



EGG INDUSTRY STATS SUMMARY FOR 2017

INDUSTRY OVERVIEW

1. Egg prices

According to Statistics SA (Stats SA), the average producer price for 2017, for all sizes, was R17.13/dozen compared to R15.34 for 2016; an 11.7% increase. The expected grade-out was used to calculate a weighted average of the sizes. The price does not take all the rebates into account but allows for discount offered off the list price.

Data collected from members of SAPA indicates that the average producer price for all sizes, net of discounts and rebates, was R14.99/dozen (cage eggs). This increased from R12.84 (+16.7%) in 2016. The percentage representation of the survey increased from 19.1% in 2016 to 19.9% in 2017.

The difference between the two prices (SAPA versus Stats SA) was -R2.14/dozen (-12.5%) which is an indication of the rebates taken by the retailers.

The retail price reported by Stats SA was R26.04/dozen large; a 5.8% annual increase. Stats SA's producer price for large eggs was R16.27/dozen. During the past five years, the mark-up on eggs increased steadily from 56% in 2013 to a high of 69% in 2016 and decreased to 60% in 2017 (Figure 1).

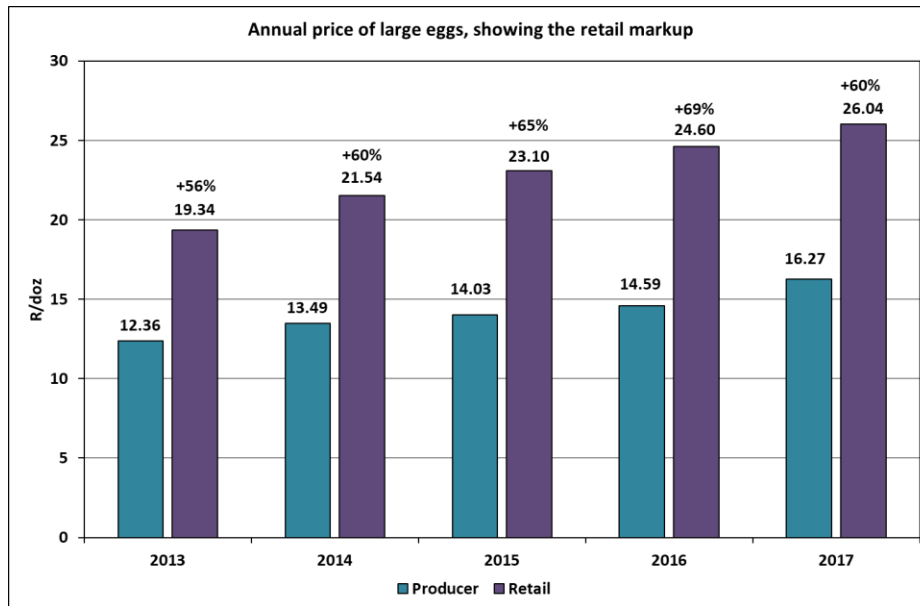


Figure 1: Annual producer and retail price of large eggs (source: Stats SA)

The average retail prices per province, recorded by Stats SA in October 2017, are shown in Figure 2. As expected, the prices were highest in Mpumalanga and the Western Cape due to shortages in supply. KwaZulu-Natal had the lowest average price for a tray of 18 eggs.

