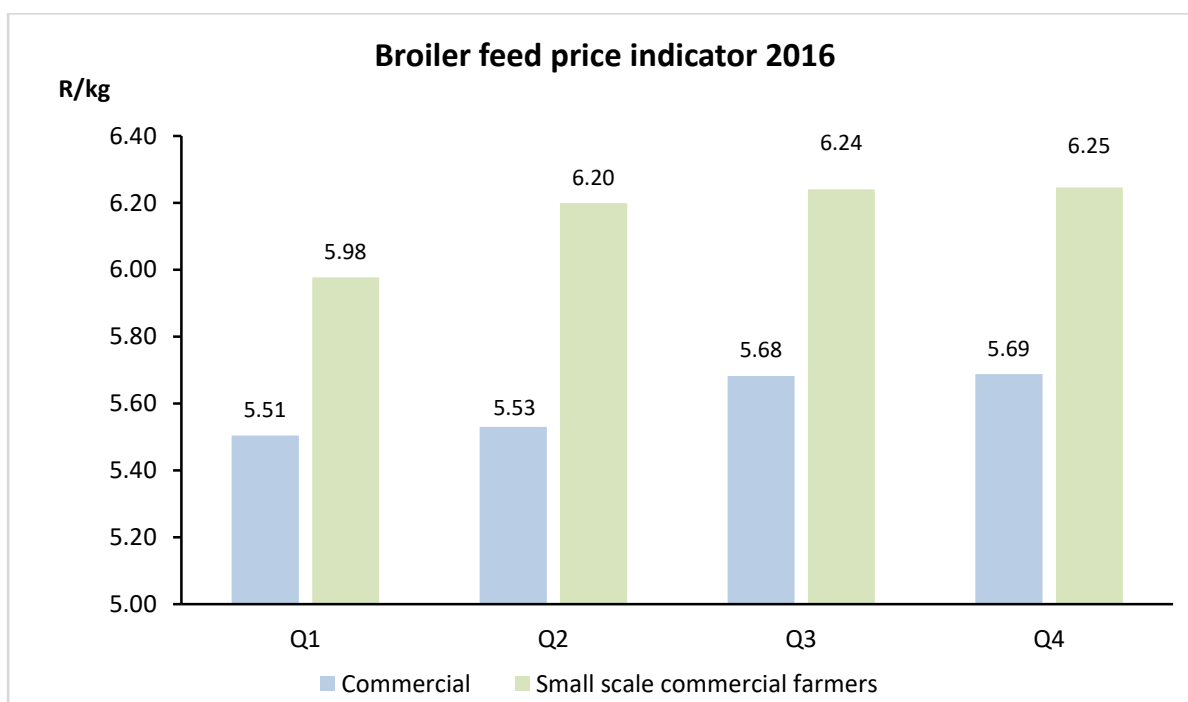
The average costs of inputs paid by survey respondents, for the four quarters of 2016, are shown in Table 14 below.

Prices exclude VAT and delivery. Where possible, prices paid by commercial farmers are shown in italics. Feed is mainly purchased in small quantities in 40 kg or 50 kg bags but for comparative purposes the prices are shown in rand per tonne.

Table 14: *The average input costs of survey respondents in 2016: broiler producers*

Period	Input costs			
	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Day-old chicks (R/bird)	6.46	6.54	6.70	6.78
Broiler starter (R/t)	6 328	6 612	6 622	6 565
Broiler grower (R/t)	6 030	6 242	6 282	6 267
Broiler finisher (R/t)	5 781	5 986	6 040	6 091
<i>Av. commercial broiler feed (R/t)</i>	<i>5 505</i>	<i>5 530</i>	<i>5 683</i>	<i>5 688</i>

Figure 30 shows the average broiler feed prices per quarter 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. There is a noticeable difference between small-scale and commercial feed prices. Expressed as percentages, these differences are + 8.5 %, + 12.1 %, + 9.9 % and + 9.8 % for the four consecutive quarters. Large broiler producers generally qualify for volume discounts which give them a substantial advantage.

**Figure 30.** *Average broiler feed price indicator per quarter, for small and commercial farmers*

Production volumes and selling prices for 4Q 2016 are summarised in Table 15 below. 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 R5.15 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.

Table 15: *Production volume and selling prices of survey respondents in 4Q 2016: broilers*

Period	Q4 2016
Live sales volume (birds)	314 509
Average price (R/bird)	51.77
Live sales as a % of total sales	90.9
Slaughtered volume	31 328
Average price (R/kg)	
<i>Small-scale</i>	26.75 (R60.66/bird)
<i>Commercial</i>	19.61

The estimated margin over feed cost, for small-scale and commercial producers, is shown in Figure 31. 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).

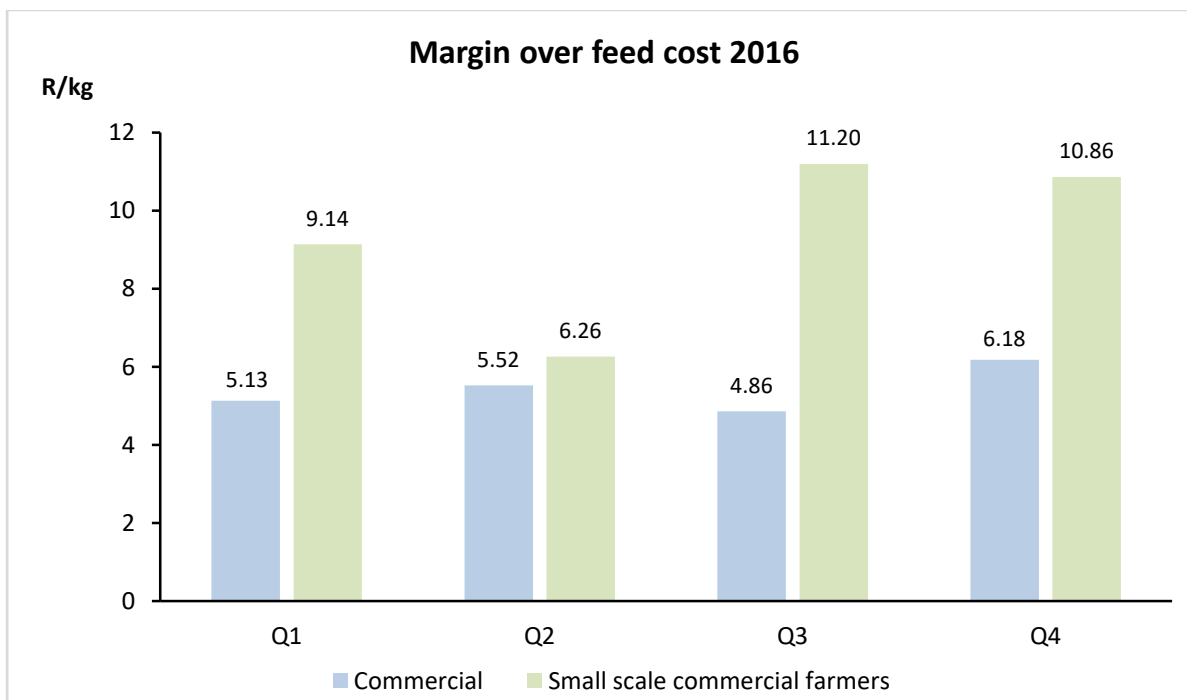


Figure 31. *Estimated margin over feed cost per quarter (broilers) for small-scale and commercial farmers*

As seen in Figure 31, the small-scale broiler farmers enjoy a substantially larger margin than commercial farmers, despite their higher feed prices, because of their inflated selling price. However, compared with margins over feed cost of over R30/bird in 2014, it can be seen that feed costs and perhaps constrained bird prices are starting to reduce margins for smaller farmers.

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 smallholder egg farmer is defined as a person producing less than, or equal to, 20 000 eggs per day, that is, 1 667 dozen per day.

Figure 32 depicts the distribution of small-scale 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.

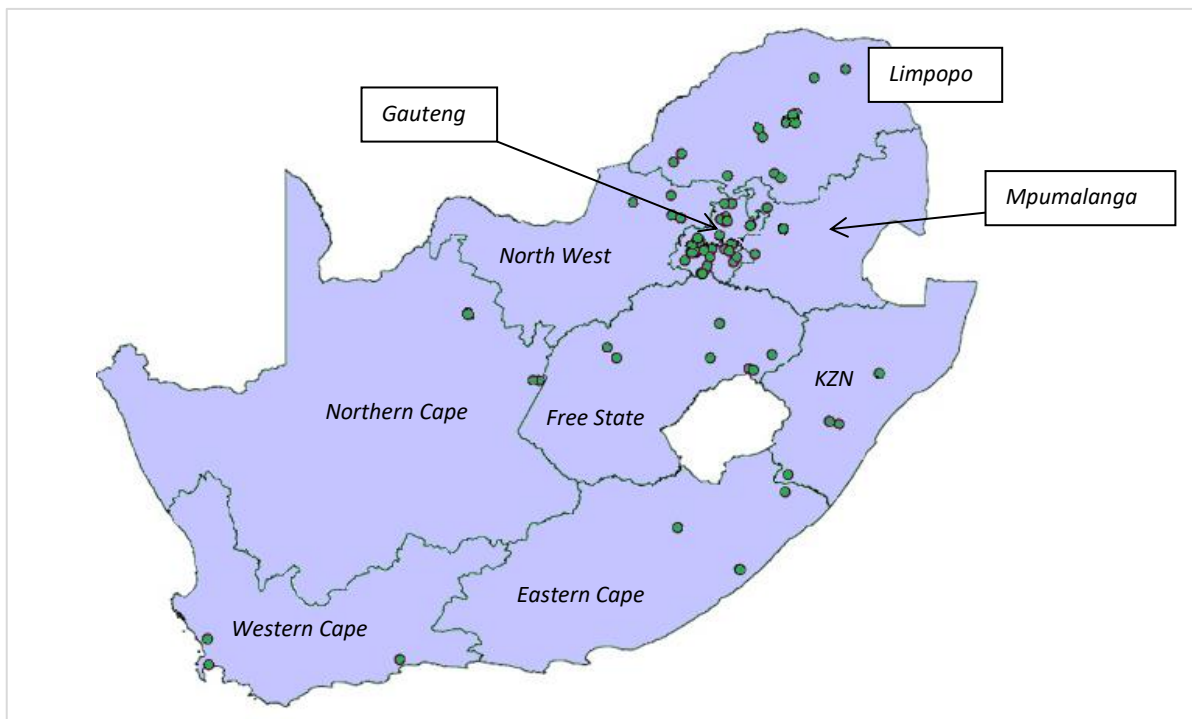


Figure 32. *Distribution of surveyed small-scale egg producers 4Q 2016*

The majority of participants in the fourth quarter survey were resident in the Gauteng, North West, the Free State and Limpopo.

Table 16: *Survey respondents and business activity in 2016: small-scale egg producers*

Period	Surveyed small-scale egg producers 2016			
	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Number of respondents	79	66	94	98
Completed questionnaires	68	54	88	82
Number that stopped farming	11	12	6	16
Number that resumed farming	3	2	4	3

The cost of inputs is summarised in Table 17 below. The average feed price paid by 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. Small-scale members 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.

Table 17: *The average input costs of small-scale survey respondents in 2016: eggs*

Period	Input costs			
	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Day-old pullet (R/bird)	7.06	10.37	10.21	13.03
Point-of-lay pullet (R/bird)	64.25	51.67	53.18	59.28
<i>Laying mash (R/tonne)</i>				
Small-scale	5 168	5 710	5 152	5 517
Commercial	3 861	4 129	4 168	4 116

The feed price in R/kg for the four quarters of 2016 is shown in Figure 33. 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 small-scale members and commercial producers.

Expressed as percentages, these differences are +34 %, +38 %, +24 % and +34 % for the four consecutive quarters.

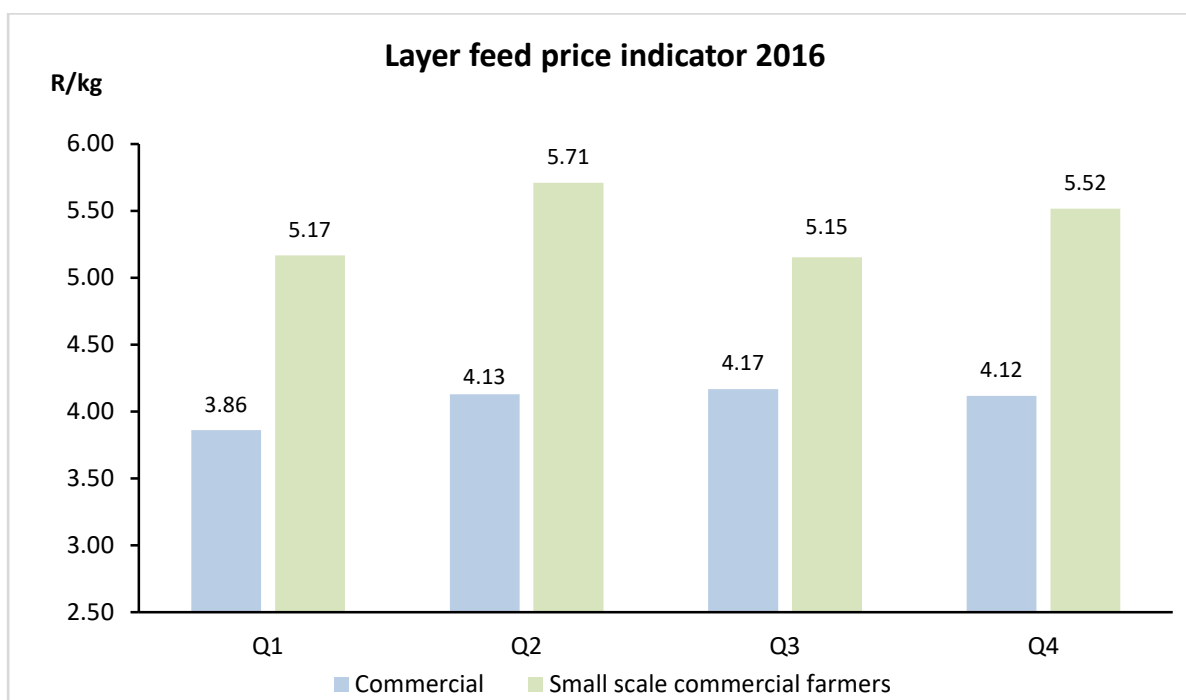


Figure 33. Average layer feed price per quarter, for small-scale and commercial farmers

Bird numbers and egg production are shown below (Table 18). It is interesting to note that the laying farms are not stocked to capacity. 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. Smaller producers may also find it hard to source point-of-lay pullets.

Table 18: Pullet and hen numbers: Small-scale layer farmers 2016

Period	Pullet and hen numbers			
	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Number of pullets being reared	16 358	14 586	17 668	11 205
Number of laying hens	94 727	105 053	216 882	150 585
Farm capacity	182 270	204 889	472 760	322 120
%	52.0	51.3	45.9	46.8

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

Figure 34 shows the average price for eggs for the four quarters of 2016. Small-scale producers generally sell their eggs at a much higher price than commercial producers. Expressed as percentages, these price differences are + 9.3 %, + 3.1 %, - 0.2 % and -1.2 % for the four

consecutive quarters. Because the small producer generally sells ungraded eggs in 30-egg trays, there is no grading cost and the packaging material cost is lower.

Table 19: Average selling prices and margin over feed cost: small-scale layer farmers 2016

Period	Average selling prices and margin over feed cost			
	Q1 2016	Q2 2016	Q3 2016	Q4 2016
Egg price (R/doz)				
Small-scale	13.45	13.08	13.33	12.85
Commercial	12.31	12.69	13.36	13.01
Cull price (R/hen)				
Small-scale	37.27	35.31	35.78	33.34
Commercial	27.67	28.83	30.31	26.53
Feed cost (R/doz)				
Small-scale	8.39	9.37	8.36	8.96
Commercial	6.27	6.70	6.77	6.68
Margin over feed cost (R/doz)				
Small-scale	5.06	3.81	4.97	3.89
Commercial	6.04	5.99	6.59	6.33

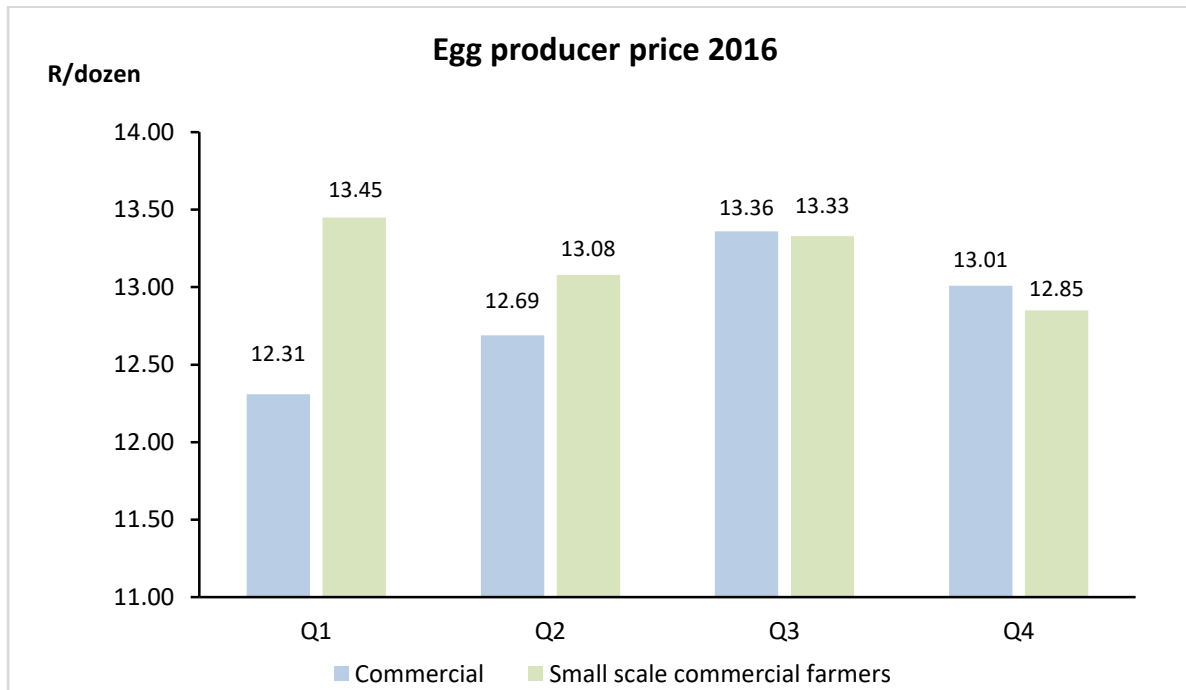


Figure 34. Average producer price per quarter, for small-scale and commercial farmers

The cull hen price obtained at the end of the laying cycle puts the DPFO members in a strong position to purchase new point-of-lays; although prices have been generally lower in 2016 than in 2015. In 2015, the average cull price of R39.22/hen was 68 % of the average point-of-lay price (R57.71). In 2016, the average cull price of R35.43/hen was 62 % of the average point-of-lay price (R57.10).

In the above table, the estimated feed cost in rand per dozen is a calculation based on the feed price (R/kg) and on the assumption that the hens are eating 115 grammes per day and are laying at a rate of 85 %. In the fourth quarter, for every one dozen eggs produced it cost the small-scale farmer R8.96 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 fourth quarter:

$$R12.85/\text{doz} - R8.96/\text{doz} = R3.89./\text{doz}$$

Figure 35 shows some very interesting results. In 2014, small-scale egg producers had a much better margin over feed cost than commercial farmers, despite paying a higher price for feed. This was because they were often selling their eggs directly to the end user or to the informal market. Large commercial producers selling to the formal market pay substantial rebates to the retailers. In 2016, with feed prices escalating and less money in consumers' pockets, small-scale farmers have realised lower margins, below those realised by commercial producers. This has not been the case in earlier years, where the margin/kg for smaller producers has often been higher than in commercial operations.