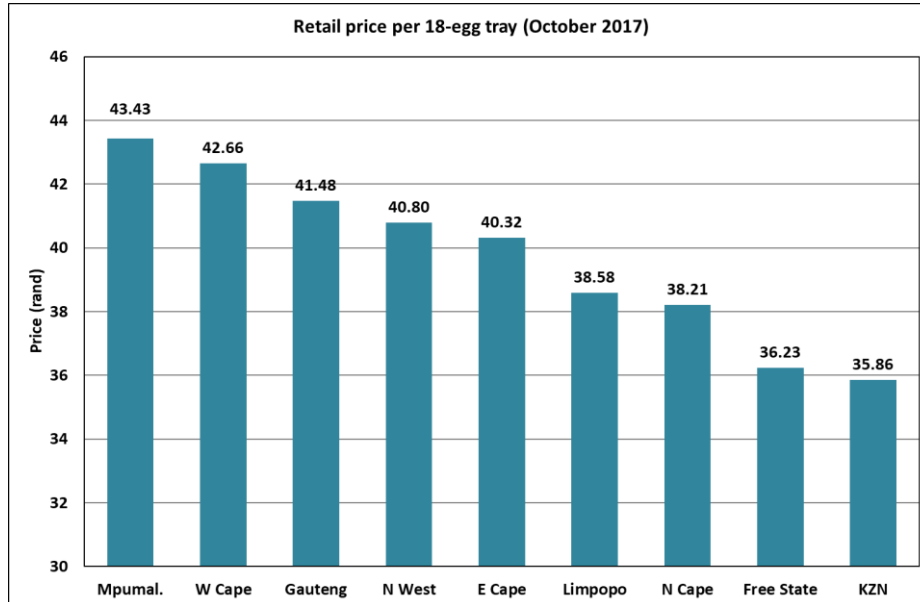


Figure 2: Average retail egg prices per province in October (source: Stats SA)

Price comparison with other protein sources

Eggs are still an affordable animal protein source in comparison with meat, costing R21.40/kg. The pork abattoir price for 2017 averaged R27.57/kg; an annual increase of 13.2%. Average beef abattoir prices were R39.26/kg (+26.2%) and R45.41/kg (+20.2%) for classes C2/C3 and A2/A3 respectively. The average broiler producer price was R21.44/kg.

2. International price comparison

The average price in the northeast region of the United States of America (USA) in 2017 for white, size large, was US\$1.07; for white, size medium, US\$0.85; and for brown, size large, US\$1.19 per dozen (source: Urner Barry). Expressed in rands, using the average exchange rate of R13.29 to the US dollar for the year 2017, white, size large, was R14.23; white, size medium, R11.31; and brown, size large, R15.82 per dozen.

The US Department of Agriculture (USDA) gives the average prices per dozen for the northeast region for extra-large, large and medium eggs as \$0.97, \$0.94 and \$0.71 respectively. These equate to R12.92, R12.52 and R9.41 per dozen respectively.

Figure 3 shows the movement in egg prices in the USA over the past five years. The soaring prices in the second half of 2015 were caused by egg shortages following the slaughter of over 40 million layers infected with HPAI. The steep drop in 2016 was caused by an oversupply of eggs.

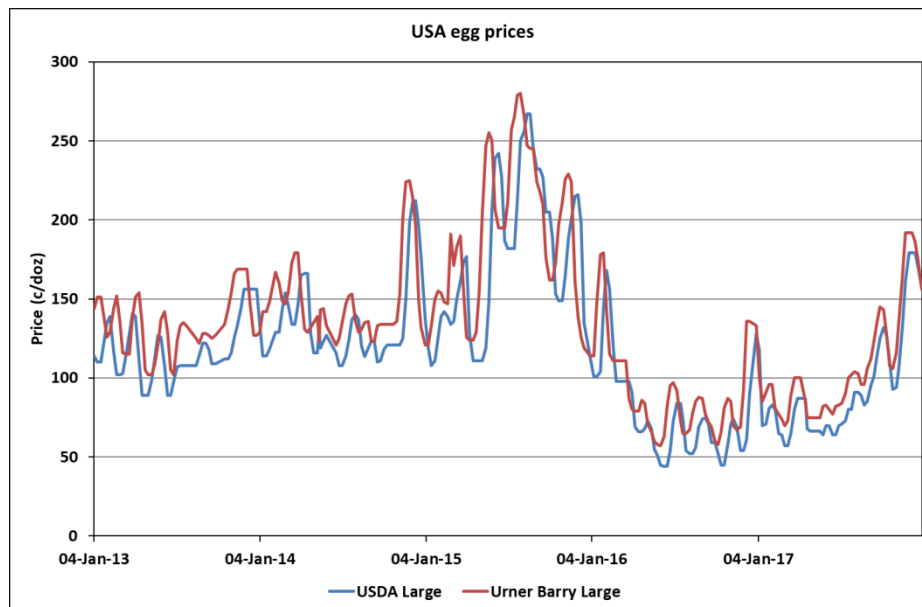


Figure 3: USA egg prices (source: USDA, Urner Barry)

3. Layer breeders

In 2017 there were an estimated 8 300 breeding hens in the grandparent operations producing layer parents, and between 232 000 and 306 000 breeding hens in the parent operations producing layers. There are no pure lines or great-grandparents in South Africa.

4. Day-old pullets

Day-old pullet placements increased by 1.2% in 2017 compared to the previous year, reaching a total of 24 302 300; an average of 467 630 per week (Figure 4). In terms of feather colour, 58.8% were silver and 41.2% were brown strains. In July an estimated 120 000 pullets died or were culled due to AI, thereby reducing the number of point-of-lays transferred to laying farms.