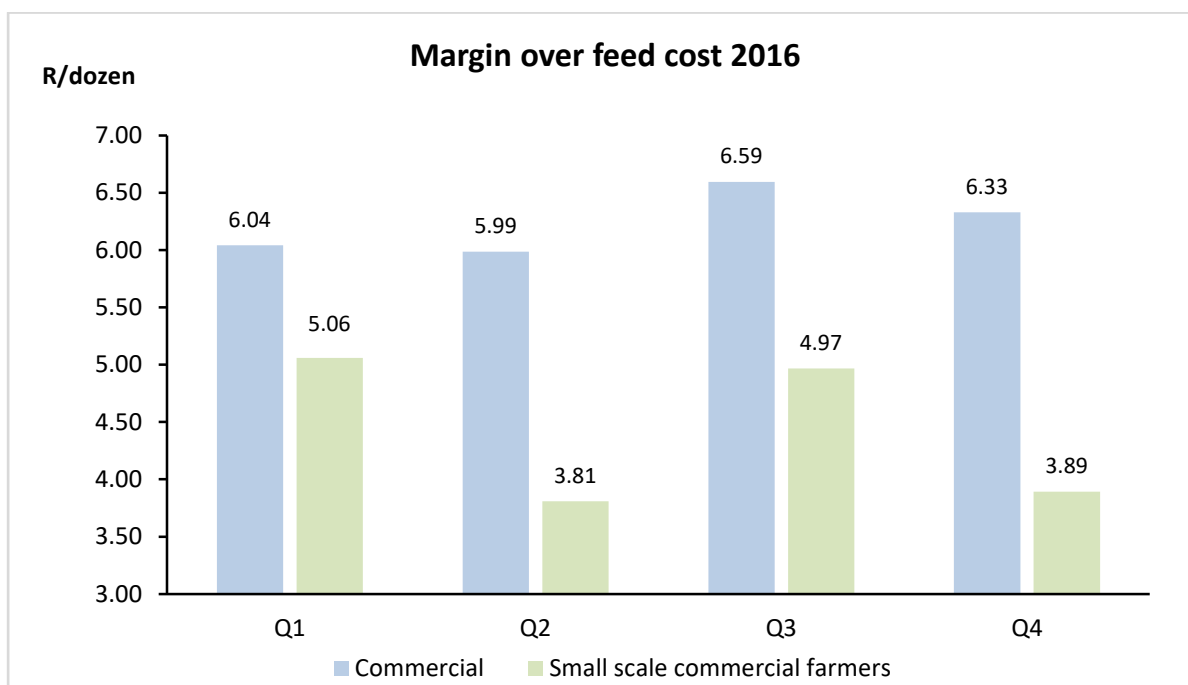


Figure 35. Average margin over feed cost per quarter, for small-scale farmers (laying hens)

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.

Summary of statistical findings

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-scale 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-scale farmers who patiently contribute to the telephonic surveys.

The small-scale farmer 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.

Note that all of the statistical reports produced by SAPA are available on the SAPA website. If the way in which information presented does not meet the needs of SAPA members, contact our data collection team at Silverpath Consulting (cynthia@silverpath.co.za) and we will make the necessary changes to reports.

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 10.2 and a report on the activities of this Committee can be found in Chapter 12.2.

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 straightforward. Specific markets are needed for smaller new entrants that will allow these development projects to succeed and grow but, in 2016, the industry as a whole 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. Meaningful transformation therefore remains 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.

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 remains weak 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 in chickens and highly pathogenic avian influenza (HPAI) in ostriches, have demonstrated the vulnerable position the South African industry is in in terms of disease control. An outbreak of HPAI in chickens would have disastrous consequences for both the poultry industry and 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 could be expected to run into billions of rands. To mitigate this risk, a number of programmes have been developed to protect 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 as a means to protect the national poultry flock through disease surveillance, monitoring, control and management of diseases which threaten the health of the flock and 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 (such as *Salmonella enteritidis*), HPAI and any other low pathogenic AI infections.

Funded, until recently, by the industry statutory levy paid by poultry producers and managed by SAPA, the PDMA is located at the University of Pretoria Onderstepoort campus (OP) in the Department of Production Animal Studies.

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, which includes a microbial reduction programme;
- Rapid response mechanisms against local and exotic disease threats;
- Improving veterinary and animal health training within South Africa;
- Establishment of a formal Public Private Partnership, under which the state delegates certain regulatory functions to the PDMA;
- Reducing the levels of residues in poultry meat through the residue monitoring programme;
- Collaboration with the ostrich industry for mutual benefit deriving from improved disease control;
- Achieving and maintaining export status for the benefit of both industries.

These goals translate into the PDMA strategic priorities of:

- Engaging national and local government on issues of disease control in the SA poultry industry;
- Making use of the database of poultry farms in South Africa to assist DAFF with monitoring notifiable diseases such as avian influenza, salmonella and Newcastle disease, while simultaneously using it to develop monitoring programmes for critical diseases such as infectious bronchitis;
- Appointing or designating veterinarians with expertise in poultry diseases in each province who are available to assist state veterinarians in the event of disease outbreaks in commercial, smallholder and subsistence poultry;
- Investigating the role of the PDMA in training state veterinarians and/or animal health technicians to improve services delivered by the state in the event of disease outbreaks on poultry farms;
- Considering developing a residue monitoring programme for poultry products nationally, or at least a database of residue monitoring data that is available;
- Delivering 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;
- Collaborating with the ostrich industry.

The PDMA and SAPA work in close conjunction with the following branches of the Department of Agriculture, Forestry and Fisheries: Agricultural Production, Health and Food Safety; Food Security and Agrarian Reform; and Economic Development, Trade and Marketing.

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 2016

Government engagement

The engagement between the Poultry Disease Management Agency (PDMA) and government has grown since 2012 and continues to work well. DAFF now consults the PDMA on poultry-related disease control, epidemiology, imports and exports, and veterinary public health matters. On-going disease risk assessment, to establish where diseases are most likely to originate, will enable effective protection of the national flock from disease outbreaks.



We are on track to promote awareness, through multi-agency collaborations and interactions between government, academia and the industry, of the regulation and control of veterinary antimicrobial agents and recommended best practices for the management of antimicrobial use, stewardship and resistance.

Poultry veterinarians placement programme

This project was conceived in appreciation of the low levels of exposure of veterinary science students to poultry science and production. The programme aims to create a group of poultry experts who can be absorbed by the industry without the need for extensive further training. The trainees are exposed to operations on broiler and layer farms and at a hatchery. Attention is paid to problem identification, post-mortem analysis and defining solutions. The veterinarians are also linked to private poultry practitioners to hone their skills. A total of 71 state veterinarians have gone through targeted in-service professional training since 2013, with 22 trained in 2016. A further 21 veterinarians have been scheduled for training in 2017. The training is supplemented by seminars, where both private and state veterinarians are invited to discuss specific important topics. The PDMA was meant to conduct a follow-up contact session in 2016 for all state veterinarians who have gone through training but, unfortunately, due to budget restrictions, this has been postponed until 2017.

Development of the National Residue Monitoring and Microbial Reduction Programmes

Historically, DAFF only tested for chemical residues in meat at a few abattoirs. Large poultry producers and retail companies conducted their own monitoring of residues in their products. Following a request from DAFF to co-operate with the implementation of a National Residue Monitoring Programme, government released a draft paper on residue monitoring in poultry. The paper proposes that all available records of residue analyses conducted on behalf of retailers be made available to the programme. These data would enable the country to comply with international requirements for exports, and allow the establishment of maximum residue levels (MRL) in imported products.

Whether exporting their products or supplying major retailers, poultry producers appreciate the need for a strong National Residue Monitoring Programme (NRMP). Local consumers have a right to high quality and safe poultry products. The NRMP and the Microbial Reduction programmes are essential tools that the industry can use to standardise the quality of the product that South African consumers buy. These projects are a collaboration between SAPA and the DAFF Veterinary Public Health Directorate (VPH). The Epidemiology Section of the University of Pretoria is also involved in these projects.

A broiler sampling protocol has been designed and tested at three large processing facilities. The next phase will be to determine the basic guidelines for routine sampling of residues and microbial agents; then, based on the outcome of the results, an application to test the rest of the country will be made. The National Department of Health (DoH) has been invited to participate in the research,

to facilitate a 'One Health' approach. The long-term objective of the programme will be to enable the export of products, irrespective of farm size, with endorsement from DAFF based on standardized testing and monitoring programmes; whilst simultaneously benefiting health amongst local poultry consumers.

The PDMA, in collaboration with DAFF's Veterinary Public Health (VPH) division, ran a successful pilot study of egg sampling, residue and microbial presence testing as a first step towards the development of a national residue and monitoring programme for eggs. A total of 32 commercial and 6 small-scale layer farms were included in this preliminary sampling around Gauteng province. The egg sampling protocol is currently the subject of two MSc projects. The outcomes of these two projects, which started in early 2015, will be used to set the minimum testing requirements for egg producers in the formal and informal sectors. The testing protocols will also be used for export purposes, where national programmes are required by importing countries. Most importantly, the protocols will provide the egg industry with benchmark levels from which improvements can be made and measured. The programme will allow for continuous monitoring, evaluation and improvement of disease and residue procedures.

In light of the outcomes of the Antimicrobial Resistance Summit held in October 2014, the poultry industry has to commit to being part of the solutions team and make sure that it plays its role in addressing the issues. The Department of Health (DoH) is very clear with regards to the actions they wish to see, and producers, veterinarians and the pharmaceutical industry need to join hands with DAFF to start looking at solutions for the meat producing industries. Proactive actions are needed to avoid being required to implement actions that may not be practical in the field. The process will begin with a three-year review of the use of antimicrobials in animal feeds and additives.

Meat Safety Scheme

As part of the Meat Safety Act, Act 40 of 2000, the issue of independent meat inspection (IMI) is being dealt with by government, in conjunction with the industry, on a consultative basis. The absence of such a scheme for poultry is negatively impacting retailer audit scores and certain export opportunities. The poultry industry meat inspection scheme will be separate from red meat inspection and will be implemented in phases taking into account the size and location of different abattoirs.

The scheme involves enhancing meat safety practices; conducting surveys; offering training; investigating food-borne diseases; promoting good hygiene practices; determining the origin of meat and animal products; monitoring residues in meat and animal products; creating assessment services; creating standard microbiological testing protocols, etc. All national production should be produced to a common minimum standard. All imported products can then be tested against the scheme standard and all further processing by importers can also be tested against local standards. Import barriers, relating to the minimum standard, can be put in place to protect consumers where necessary.

In mid-2016, DAFF indicated that a state law advisor had expressed dissatisfaction with the proposed legislation and so a further delay in the implementation of the scheme can be expected. It may be necessary for the industry to drive a voluntary industry scheme in order to meet the demands of export markets.

Developing a searchable registered products database

Information on registered products is available on the PDMA website. There has been great progress in the submission of package inserts from various companies since the notification sign was uploaded to the landing page of the website. The PDMA would like to thank all the companies for their time and contribution. The database will be an effective tool to assist producers with farm management. The website is open to the public: www.poultrydiseases.co.za.

Research Chair in Sanitary and Phytosanitary Risk Analysis

Funding has been secured from the Department of Science and Technology and DAFF to establish a Research Chair in Sanitary and Phytosanitary Risk Analysis. The joint funding will be for five years at a cost of R3 million a year; renewable for a maximum of three five-year terms. The National Research Foundation (NRF) included this position in its June 2016 call for research chairs. The animal health industries, through the National Animal Health Forum, will suggest projects and provide project funding. The chair will be responsible for building the country's risk analysis capabilities by training postgraduate students.