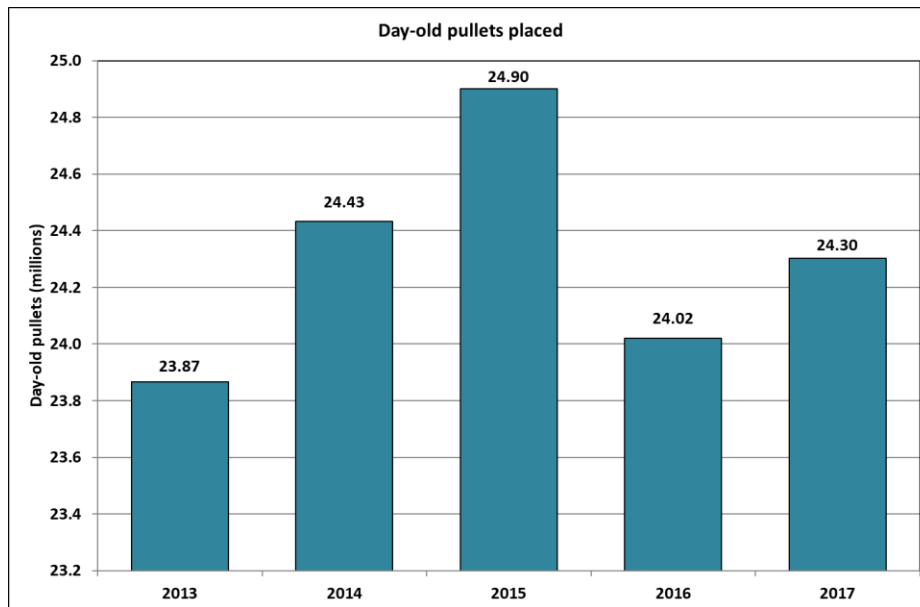


Figure 4: Trend in day-old pullets placed

5. Layer flock

The average hen number in 2017 was 23.16 million; a 6.6% decrease compared to the previous year (Figure 5). The biannual census figures show the effect of AI on the national flock more dramatically. At the end of May 2017, there were an estimated 24.16 million laying hens, but this figure had plunged to 21.33 million hens by 31 December – an 11.7% decrease. In response to reports from the Poultry Disease Management Agency (PDMA) and World Organisation for Animal Health (OIE) statistics, 4.69 million hens were taken out of the egg forecasting model between June and October.

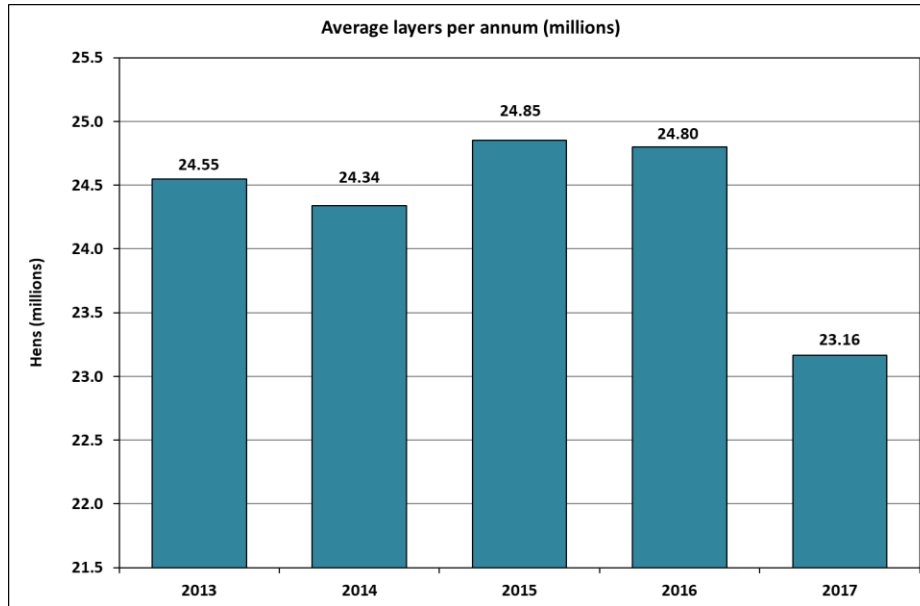


Figure 5: The national layer flock

6. Egg production

In 2017 egg numbers plummeted in line with hen numbers (Figure 6). The average number of cases produced per week was 378 940, a decrease of 27 830 cases (-6.8%) per week. Total egg production amounted to 19.75 million cases, or 592.6 million dozen eggs; a decrease of 7.1% compared to 2016.