Disease surveillance and mapping

A workshop on risk analysis and surveillance was held by the PDMA in February 2015 (Pretoria). Private and state veterinarians were invited to discuss the current status of disease surveillance and the risk posed by trans-boundary animal diseases. It was concluded that there is a need for an established and routine surveillance system to be in place. The PDMA continues in its attempts to establish a system for the reporting of poultry diseases that are diagnosed throughout the country. It should be understood that an active and reliable poultry disease surveillance system is a priority to enable a better understanding of the country's disease situation and to enable proper monitoring and control. We have continued to approach industry's role players to provide us with past and current confidential data on diagnosed cases for purposes of planning a reliable disease surveillance system. In the same vein, we are appealing to the Directorate of Animal Health (DAH) in DAFF to regulate this activity and make it compulsory for all industry players, laboratories, farms, abattoirs and necessary partners to report cases, and to implement adequate measures of punishment for non-compliance. This will force the industry into compulsory reporting whatever the situation is, on a case-by-case basis.

The HPAI surveillance system, run by DAFF with support from the PDMA, is one of the rare exceptions to this problem. Our inability to negotiate better terms, especially regarding salmonella

requirements, with the USA over the AGOA renewal should be a strong motivation to get our programmes for controlled diseases in place through the PDMA as soon as possible. These programmes will also be a prerequisite for the envisaged farm-to-fork meat safety system, as well as to comply with export requirements.

It is possible to state, with conviction, that no South African chicken flocks were infected with notifiable avian influenza through 2016. The outbreaks of low pathogenic AI in ostriches should, however, be a warning to chicken producers that the risk of HPAI is real and high biosecurity standards should continue to be enforced.

The necessary pathogen reduction programmes for diseases such as HPAI, NCD, mycoplasma, salmonella and campylobacter are available from the same countries that supply genetic material. Local conditions, however, contribute to increased susceptibility to diseases, and the presence of negative management-related conditions often manifest in the prevalence of some diseases, such as infectious bronchitis and mycoplasma. This makes the ability to farm successfully with such advanced genetic material only possible when the necessary managerial and technical expertise can be relied on.

The NAI surveillance monitoring programme was in the spotlight for most of 2016. The South Africa government suspended export permits held by various poultry facilities due to a lack of reliable NAI information. Such steps are unavoidable if submissions are not done by producers and their operational veterinarians. It should be understood that according to the Animal Diseases Act, Act 35 of 1984, it is compulsory for all operating poultry farms to test for AI and submit results to their provincial state veterinarian and the PDMA office.

In 2016, the PDMA continued work on sourcing disease data from laboratories and mapping these data using GIS (Geographic Information System). This process was started in 2014, looking at four diseases and three laboratories. The plan is to broaden the data source base and include more laboratories. The diseases that will be mapped include Newcastle disease, infectious bronchitis, avian influenza H6, salmonella and mycoplasma.

The surveillance programme for salmonella is on track and surely will be fully implemented in 2017. The PDMA has made great progress in collecting data dating back five years from various laboratories and appeal to those that have not yet submitted data to follow suit as it is for the benefit of the industry. Discussions towards finalising the salmonella movement control protocol with the Department of Animal Health are likely to be treated with some urgency in 2017 and finally implemented.

Informal chicken market (GDARD project)

In South Africa, the vast majority of chickens sold in urban communities originate from layer or broiler farms, where it is mandatory to adhere to strict slaughter procedures. Abattoirs are regularly inspected by veterinary public health officials and the chickens sold at retail outlets are also subjected to monitoring by government agencies.

However, in rural and township communities, large numbers of chickens coming out of commercial farms as spent hens are slaughtered and processed daily under unhygienic conditions. In these informal markets, there is no monitoring of quality (microbial or antimicrobial residues) at either the slaughter or sale levels and this poses a risk of food poisoning for the consumer. In an effort to address this and stamp out illegal slaughter, the Gauteng Department of Agriculture and Rural Development (GDARD) has fully funded a pilot study to assess the hazards posed by these outlets which should positively guide government policy towards monitoring and ensuring meat safety for the public. Malesedi Mokgoatlheng-Mamogobo, a PDMA staffer, is involved in the project.

The objectives of this project are stipulated below:

- Determine the distribution of informal chicken outlets in Gauteng province, the different processing practices and the sanitary practices during slaughter, dressing and packaging;
- Identify the critical control points in the operations at the outlets, as well as the risk factors for bacterial contamination;
- Determine the prevalence of *Salmonella* spp., *Campylobacter* spp., *Escherichia coli*, *Staphylococcus aureus*, total coliforms and total aerobic plate count at various stages of processing;
- Determine the occurrence and types of antimicrobial residues in the livers of the chickens;
- Characterise the pathogens by phenotypic and molecular techniques regarding the presence of toxic, virulence and resistance genes;
- Recommend intervention strategies for sanitary practices at the outlets that will lead to safer chickens being sold to consumers.

National Animal Health Forum

The PDMA represents SAPA at the National Animal Health Forum (NAHF). Some key discussions that have involved and affected the poultry industry are:

Implementation of the Provision of Veterinary Services Report recommendations

The World Organisation for Animal Health (OIE) performed a gap analysis on the provision of veterinary services in the country as part of the Provision of Veterinary Services Report recommendations. A report on a strategy to improve veterinary services between 2016 and 2026 can be accessed at: <http://nahf.co.za/wp-content/uploads/Vet-strategy-final-signed.pdf>

Compulsory community service (CCS) for veterinarians

Newly graduated veterinarians are to be deployed in areas where there is a shortage of veterinarians to support farmers. The CCS will be a requirement for practice in South Africa. The programme commenced in 2016.

The manufacture and use of unregistered products

The manufacture and use of unregistered products is increasing and is of particular concern where vaccine and antibiotics are concerned. The NAHF is working to find solutions to the issue and to protect the human food chain.

8.3 Poultry research Chair: 2016

The industry sponsored Chair in Poultry Health and Production at the University of Pretoria (UP) was formally established in August 2012. The mandate of the Chair, Professor Celia Abolnik, is to conduct research into poultry diseases with the aim of improved control. Professor Abolnik received the 2016 Kwame Nkrumah Regional Award for Women (Southern Africa region) at a ceremony at the African Union headquarters in Addis Ababa, Ethiopia. The awards recognise outstanding achievements in science and technology on the continent.

Monitoring of the current exotic Newcastle disease virus (NDV) genotype VIIh outbreak has led to the strains isolated by the national laboratories being sequenced to reconstruct the molecular epidemiology of the outbreak. This activity dovetails with an international collaborative initiative to establish a unified nomenclature for NDV genotypes. A full South African NDV genome was also completed and submitted to the GenBank database. The phylogenetic time-scaled analysis of Newcastle disease in South Africa (2013–2016) is still being prepared for publication after more viruses were included in the analysis.

Progress in the Tshwane Animal Health Cluster/Technology Innovation Agency (TAHC-TIA) projects remains on track. The University of Pretoria and the Council for Scientific and Industrial Research (CSIR) entered into an official collaboration agreement for the ostrich AI ELISA project, and the Chair has been an official visiting scientist at the CSIR since May 2015. Soluble H5 and H7 subtype influenza proteins were successfully expressed in the tobacco plant system, which is ideally suited to the large-scale production of antigens. The ELISA test, for which these H5 and H7 antigens are intended, will enable more rapid, sensitive, specific and high-throughput screening of ostrich blood samples for disease surveillance and export testing. Validation of the ELISAs is underway, trademark registration by the University of Pretoria (UP) is in progress, and non-disclosure agreements with potential technology partners have been signed.

Influenza viruses undergo rapid mutation, and the assays used in South Africa for the molecular detection of H6 in poultry had ceased to detect and identify H6 strains. Real-time and conventional detection assays for H6 influenza were redesigned and tested, and primer sequences were sent to diagnostic laboratories.

On another TIA project, 81 isolates of mycoplasmas were made from mycoplasmosis cases submitted to the UP Poultry Section, and full genome sequencing and assembly for more than half of these has been completed. The genome assembly and annotation project is being undertaken

by a PhD student. A surprising finding was that 47 % of these isolates from flocks where typical pathogenic mycoplasmas were suspected (that is, *M. gallinarum* (MG) and *M. synoviae* (MS)), were *M. gallinaceum* organisms. South Africa does not vaccinate against *M. gallinaceum* and according to Dr Naola Ferguson-Noel from the USA, who presented a talk at AviAfrica 2015, MG/MS vaccines will not cross protect against *M. gallinaceum*. Our laboratory has now published the first international complete genome sequence for *M. gallinaceum*. Other mycoplasma species were also identified in the national flock, and the aim of the TIA project is to develop molecular diagnostic assays to distinguish the various *Mycoplasma* spp.

Several postgraduate students are being supervised. PhD students C. Mubamba, S. Theobald, A. Beyleveld and A. Laleye are on track with their respective projects on Newcastle disease, antibiotic resistance in *E. coli*, mycoplasmosis and avian influenza. New PhD student T. Smith was one of few recipients of a UP PhD bursary for 2017 and she will be investigating H6N2 vaccine production in tobacco, in collaboration with the CSIR. MTech student T. Phiri is collecting the final samples in her analysis of avian influenza in wild ducks at a sampling site in Irene, Pretoria. PhD candidate D. G. Bwala is finalising his thesis for examination.

Peer-reviewed articles in ISI-listed journals 2015 - 2016

Kortenhoeven C, Joubert F, Bastos AD and Abolnik C. (2015). Virus genome dynamics under different propagation pressures: Reconstruction of whole genome haplotypes of West Nile viruses from NGS data. *BMC Genomics*, **22**, 6 - 118.

Abolnik C. (2015). Genomic and single nucleotide polymorphism analysis of infectious bronchitis coronavirus. *Infect. Genet. Evol.* **32**, 416 - 24.

Abolnik C and Beyleveld A. (2015) Complete genome sequence of *Mycoplasma gallinaceum*. *Genome Announc.* **2**, 3(4).

Cumming GS, Abolnik C, Caron A, Gaidet N, Grewar J, Hellard E, Henry DAW and Reynolds C. (2015). A social-ecological approach to landscape epidemiology: Geographic variation and avian influenza. *Landscape Ecology*, **30** (6), 963 - 985.

Beyleveld A and Abolnik C., (in press) Complete genome sequence of *Mycoplasma pullorum*. *Genome Announcements*

Abolnik C., (in press) Evolution of H5 highly pathogenic avian influenza: sequence data indicate stepwise changes in the cleavage site. *Archives of Virology*.

8.4 Technical support for emerging farmers

The PDMA is working on a proposal to visit the nine provinces with state veterinarians who have gone through training discussed above (Chapter 8.2) in order to provide much-needed technical support. This will be the first step in creating an interface and added-value relationship between the state veterinarians and the farmers. This programme aims to bridge the gap between these two important role players, to address the public health and safety concerns about chickens sold in informal markets. In addition, the programme aims to improve the knowledge and perception of, and attitude towards, food safety amongst producers in this sector. An appeal will be made to the provincial structures to assist in identifying the small-scale farmers who operate in this sector.

8.5 Notifiable Avian Influenza (NAI)

Production of poultry products for local consumption and export under successful disease surveillance and control programmes must be implemented at a level which complies fully with the export requirements of available international markets. The role of the PDMA in achieving the required disease control compliance for controlled diseases such as Newcastle disease (NCD), salmonella infections, and surveillance for HPAI (and any other avian influenza infections) has been discussed above. A routine surveillance programme for Notifiable Avian Influenza (NAI: “bird flu”), using a protocol which follows OIE guidelines, has been in place since September 2005. According to this protocol, all commercial ostriches, chickens, and non-commercial chickens should be sampled and tested six-monthly for both the H5 and H7 avian influenza sub-types. The surveillance protocol undergoes periodic revision to keep it up to date. Bi-annual reports on the NAI status of the South African Poultry flock can be found on the SAPA website.

At present, the surveillance by DAFF in the ostrich industry uses protocols and diagnostic techniques on a par with the best in the world, including a standardised testing protocol developed by Deltamune, OVI and DAFF and advanced diagnostic methods implemented by Professor Abolnik (University of Pretoria) who is sponsored by the poultry industry. It is of the utmost importance that the poultry industry continues its surveillance for avian influenza at such a level and remains supportive of DAFF’s efforts to control this potentially devastating disease.

While the broiler and egg industries in South Africa remain HPAI free, the persistence of the LPAI H6N2 strain in the national flock cannot be ignored. It is of concern that the industry is prepared to ‘accommodate’ this low pathogenic strain in the national flock. The continued practice of vaccination against this disease results in a high-risk comfort zone in handling a disease notorious for genetic shifts and drifts. The strain may not be killing large numbers of chickens, but its economic impact is concerning; thus it is beneficial to develop a strategy to eradicate it.

Three previous unrelated outbreaks of H5N2 in ostriches in the southern Cape (2004; 2006; 2011) were successfully ended through the use of culling programmes. No further isolations or identification of the highly pathogenic H5N2 virus were made in 2012 but new introductions of LPAI

H7N1 occurred in that year. In 2013, the strain affecting ostriches in the southern Cape was identified as LPAI H7N7 by the University of Pretoria. South Africa's status as free from Highly Pathogenic Notifiable Avian Influenza (HPNAI) was revoked in 2011 by the EU until certain conditions were met. The four-year ban on ostrich exports to the EU was lifted in 2015 in response to improvements in bio-security measures.

During 2016, South Africa reported 9 outbreaks of low pathogenic avian influenza (LPAI) on ostrich farms in the Eastern and Western Cape. Most of the outbreaks were in the Western Cape in the regions of Hessequa, Oudtshoorn, Mossel Bay and George but there were also outbreaks in Ikwezi and Camdeboo in the Eastern Cape. No deaths were recorded in all these cases and the South African ostrich flock remains free of highly pathogenic avian influenza (HPAI).

In view of the successful implementation of NAI surveillance programmes by the ostrich industry and the effective control over the occasional positive cases, a close cooperation between the two industries must be maintained together with government officials. It is of the utmost importance that the poultry industry continues its surveillance for AI at such a level, so as to be in support of the required level of vigilance for this very important, potentially high-risk and disastrous disease, and to support the control measures implemented by DAFF.

8.6 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) have been updated to give the necessary guidance for certain methods of production and in the handling of chickens. The last version in 2012 addressed 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 and cull outlets.

Important factors that play a role in the ability of the industry to be able to meet the welfare challenges are the availability of technical support from scientists, the financial and economic situation in the country, the pressure from animal welfare groups and from animal rights groups, as well as the political and bureaucratic environment to allow for welfare improvement.

It is the view of the Poultry Health and Welfare Committee that codes of practice which effectively deal with the welfare aspects of poultry farming through realistic and practical industry-orientated guidelines, rather than South African Bureau of Standards (SABS) standards, are preferable; although this does not preclude the use of an SABS standard.

9. AGRICULTURAL POLICY ACTION PLAN

SAPA has collaborated with the Department of Agriculture, Forestry and Fisheries (DAFF) on a series of strategic programmes and projects and believes an active and meaningful partnership between industry and government is important for all stake holders.

In July 2013, Cabinet resolved that the Department of Agriculture, Forestry and Fisheries should develop a plan that addresses the vision of the National Development Plan (NDP) and the New Growth Path. Under the Medium Term Strategic Framework of the NDP, agricultural development is seen as a key to realising three important outcomes: *Number 4* (decent employment through inclusive growth), *Number 7* (comprehensive rural development and food security) and *Number 10* (the continual protection and enhancement of environmental assets and natural resources). Agriculture is seen as critical in achieving higher levels of employment and better food security. Agriculture delivers more jobs per rand invested than any other sector and it is hoped that the sector can generate a million new jobs by 2030.

Vision 2030 of the National Development Plan calls for an inclusive rural economy wherein “...*rural communities should have greater opportunities to participate fully in the economic, social and political life of the country. People should have access to high-quality basic services that enable them to be well nourished, healthy and increasingly skilled. Rural economies will be supported by agriculture, and where possible by mining, tourism, agro-processing and fisheries...better integration of the country’s rural areas, achieved through successful land reform, job creation and poverty alleviation*”

The National Development Plan, Chapter 6, sets out clear targets and actions to realise this vision. It identifies almost 600 000 potential jobs in communal areas and 400 000 jobs in commercial agriculture. Roughly a third of the jobs created would be in secondary and service industries, upstream and downstream of primary agricultural jobs. Besides increasing the amount of land under irrigation and making better use of land in communal areas, the NDP also aims to identify sectors of the agricultural economy which have the highest potential for growth and employment. Industries and regions with the most potential to create jobs will receive the most support. The Department says there is a need to promote agricultural development in a manner that translates into rural development and poverty alleviation. Increased collaboration between successful farmers and the beneficiaries of land reform programmes is seen as important in job creation. The Department also identifies a need to find a better balance between large-scale and small-scale subsectors, thus broadening market participation.

The Agricultural Action Policy Plan (APAP), presented as a draft in spring 2014 and accepted by Parliament in March 2015, is a value-chain approach to encouraging rural development. Under this Plan, the Department of Agriculture has identified important agricultural value-chains and will target government investment accordingly. The Department is concerned that South Africa increasingly relies on imports of crops (wheat; soya) and livestock products (poultry), while agriculture itself relies on imports of inputs (e.g. fertiliser, feed, mechanisation). There is a need to

create a more sustainable and productive sector and to strengthen the country's competitiveness by supporting localization where there is potential.

Whilst poultry production is not as labour intensive as, for example, horticulture or sugarcane farming, the potential for growth in this sector was seen as high. The Poultry Integrated Value chain was identified as one of eight sectoral key action programmes (KAPs) under APAP. These sectors were chosen based on their contribution to food security, job creation and growth, and their potential contribution to South Africa's trade balance. The other KAPs are: red meat; fruit and vegetables; wine; forestry; fisheries; wheat and biofuels.

The APAP programme aims to provide a long term vision and focused interventions in a five-year rolling schedule. The programme is based on Sectoral Key Action Programmes (mentioned above) and Transversal Key Action Programmes (e.g. research and innovation; land reform; Fetsa Tlala (the government's hunger eradication programme); Climate Smart Agriculture (CSA) and the Strategic Integrated Project on Agro-Logistics and Rural Infrastructure). Institutional arrangements and processes are also being put in place to help achieve the development objectives, especially in integrating planning, monitoring and evaluation between the Department of Rural Development and Land Reform and DAFF across all three spheres of government (local, provincial and national).

Each Key Action Programme in APAP has: a problem statement; aspirations; policy levers; nature of interventions and key outputs (actions). For the Poultry Integrated Value Chain, the problem statement reads as follows:

- Globally, poultry is expected to account for more than half of meat consumption. SA's consumption of white meat has increased far more rapidly than that of red meat and consumption is expected to increase by 34% by 2023 (to 2.6 million tonnes or 50 kg per capita). Unfortunately, much of this increase has been by way of imports, especially of low-cost frozen portions. Production is only expected to expand by 2 million tonnes to 2023, necessitating the importation of 680 000 tonnes per year.
- Poultry production systems have a high dependency on imported feed grains for animal feed; about 63 % of soya oilcake is imported, pushing up feed prices.

The strategy of the Key Action Programme for poultry focuses on import substitution. When the KAP was drafted, there existed hope that the new import tariff structures would stimulate local production. However, with the US now allowed to export 65 000 tonnes/annum of frozen chicken portions to South Africa, free of anti-dumping duties, and with the EU and Brazil still enjoying favourable access to the local poultry market, import substitution and growth of the South African broiler industry are likely to be problematic.

The Department of Agriculture, Forestry and Fisheries sees the main challenges and constraints to the broiler industry as:

- The increasing cost of production, especially feed and energy
- The increasing cost of day old chicks, and variable quality of day old chick supply in the market
- Dumping and/or oversupply of imports from the EU & South America
- Variable control of poultry diseases
- Low demand/consumption in neighbouring countries
- High initial investment for start-up
- Need for R&D to improve production systems and feed conversion ratio
- Unstable electricity supply
- Monopolistic behaviour of processors and retailers
- Lack of official information in the market, stock population, etc.
- Inadequate market access for smallholder producers
- Highly concentrated commercial poultry sector with less smallholder farmer participation
- Slow transformation agenda
- Abattoirs and hatcheries not well located for smallholder farmers
- Losses due to diseases and pests
- Low levels of transformation

In terms of raw materials, the Key Action Programme hopes to ensure a reduction in feed costs by increasing domestic production of soya bean (to meet increased capacity in crushing facilities) and infrastructure investment in soya bean and yellow maize production and processing. Soya bean-grading regulations will be amended, and regulation relating to the retention of protected soya bean seeds will be developed and implemented. Smallholder training programmes focused on soya bean and yellow maize production and post-harvest practices will be refined and expanded. Off-take agreements with feed companies will be sought.

A national Poultry Support Programme will be developed and implemented in partnership with SAPA. Research programmes will be initiated, aimed at making broiler production more energy-efficient and at developing higher-yielding soya bean varieties through partnerships with private sector seed companies.