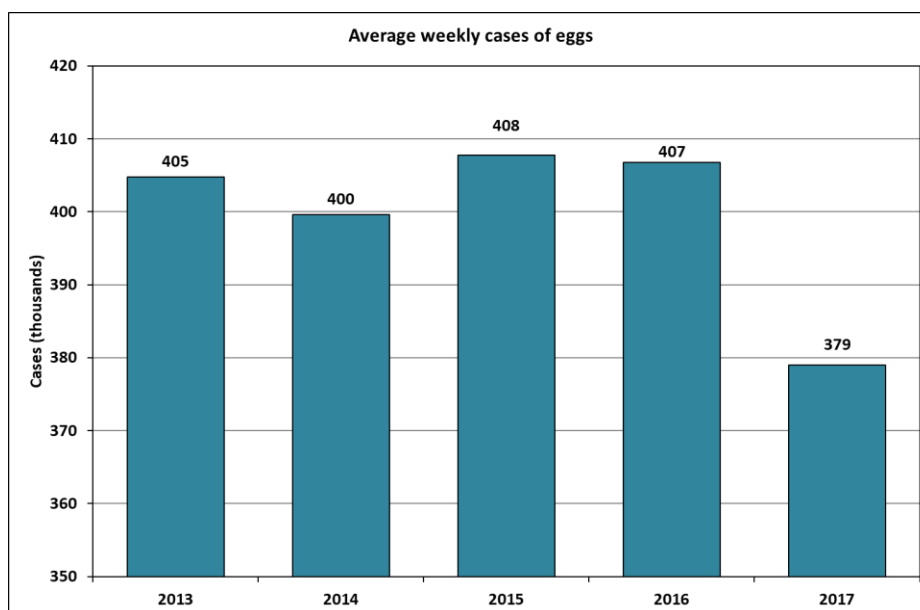


Figure 6: Cases of eggs produced

Of all the forecasted marketable graded eggs (Grade 1) that were sold in 2017, 9.0% were size medium, 44.1% were large, 42.8% were extra-large and 4.1% were jumbo.

Table 1 summarises bird numbers and egg production and shows the changes for 2017 compared to the previous year. Figure 7 illustrates the relationship between egg volume and producer price.

| TABLE 1: Bird and egg numbers for the egg industry (millions) | | | | | |
|---|------------|------------|-------------|--------|---------------|
| Year | DOP placed | LRP placed | Laying hens | | Cases of eggs |
| | Per annum | Per annum | Avg. no. | Depop. | Per annum |
| 2016 | 24.021 | 23.393 | 24.801 | 21.975 | 21.268 |
| 2017 | 24.302 | 23.583 | 23.165 | 20.313 | 19.753 |
| Change | 0.281 | 0.190 | -1.636 | -1.662 | -1.514 |
| % change | 1.17 | 0.81 | -6.60 | -7.57 | -7.12 |

DOP = day-old pullets LRP = layer replacement pullets

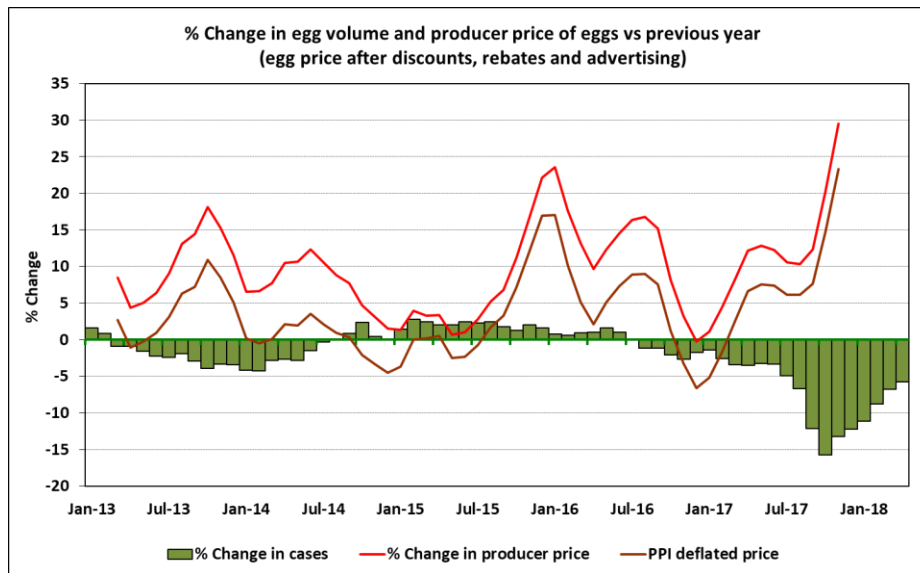


Figure 7: Percentage change in egg volume and producer price

Figure 8 shows the trends in the official Producer Price Index (PPI) and Consumer Price Index (CPI) since 2013, with December 2016 as base. In general, as input costs rise, producer prices tend to adjust automatically over time and this is reflected in changes to the PPI. However, this is not the case with eggs because the retailers engage in price suppression. In 2017 the PPI for eggs lagged behind the CPI for food until the demand for eggs exceeded the supply, causing the egg price to soar.

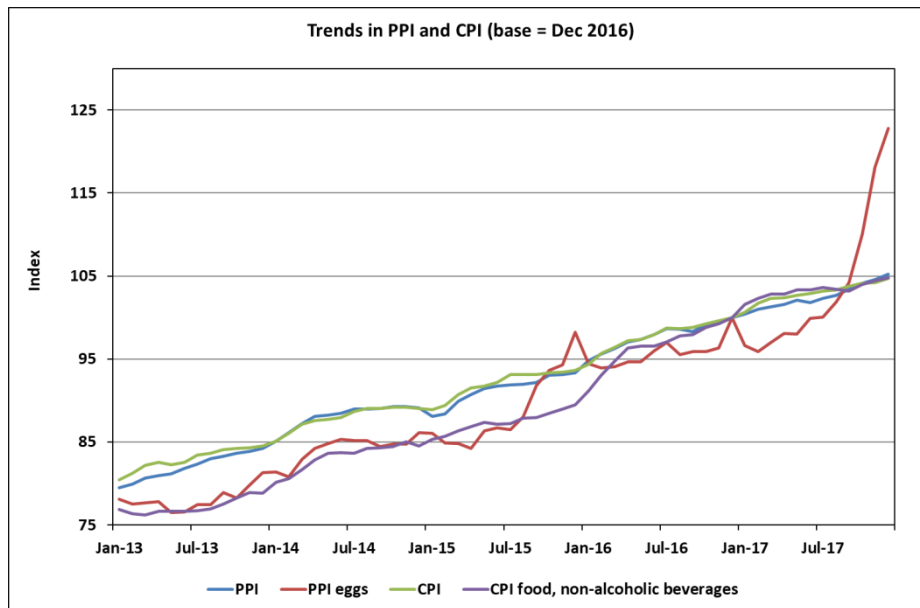


Figure 8: Trends in PPI and CPI (source: Stats SA)

7. Prospects for 2018

The number of point-of-lay pullets placed is expected to decrease by 2.5% during the first four months of 2018 compared to the same period in 2017.

An average flock of 22.3 million layers is projected for the first four months of 2018. This will be a decrease of approximately 2 million layers (-8.3%) compared to the same period in 2017. Consequently, egg production is expected to decrease by 8.1% (an average of 32 320 cases per week) to an average of 365 700 cases per week in the first four months of 2018.

8. Gross value

With a gross turnover of R10.77 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 5.6% compared to 2016, after an annual increase of only 3.4% the previous year. Eggs' share of the gross value of animal products was 7.9% and of all agricultural production 3.9%, down from 8.5% and 4.0% the previous year.

The total value at retail level was estimated to be R15.43 billion for 2017. About 593 million dozen eggs were sold in 2017 through various channels.

9. Input costs

The average layer feed price for 2017 was R3 457/tonne; an annual decrease of 15.0%. This followed annual increases of 23.7%, 12.0%, 4.8%, 0.5% and 18.9% in the previous five years. The layer feed price includes distribution but excludes medication, additives and VAT. The movement in the feed price is shown in Figure 9.

In 2017 the South African rand exchange rate averaged R13.29 to the US dollar, compared to R14.70 in 2016.