For more information on the Agricultural Policy Action Plan, the reader is referred to the following link for a full presentation on the aims of the programme:

http://agbiz.co.za/uploads/AgbizNews/15917_APAP.pdf

In the State of the Nation address in February 2016, President Zuma announced a “Nine point plan” to rejuvenate the flagging economy. One of the nine points is the “revitalisation of agriculture and the agro-processing value chain”; now known as RAAVC. During 2016, the Government also introduced the concept of Operation Phakamisa, initially with the ocean and mining economies and

then, in spring 2016, with the agricultural sector. Operation Phakamisa is derived from Malaysia's Big Fast Results methodology which has been used successfully to achieve rapid economic transformation. Its broad aim is to stimulate growth, foster job creation and instill transformation along the agricultural and agro-processing value chain. The Departments of Rural Development and Land Reform (DRDLR) and DAFF held a series of strategic workshops in six month consultation period in order to produce a scoping document to be used at a 5-week Operation Phakamisa laboratory in September/October 2016. There were 161 registered participants at this laboratory and poultry producers made their voices heard in the Livestock work-stream. Of the 27 initiatives decided on during the course of the laboratory (which are aimed at accelerating delivery of the National Development Plan), five fell under the Livestock workstream:

1. Livestock Skills and Knowledge Upgrading Programme
2. Access to commercial and alternative livestock value chains
3. National Livestock census and animal identification and traceability programme; to strengthen exports; improve disease control; and ensure adherence to international trade protocols.
4. Enhanced animal health, through revolutionary veterinary services
5. Fortified veld management; for sustainable livestock production; aiming to rehabilitate 550 000 hectares of old lands and eroded and cleared areas, with a 20% improvement in grazing capacity by 2030.

Over the past two years, a lot of plans and strategies have been adopted in relation to agriculture and rural development. It remains to be seen whether the plans will be matched with action on the ground.



10. SAPA RESTRUCTURING

10.1 Restructuring

In October 2013, the need for a new, more efficient SAPA became clear. Members insisted that the activities of SAPA be made more relevant to all of them. In January 2014, SAPA took the decision to consolidate 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 CPO and the DPFO would be absorbed into their respective product value chains, falling under either the Broiler Organisation or the Egg Organisation.

With revised national and provincial structures decided upon, a draft Constitution was drawn up. Delays were experienced in the restructuring process as the four subsidiaries debated the proposed changes. The Egg Organisation, in particular, felt that the problems affecting the broiler industry swamped the ability of the SAPA structures to deal with problems in the egg industry, and the need for two completely separate representative bodies was mooted. In the end, a further revised but unified membership structure (two member bodies and a Board composed equally of both bodies) was accepted by the Executive Committee of all four organisations.

Under the new SAPA structure, membership representation of the Association will be by category, as follows:

Subsistence farmers

Broiler: less than 1 500 birds per cycle

Egg: 1 – 499 hens

Small commercial farmers:

Broiler: more than 1500 birds per cycle; less than 40 000

Egg: 500 – 50 000 hens

Large commercial farmers:

Broiler: more than 40 00 birds per cycle; less than 40 000

Egg: More than 50 000 hens

The provincial structures for both the Broiler and Egg Organisations will nominate representatives to participate in the relevant national structure. The provincial and national structures of both the Organisations will need representation from all sectors of their value-chains; for example, abattoirs

will need to be represented within the Broiler Organisation structures, and pullet-rearers within the structures of the Egg Organisation.

The Management Committee accepted the draft constitution in April 2015 and agreed that the new SAPA member structure should go before the SAPA Congress in June, for member approval. Besides the consolidation of the organisations, key changes which would be discussed at Congress included:

The provincial structures.

These will now be voluntary, less formal and self-funding, rather than part of a formal lower tier of the national SAPA structure. They will have increased flexibility to set their own rules, without the need to have these rules proposed and accepted at a SAPA AGM.

The Egg Organisation.

Egg producers will now have a dedicated person to serve their needs.

Project management. SAPA staff will no longer be involved with project management on any research projects undertaken by either of the two new organisations. All project management costs must be fully funded by the project itself.

At the 109th Congress of the South African Poultry Association, members in each of the four SAPA subsidiaries voted to create two new organisations representing the egg and broiler value chains. They also voted to establish a Board to manage all non-egg and non-broiler specific affairs and to be an over-arching and unifying authority. The SAPA Board will have four representatives from each of the two Committees, and two alternatives. The initial leadership of the two producer bodies and the Board will be determined by the current Management Committee, to allow for continuity in management while the new structures are launched. From SAPA Congress 2016, normal voting processes have applied.

Once it had been accepted by Congress, the new SAPA constitution had to be approved by the Commissioner of SARS. The existing SAPA structures therefore had to remain in place until SARS were satisfied with the constitution – this approval was received in October 2015. The new Constitution could then be implemented, by virtue of written resolutions prepared and signed by the new Committees in the months leading up to the SARS announcement.

Along with the changes to the membership structure of SAPA, there has been a parallel restructuring of the SAPA secretariat, which began in June 2014 with five staff members leaving the Association's offices as part of the downscaling process. The restructuring of the secretariat to serve the needs of the new provincial and national structures continued in 2015, with three further retrenchments reducing the SAPA staff by 50 % from its peak of 16 employees. Five redefined positions were rewritten and advertised during 2015.

In order to realise the new SAPA strategy, the existing funding structures will change. The two committees used a draft funding proposal to draw up and agree to their own budgets, including their contribution to the shared services budget (cost of secretariat, statistical services, website, etc.). The bulk of the decision-making is thus done at individual committee level, with the SAPA Board ratifying the shared services budget only at the end of the process. Expected expenditure decreased by 40 % in 2015 and this level was to be maintained through 2016.

The Egg Organisation held its first meeting on 12 November 2015 and opted for a flat-rate funding model of 1 c/dozen eggs, on top of a basic membership fee of R400/year. In March, the Chairman of the Egg Organisation wrote to all egg producers to appeal to them to support the Egg Organisation. Without the support of producers, the Organisation would have to be dissolved as organisational income was below the level needed to sustain expenditure. The response to the appeal was disappointing, even with some new members climbing on board. By the end of the year, the Egg Organisation decided that a statutory levy would be the only solution to allow the organisation to carry on with its work on behalf of all producers. This work includes the collection and distribution of statistics, health and welfare work through the PDMA, food compliance work and government and media engagements. The EO has presented a case to the National Agricultural Marketing Council (NAMC) for the reintroduction of a statutory levy. The motivation was positively received by NAMC and a formal application for the levy will now be submitted. The proposal will be published in the Government gazette and a public participation process followed.

The new Broiler Organisation held its first meeting on 26 November 2015. Its funding model is based on the number of birds slaughtered per week. Broiler breeder producers tentatively agreed to carry 14 % of the Broiler Organisation costs. As with the Egg Organisation, finances have been stretched in 2016, putting paid to any thoughts of advertising campaigns or research projects in this financial year. Legal expenses continue to be a huge drain on resources for the Broiler Organisation.

Under the new membership structure, the provincial organisations are expected to conduct a survey of the producers in their province and to recruit producers and build membership of SAPA to increase its relevance. Databases of producers at provincial level will be maintained and shared with the SAPA national structures. Provincial organisations are expected to lobby the relevant authorities on local issues and to identify empowerment opportunities and development projects.

10.2 Industry transformation

A strategic transformation session was held in August 2015 and a decision was taken at this meeting to produce a draft transformation document. This document defined the scope and nature of the work to be done by SAPA to support transformation initiatives. The Management Committee accepted that the role of SAPA in transformation is to facilitate work that brings about social, political and economic change in the industry, rather than to do it directly. The appointment of Dr Charlotte Nkuna in the position of Senior Executive brought traction to the team at this time. The

Transformation Committee produced a draft report which details the poultry industry's racial history, its current status, a strategy and an action plan.

At its December 2015 meeting, the Transformation committee identified three key areas for SAPA's transformation agenda. The first focus area is simply to report on success stories in the industry, both at the small scale farmer level and within big business. The Poultry Bulletin and annual Avi Africa Congress are the perfect vehicles for spreading the word on transformative projects. These media avenues also lend themselves to providing technical information and industry statistics to small scale farmers.

The second focus area is SAPA's internal transformation as an organisation. Significant steps forward were taken in this regard this year with the first black chairpersons in SAPA's 112-year history being elected at the 2016 AGM. Achmat Brinkhuis and Willie Bosoga took the positions of chairperson of the SAPA Board and the Egg Organisation respectively. At the end of the year, a new director of the Poultry Disease Management Agency (PDMA) was appointed. Dr Ziyanda Majokweni will take up her position in early 2017. Dr Charlotte Nkuna has been appointed as a Senior Executive and as the Egg Liaison in SAPA, and is the main contact person within the organisation for transformation matters.

The third focus area for the Transformation Committee is to assist and report on transformation in the industry itself. While SAPA cannot interfere in the running of individual businesses on transformation issues, it can continue to liaise with Government on behalf of the industry and provide the industry with feedback on these discussions. Large companies will, of course, be subject to government progress audits according to the seven pillars of the AgriBEE charter. However, the Organisation has more power to influence transformation at grass roots level, amongst small scale farmers. The transformation agenda cannot succeed though unless all stakeholders are involved.

In an attempt to bring all parties together, a multi-stakeholder meeting was held in Sandton on 19 April 2016, attended by SAPA, the Department of Trade and Industry (dti), DAFF, the Department of Rural Development and Land Reform, the GDARD, and the Industrial Development Corporation (IDC). All parties agreed that transformation efforts and finances need to be better coordinated. The newly formed steering committee was tasked with putting a detailed transformation programme together, with budgets. The IDC and SAPA will take the lead in this regard. The newly launched Agricultural Policy Action Plan (APAP) has transformation as a cornerstone. APAP is an official Cabinet-approved policy with the purpose of prioritising spending within DAFF. Poultry is one of the priority sectors in terms of APAP (Chapter 9).

Complaints had been heard from some small-scale commercial farmers who felt that they had lost their voice when the Developing Poultry Farmers' Organisation (DPFO) was disbanded. Part of the Transformation Committee's mandate is thus to develop provincial structures, as provided for under the new SAPA constitution, and, in so doing, encourage smaller producers to join SAPA. The first SAPA provincial meeting was held on 15 November at the KZNPI in Pietermaritzburg, attended by over a hundred large and small poultry producers, along with representatives from

DAFF and the Department of Economic Development. Meetings are scheduled for Gauteng and the Western Cape in February 2017. Local follow-up meetings should follow at which provincial committees will be elected.

The termination of the statutory levy at the end of 2013 reduced the amount of money available for small-scale farmer-specific projects and general organisational work within SAPA. However, the SAPA Board agreed towards the end of 2015 to earmark SAPA's statutory levy surplus for transformation projects, under the direction of the new Transformation Committee. The goal is to establish an evergreen trust with surplus funds from the now defunct levy. Growth in the fund would allow roughly 6 % to be used annually to support development and transformation projects. The National Agricultural Marketing Council has accepted the idea in principle and the necessary legal trust deed has been drawn up and will be submitted to NAMC for consideration in 2017. Additional funds will be sought to bolster the trust fund.

The industry transformation focus is on creating more and better opportunities for previously disadvantaged producers, by improving access to quality inputs, information, finance, veterinary services and abattoir facilities; providing mentorship; assisting in the creation of regional networks for smallholder producers; and expanding market access. 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.



11. TRAINING AND SKILLS DEVELOPMENT

11.1 SAPA management courses: 2016

The year 2014 proved to be an extremely disappointing year in terms of national attendance of the annual SAPA management courses with a total of 48 attendees, compared to 163 candidates in 2013. The drastic drop in attendance was attributed to the general economic conditions in the industry; the removal of the course subsidy as a consequence of the statutory levy having been brought to an end; and a temporary saturation in terms of the need for courses. As a result, it was decided not to offer SAPA management courses in 2015 and 2016, with the proviso that, should there be a renewed demand, the courses would be reintroduced in 2017. During these two years, the KwaZulu-Natal Poultry Institute has assisted with courses where needed.

11.2 DAFF small farmer training

The primary focus of SAPA's training activities in 2016 was the DAFF small farmer training initiative. The Department committed to a R1.5 million investment in this project over a two-year period from 2015, with the expectation that 250 farmers would benefit. In 2016, 261 farmers attended training in two cycles. Training in the second cycle took place in Gauteng, the Western Cape and Limpopo. Residual funding will allow training to continue in early 2017.

The focus of this agreement is to assist existing smallholder farmers with their training requirements and thus excludes new entrants. In 2015, "Farmer Profile" forms were introduced to assist in directing training towards existing small-scale farmers, along with a farmer feedback model to determine the impact of the training. DAFF wanted to ascertain the impact of the courses on the farmers and to establish whether there were further training needs.

11.3 AgriSETA funding

Funding support through the Agricultural Sector Education and Training Authority (AgriSETA) continued in 2016. This funding is of great value in addressing skills shortages in the industry. In late 2015, all SETA's were requested to engage with stakeholders to discuss, inform and solicit inputs on a gazetted document from the Department of Higher Education and Training (DHET) entitled "Proposal for the New Skills Development Strategy (NSDS) and Sector Education and Training Authorities (SETA's) landscape within the context of an integrated and differentiated post school education and training system (NSLP-2015)". Two workshops for stakeholders were hosted by AgriSETA in December 2015 and January 2016. SAPA convened a special training meeting in February 2016 to discuss the matter, following which a submission was made to the DHET and AgriSETA.

By the end of the year, it was clear that the SETA's will continue, but in a revised format. The existing SETA's will be replaced with SETAB's (Sector Education and Training Advisory Boards). The Boards are expected to determine the skills needs of employers; secure workplace-based learning opportunities for learners; support institutional and work-place-based learning within the current workforce; support education and training institutions to meet skills needs; and manage the support structures and budgets linked to their mandate. The SETAB's will engage with the DHET through the National Skills Fund (NSF). The NSF is funded by a 1 % levy on employer's payrolls and used to support 21 SETA's. The proposed changes look set to wrestle the lion's share of this funding away from SET Authorities and have it managed by the NSF. The existing SETA's will take on more of an advisory role, directing where the NSF should spend the funding. The changes are seen as necessary because of failures within many of the SETAs and because of wasted expenditure. Critics of the changes argue that some SETAs work very effectively and should be protected and that the diversion of funds away from the SET Authorities to central government will make it harder to bring employers on board. The changes are unlikely to take effect before 2018.

Further to receiving funding from AgriSETA, SAPA is now represented on the AgriSETA Poultry Subsector Committee, as well as on the Grant and Funding Allocation Committee.

Poultry meat examiners and inspectors

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There is a constant need for suitably trained Poultry Meat Examiners (PME) in the poultry sector. AgriSETA granted SAPA R500 000 for Poultry Meat Examiner and Poultry Meat Inspector training. This project commenced in November 2015 and 56 PME and 18 PMI candidates received their qualifications in May 2016. Another course will begin next year.

Poultry processing qualifications

During 2014, an application was sent to AgriSETA for the development of poultry processing qualifications in terms of the Quality Council for Trades and Occupations (QCTO) Qualifications Framework. The application covered four abattoir qualifications: poultry slaughterer; poultry slaughterer (poultry processing); poultry slaughterer (poultry meat examination) and poultry slaughterer (poultry meat inspection).

The Council for Trades and Occupations registered one of our qualifications in 2016: Poultry Farm Worker.

11.4 Avi-Africa: annual exhibition and conference

Avi Africa is the biggest poultry exhibition and conference in Africa. It is held every winter in Gauteng. Avi Africa showcases the latest in products, services and technology and provides attendees with parallel sessions of presentations by invited local and international speakers. In 2016, the following talks were given in the three conference sessions:

Farm Economics:

Tracy Davids (BFAP): *Local competitiveness*

Dr Ferdi Meyer (BFAP): *Agricultural subsidies: making us more competitive*

Tumisang Mokwene: *Bringing small producers into the main supply chain*

Suzanne Ackermann: *Making space for small suppliers*

Rian Coetzee (SEFA): *Innovative financial instruments*

Nicole Teuchert (Alltech): *Antibiotic free feed programme*

Dr Mpane Molefe (DAFF): *Independent meat inspection*

Export seminar: chaired by Dr Charlotte Nkuna

Production:

Francois Crots (Afgri): *Nutrition: diets for long lived layers*

Felicity von Moos (Hy-line SA): *Growing your free-range operation*

Serve Harmans (ISA): *Breeding*

Pieter Oosthuysen (Cobb Europe): *Seven day weight as the foundation of broiler flock efficiency*

Dr Deryn Petty (DAFF): *Enhancing biosecurity*

Dr Stefan Swanepoel (Deltamune): *Vaccination: the cheapest way to profits*

Scott Black (Cobb SA): *Lighting*

Dr James Meyer: *A perspective on current water use issues*

Ventilation seminar: chaired by Philip Bronkhorst

Health:

Dr Scott Elliott (MSD Animal Health): *Salmonella gallinarum*

Dr Obed Lukhele (Astral): *Field report on IBD over a 4-year period*

Dionne Rauff (Deltammune): *AI vaccination for South Africa?*

Dr Adriaan Olivier (Klein Karoo International): *Compartmentalisation vs regionalisation: the ostrich experience*

Prof Moritz van Vuuren (UP): *Antibiotic resistance: the South African national action plan*

Dr Dauda Bwala (UP): *Mycoplasma update*

In addition, there were keynote addresses by ABSA economist Ernst Janovsky, political commentator, columnist and author Justice Malala, and author GG Alcock.

12. SAPA TECHNICAL COMMITTEES

12.1 Introduction

The modern-day poultry industry consists of a series of logistically planned, high-tech production operations, requiring intensive management inputs, which rely strongly on technical support from both South Africa and abroad. The role of the SAPA technical committees and work groups is to assist the industry in successfully continuing with sustainable supplies of high protein food from the modern-day poultry breeds by minimising environmental and disease-orientated stress factors, and by applying production practices which will optimise the potential of the most genetically advanced food animal species. The industry needs to adopt a broad-based self-regulatory policy for situations which need proactive control; for example, disease control, poultry welfare, antibiotic use, product safety. This approach should include research trials under South African conditions; timely development of standards; unconditional participation in disease control programmes and application of all necessary and relevant customer oriented procedures (COPs) in practice to produce products of the required quality under acceptable conditions.

Meetings of the different work groups, that is, the Transformation Committee, the Poultry Health and Welfare Work Group, the Food Compliance Work Group, the Training Committee and the Research Committee, were held regularly through 2016 and Government agencies engaged where necessary. In late 2016, a new Media Relations Committee was introduced.

12.2 The Technical Committees and Work Groups

Transformation Committee

It was a busy year for the Transformation Committee. Chapter 10.2 (Industry transformation) deals with SAPA's approach to transformation matters since the organisation's restructuring in 2015.

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, with the emphasis 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.

In March, members of the Transformation Committee met with a delegation from the World Poultry Foundation (WPF), a US non-profit organisation tasked with helping to solve hunger and poverty issues, and enabling poultry farmers in economically distressed countries. The WPF were on a fact-finding mission in South Africa to establish how best to assist black farmers. A partnership was formed with the KwaZulu-Natal Poultry Institute (KZNPI) and several training sessions were scheduled for the first half of 2017. The WPF was set up with seed-funding from the US Poultry and Egg Export Council (USAPEEC) and its involvement stems from the African Growth and Opportunity Act (AGOA) negotiations. The training projects have the support of DAFF, dti, the USDA and the US State Department. More information on the foundation can be found at worldpoultryfoundation.org. The US Government is itself expected to be involved in other development projects as part of the AGOA settlement. The first historically disadvantaged individual to benefit from the (AGOA) quota of 65 000 tonnes of frozen chicken imports was Evodia Motsepe. Her company, Mega Meat Supplies, was allocated a quota of 1 000 tonnes. A total of eight black entrepreneurs have been included in the import deal.

It is hoped that designation of poultry products (meat and eggs) will provide access for small scale farmers to a long-term market in the form of government institutions. Engagements between SAPA and the dti continue in this regard and it is hoped that this designation, which will force government institutions to source locally produced poultry meat and eggs, will be granted by year-end.

Two SAPA-affiliated transformation projects – the Gauteng Abattoir Project and Lebowakgomo Integrated Poultry Project – encountered numerous delays, mostly due to the difficult trading environment. Because many smaller broiler farmers ceased trading in and around Gauteng, it was deemed pointless to build an abattoir. A decision was taken to establish a processing facility instead, owned wholly by historically disadvantaged individuals. The Lebowakgomo abattoir in Limpopo stands empty until a strategic investor can be found to operate the facility. Built in 2002 at a cost of R70 million, it has the capacity to slaughter 20 000 birds per shift and once operational again, will be hugely beneficial to the small-scale broiler farmers in the area.

During meetings with SAPA, the government continued to put pressure on the organisation to transform the poultry industry. In order to achieve the goals of the National Development Plan (NDP), smaller producers need to be included in the formal market. To this end, SAPA Senior Executive Dr Charlotte Nkuna took part in the gruelling Operation Phakisa; the purpose of this operation was to find ways to assist in accelerating delivery of the NDP (see Chapter 9).