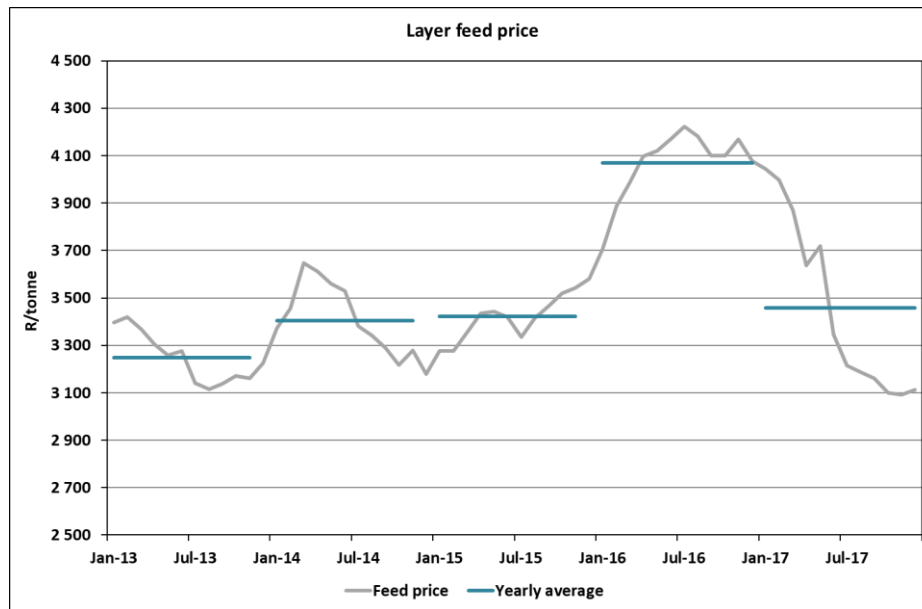


Figure 9: Layer feed price (source: SAPA)

10. Feed usage

The estimated feed usage for layers and pullets is summarised in Table 2. These figures exclude breeder rations.

| Year | Rearing | Laying | Total feed usage | |
|-----------------|-----------|----------------|------------------|---------------|
| | Per annum | Per annum | Per annum | Per week |
| 2016 | 140 811 | 1 034 185 | 1 174 996 | 22 473 |
| 2017 | 144 056 | 962 213 | 1 106 269 | 21 216 |
| Change | 3 245 | -71 973 | -68 728 | -1 256 |
| % change | 2.30 | -6.96 | -5.85 | -5.59 |

According to the Animal Feed Manufacturers Association (AFMA), national feed sales for the layer industry from 1 April 2016 to 31 March 2017 amounted to 885 676 tonnes; a 6.9% year-on-year decrease. Their national estimate, including feed manufactured by non-AFMA members, was 1 273 789 tonnes. SAPA's forecasting models predicted a feed consumption of 1 165 378 tonnes for pullets and layers for the same period; 108 411 tonnes less (-8.5%).

11. Consumption

The per capita consumption for 2017 was 128.2 eggs or 7.65 kg, compared to 141.4 or 8.39 kg in 2016 (source: SAPA) (Figure 10). While the population increased by a midyear estimate of 1.6% (source: Stats SA), the per capita consumption of eggs decreased by 9.4%. The reduced availability and increased price of eggs due to the AI outbreaks had a marked effect on consumption. Peak egg consumption occurred in 2012 at 152.5 eggs per person.

DAFF estimated the per capita consumption for 2017 as 124.7 eggs or 7.28 kg, allowing for a 3% loss.