A number of non-governmental organisations and government officials continued to support new-entrant black farmers, both financially and with skills training. However, many projects failed for

various reasons. Ideally, the industry needs to come up with new models for successfully integrating black farmers into the value chain. Transformation is very much an industry responsibility, and government's role is to create an enabling environment with appropriate legislation.

Existing poultry companies can do much to facilitate meaningful transformation. This could be through helping developing farmers via equity partnerships, or by providing mentorship, technical support, lower cost inputs and access to markets. For large agribusinesses, the seven pillars of the AgriBEE scorecard offer a number of opportunities with regards to skills and enterprise development, and preferential procurement; for example, black-owned businesses can be contracted to do the cleaning and disinfection of poultry houses, vaccination of birds and manure removal.

Research Selection Committee

This Committee's purpose is to consider and evaluate various research proposals that will utilise available funds for market or scientific research. Research proposals must be of broad-based practical advantage to the industry, addressing issues such as disease management, nutrition, production, abattoir operation, agricultural engineering and economics, etc. At least 20 % of the research conducted must benefit the goals of industry transformation, assisting smallholder farmers entering the commercial sector. Committee members represent the main sectors of the industry, and include nutritionists, veterinarians and other relevant scientists.

Training Committee

This Committee's purpose is to consider proposals and issues relating to training and development within the established commercial and developing poultry farmer sectors. Emphasis is placed on the development of a national training and development strategy for the sectors and the establishment of minimum standards for skills development.

In addition to this, the committee's role will be the establishment of a national network of SAPA-recognised providers of both poultry specific and non-poultry training.

The Committee works with the broader industry, developing farmers, statutory organisations and interested parties. Work group participants include members from industry (egg and broiler); local government and veterinary supply companies.

The Research Selection and Training Committees work together on matters relating to bursaries and scholarships at local universities, for both undergraduates and post graduates. Through the Research Committee, relationships are built with the Universities for the Training Committee to build on. The Committees strive to ensure growth in poultry science studies and research and in the number of poultry veterinarians and foster the establishment of centres of poultry excellence in South Africa.

SAPA's Training and Development manager arranges and co-ordinates industry training by service providers that include the KwaZulu-Natal Poultry Institute and works to improve training resources. In this role, his function is informed and supported by the SAPA Training Committee comprising human resource managers from SAPA member companies and invited consultants.

Poultry Health and Welfare Work Groups

The Poultry Health Work Group considers issues related to poultry health and poultry disease control; working with Government where appropriate to prevent and manage diseases that threaten the national flock. Topics under discussion include controlled and other diseases (especially those that have the potential to decimate the industry's commercial well-being), and events that reduce bio-security effectiveness. The group monitors international movements in poultry welfare and reacts accordingly (see Chapter 8.6).

Along with the contributions of this work group, poultry health is managed through the PDMA, the Research Chair at Onderstepoort; and the National Animal Health Forum, of which SAPA is a member and vice-chair.

Work Group participants include members from industry [egg and broiler] and industry consultants, central and local government, University of Pretoria (OP), the PDMA, and poultry veterinary supplying companies.

The Poultry Welfare Work Group considers proposals and issues relating to poultry welfare, including international practices and trade movements. Outcomes are recorded in SAPA's Code of Practice, with which members are obliged to comply as a *minimum* standard. Standard operating procedures are being discussed concerning poultry welfare in commercial production (including work on layer hen caging, broiler housing and stocking densities, handling and slaughter of birds) which will allow the industry to properly justify and defend production systems to consumers and the media.

Three meetings of the Committee took place during the year. Work on updating the code of practice (COP) continued. The main welfare issues that were discussed were cage density, cage drinker systems, beak trimming, transport, euthanasia of chickens, and the treatment of end-of-lay birds at cull outlets. Stocking density in cages should be reduced to fit in with international standards, allowing 550 cm² per hen. A minimum of two water nipples per cage should be provided, with a maximum of five birds per two nipples. Alternative production systems for laying hens still need to be clearly defined, especially enriched cages.

With regards to transport, birds should spend no longer than 24 hours in transit, although the National Council of SPCAs (NSPCA) is recommending 18 hours. This may be difficult when birds are delivered to Namibia.

With regards to euthanasia, day-old chicks may be gassed or macerated. Small numbers of birds may be killed by stunning, followed by neck dislocation. The NSPCA is promoting the use of

stunning boxes as an alternative to neck dislocation, which requires well-trained individuals. Consensus needs to be reached on appropriate procedures for euthanasia. Methods for mass slaughtering following a serious disease outbreak were debated, with the use of gas in containers and foaming being two options.

The NSPCA's involvement in the COP Committee was welcomed, but the NSPCA expressed frustration at the slow pace of change. More producers need to be involved and have their say. Finalising the new COP should be a priority because the South African Bureau of Standards is using the document as a base for developing their industry standards for animals.

Concerns about the outbreaks of fowl typhoid (*Salmonella gallinarum*), a notifiable disease, were deliberated at length. Some producers had ignored advice and sold infected cull hens some distance away from their farms. All measures to ensure that, in future, the disease does not spread were revisited. A decision was made to write to all producers recommending that slaughter be done on the affected farms. It was acknowledged that financial considerations would play a role. SAPA needs to work with DAFF to establish protocols for controlling the movement of infected birds.

The live bird and spent hen markets are uncontrolled and provide the ideal environment for the spreading of diseases. Illegal abattoirs remain a major problem. Mobile abattoirs were viewed by government as a solution for culling on farms; however, they cannot handle large volumes. In Australia all culls go into composting; something that South African producers could investigate. The processing of cull birds at registered abattoirs could be viewed as a possible solution.

Food Compliance Work Group

The Food Compliance Work Group interprets and considers relevant Food Safety Acts (Department of Health and DAFF), regulations and industry standards. It is the role of this work group to inform the industry how it needs to react to ensure continuous compliance when working with Government and consumer bodies.

Matters of food safety and compliance that require input from the poultry industry, DAFF, the Department of Health and product-control persons/food technologists from larger retailers, etc., include:

- The effect of salmonella and avian influenza on poultry production and consumption in South Africa in the event of an outbreak in the country;
- Broiler-processing regulations (Notice No. 153 of 24/02/2006 under the Meat Safety Act (Act 40 of 2000)) and their effect on the availability of safer chicken meat products for the consumer;
- Regulation R146 under the Foodstuffs, Cosmetics and Disinfectants Act (Act 54 of 1972) which deals with regulations on labelling and advertising of foodstuffs. It affects a number of marketing and production practices;

- The Consumer Protection Act; the regulations of which came into effect in April 2011;
- Pathogen-reduction plans and the responsible use of antibiotics in broiler and egg production;
- The ethical responsibility of poultry farmers and veterinary poultry consultants in their use antimicrobial remedies;
- Water pick-up and flavour enhancement, referred to as “brining” (discussed in Chapter 6); measurement and monitoring of brine injection levels during production runs, using NIR meat scanners to maintain accuracy;
- Food safety and quality audits.

Two meetings of the Committee took place during the year. Disappointingly, the promised technical session with DAFF did not take place before Minister Senzeni Zokwana gazetted the amendment to the regulations. The work group members felt that the new regulations focused on individually quick frozen portions and that not enough thought was given to other products; also, there was not enough clarity on the formulation of the brine solution.

While DAFF continued to work on regulations for an independent meat inspection scheme, broiler producers were keen to implement their own as the lack of an independent meat inspection model has impacted on the industry’s ability to export chicken. Of the 8 large producers, 6 agreed in principle to pay a levy of 2.75 to 3.0 cents per bird slaughtered in order to fund the process. It was acknowledged that training for poultry meat inspectors and examiners would be required. It was suggested that the poultry industry could follow the example of the ostrich industry and appoint a service provider with the right infrastructure to provide independent meat inspection. This service provider could later apply for the appropriate accreditation. Unfortunately, DAFF rejected SAPA’s proposal for a trial to be run.

It was suggested that the industry use one food safety certificate for all customers, both eggs and broilers. The accreditation process is the biggest stumbling block for smaller producers wanting to enter into the formal market and it is hampering transformation.



13. CONCLUSION

The year 2016 has been merciless in its treatment of poultry farmers. The country experienced its lowest annual rainfall in 112 years through the previous season, reducing the maize crop to about half of its potential. About 5 million tonnes of maize will need to be imported before the 2016/2017 crop is harvested. Poultry feed prices have rocketed to 20-year highs, pushing up the cost of production for broiler and egg producers and substantially reducing profits. A rand weakened by political whims and policy uncertainty has not helped the farmers' cause.

Once again poultry imports, mainly from Brazil and the European Union (EU), reached record levels. Bone-in portions from the EU were sold at prices below production cost (in other words, dumped), which made it impossible for many smaller producers to survive. The situation was exacerbated by the media's focus on the practice of brining, creating negative perceptions in the minds of consumers. The announcement by the Department of Agriculture, Forestry and Fisheries (DAFF) of new brining regulations was, for many broiler producers, the final straw. The industry's repeated pleas for help have fallen on deaf ears and it is only talk of impending retrenchments that has finally spurred the government into action. It has to be hoped that a Government-led task team will find a way forward for the industry in 2017 – to stimulate growth and job creation in the South African poultry industry whilst still allowing *fair* trade with exporting nations.

While the egg industry does not face competition from imports, it has nevertheless endured another tough year. The high cost of layer feed and low egg farm-gate prices put margins under severe pressure and the retailers' percentage mark-up continues to grow. The major horizon issue for egg farmers in 2016 has been the cage-free revolution taking hold in the US, Canada, Europe and South America. It is likely that welfare issues will continue to dominate the egg industry press for some time to come and represent a challenge to industry survival and growth in this era of social media campaigning. The local industry has to find a way to grow domestic per capita consumption of eggs and export opportunities in order to contribute further to the agricultural economy.

Going into 2017, the political and economic climate in South African remains uncertain and weak. Consumer spending will be further constrained until food prices ease and employment levels rise. Government's Agricultural Policy Action Plan has identified poultry production as a key sector to grow the national economy and advance rural development but this plan seems to be at odds with trade agreements with the Americans and Europeans which remove any space for growth in the industry (especially for smaller businesses) and act as a disincentive to local producers to invest in human resources, machinery, research and development, or growth.

It is important to end on a positive note and happily, by the end of the year, many parts of the country had experienced good rainfall. This has given rise to a more positive agricultural outlook for 2017. Maize crops are expected to rebound by 80% to almost 14 million tonnes. This will ease feed prices for both egg and broiler producers and should support a steady improvement in profitability as the year goes on. Producers and consumers alike will be hoping for calmer waters - or at least a lull in the storm that was 2016.





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