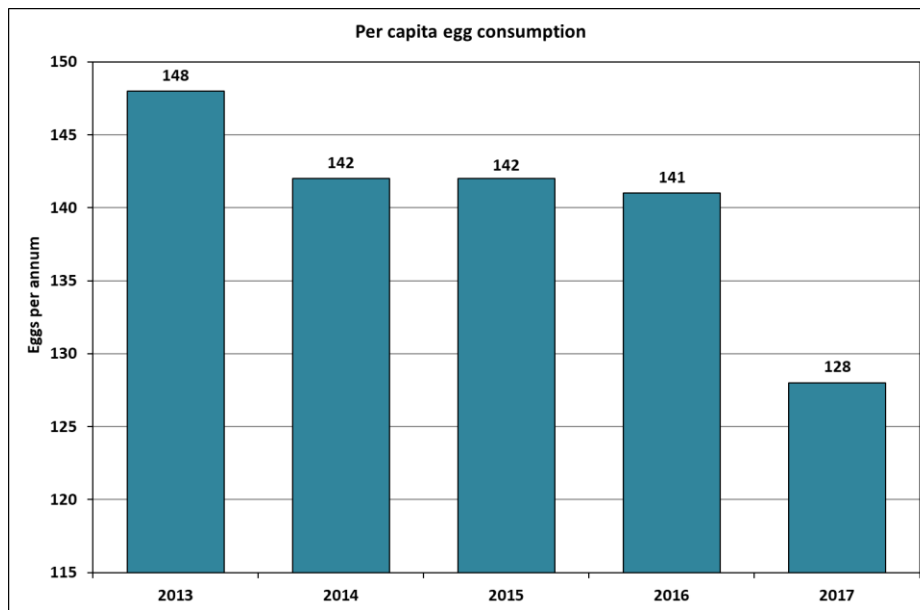


Figure 10: Per capita egg consumption in South Africa

The annual per capita consumption of eggs for the world's top egg-eating nations is shown in Figure 11. Mexico and Japan remain well ahead, with per capita consumptions of 371 and 331 eggs respectively. South Africa ranked 30th out of the 31 countries that submitted data to the International Egg Commission (IEC).

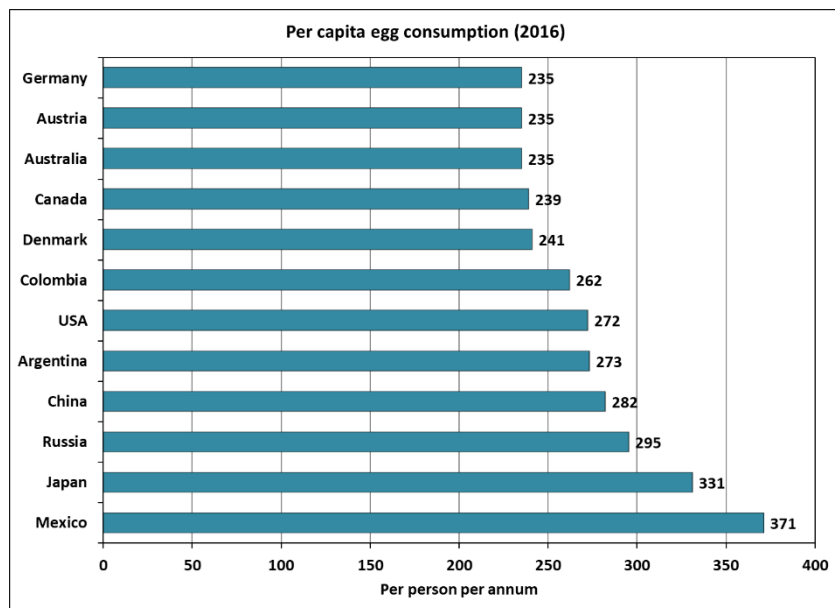


Figure 11: Global per capita consumption (source: IEC)

INDUSTRY TURNOVER

The estimated turnover from the egg industry is shown in Table 3. Point-of-lay sales are not included. Day-old pullet prices were not available from a sufficient number of producers to be able to publish an average price.

| Year | DOP industry | | Egg industry | | | | Total Turnover (R million) |
|----------|---------------|----------------------|------------------------|----------------------|---------------------|----------------------|----------------------------|
| | Price (R/dop) | Turnover (R million) | Producer price (R/doz) | Turnover (R million) | Cull price (R/bird) | Turnover (R million) | |
| 2016 | 8.63 | 207.3 | 12.84 | 8 192.4 | 27.84 | 611.8 | 9 011.5 |
| 2017 | | | 14.99 | 8 883.1 | 29.08 | 590.7 | |
| Change | | | 2.15 | 690.8 | 1.24 | -21.1 | |
| % change | | | 16.7 | 8.4 | 4.5 | -3.4 | |

DOP = day-old pullet

SMALL-SCALE EGG FARMERS

These statistics summarise quarterly surveys conducted by Silverpath Consulting. All prices exclude transport and VAT.

1. Hatcheries

In view of the fact that there were only two hatcheries that took part in the survey, it was not possible to report on the volumes and prices.

2. Day-old pullets

Between four and nine pullet rearers, from three different provinces, responded to the survey each quarter in 2017. The average representation of farms in each quarter was in Gauteng (three), Limpopo (three), and Free State (one). On average, 43% of the businesses were owned by females and 57% by males.

The average number of pullets being reared across all farms was 16 800; a 12.1% increase from 2016. The weighted average purchase price per day-old pullet was R8.78, compared to R10.17 in 2016; a 13.7% drop. In 2017, 59.3% of the capacity of the rearing facilities was used; this increased by 41.0% from 2016.

3. Pullet feed

All respondents bought their feed in bags in 2017. The average price paid per 50 kg bag for starter mash was R284.78 (a 4.1% drop from 2016); for grower mash R276.94 (-6.1%); and for developer mash R267.42 (-7.2%). The total quantity of bagged feed purchased during 2017 by pullet rearers was 409.1 tonnes, that is, an average of 1 090 bags per farmer. The total value of bagged feed purchases was approximately R1.966 million for 2017.

4. Point-of-lay sales

An average of 39.2% of the pullet rearers in 2017 sold point-of-lay birds, the remaining producers kept them for their own laying operations. This was a 49.8% drop in the percentage of respondents selling point-of-lays when compared to 2016. The total sales amounted to 57 500 birds for 2017. The weighted average selling price was R63.54 per bird; a 19.3% increase from 2016.

5. Point-of-lay hens

An average of 58 egg producers from all nine provinces responded to the survey each quarter in 2017. The average representations of farms in each quarter were in Gauteng (22), Limpopo (12), Northern Cape (7), Free State (6), Eastern Cape (1), and Mpumalanga, KwaZulu-Natal, North West and Western Cape (3 each). On average, 52% of the businesses were owned by females and 48% by males.

Ninety-four percent of egg producers bought point-of-lays, while the remaining 6% reared their own pullets in 2017. Seventy-seven percent of the hens were kept in battery cages, free-range farms represented 17%, and 5% of egg producers had both free-range and caged hens.

Small-scale farmers responding to the survey owned a total of 129 200 hens on average during the year. The weighted average purchase price per point-of-lay pullet was R68.73. This differs from the price of R63.54 shown in point 4 above because some of the birds were purchased from commercial pullet rearers not included in this survey. In 2017, 46% of the capacity of the laying facilities was used.

6. Layer feed

Eighty-seven percent of respondents bought their feed in bags in 2017, while the remaining 13% purchased in bulk. The average price for laying mash, excluding VAT and transport, was R254.84/50 kg bag. Compared to 2016, the feed price for the respondents only decreased by 4.4%. In total, 1 802.1 tonnes of bagged layer feed were purchased during 2017; approximately 620 bags per farmer. The average feed intake for these producers was 110.6 g/hd. The total value of bagged feed purchases was R8.649 million for the year.

The respondents buying in bulk bought 3 900 tonnes at a weighted average price of R4 263.20/tonne for layer mash. The average feed intake for the year was estimated to be 131.1 g/hd. The total value of bulk feed purchases was R15.869 million.

7. Egg sales

Total sales amounted to 2.996 million dozen in 2017, at a weighted average egg price of R13.98/dozen; a 6.1% annual increase. The average rate of lay, based on information provided, was estimated to be 72.5%. The total value of eggs sold amounted to R41.565 million.

8. Cull hen sales

In total 331 400 culls were sold in 2017 at a weighted average selling price of R36.41 per hen; an annual increase of 2.8%.

9. Difficulties

Below is a summary of the problems encountered by some of the small-scale egg farmers during the year:

- A need for training in record-keeping and poultry management;
- Poor production caused by, amongst other things, disease and mortalities, and fluctuating temperatures;
- A shortage of day-old-pullets and point-of-lay pullets, possibly due to the AI outbreak;
- Transport to deliver eggs;
- Distant location of farm from feed mill;
- The high cost of feed, medication and transport, resulting in very little profit;

- Irregular supply and high cost of water and electricity;
- Battling to source funding to improve current structures and expand;
- Unreliable market for eggs resulting in a lot of stock being wasted;
- High cost of purchasing point-of-lays;
- Struggling to find a reliable market for culls, or too many culls sold in the area forcing them to push their price down; and
- High crime rate in the area.

TRADE

1. Exports

During 2017, exports of chicken eggs for consumption totalled 9 984 tonnes, with a value of R157.6 million; a 55.8% increase compared to 2016. In addition, 3 669 tonnes of fertile chicken eggs were exported during the year, with an export value of R148.6 million (Table 4). Fertile chicken eggs exports dropped by 59.0% when compared to the previous year.

The destinations of egg exports (for consumption and fertilised) were Mozambique with 78.2% of the total exports, followed by Swaziland with 9.5%, Lesotho 5.8%, Zimbabwe 2.9%, and Namibia 2.0%. These five countries received 98.4% of South Africa's exports.

| Product (<i>Gallus domesticus</i>) | Value (R million) | Quantity (tonnes) | % of exports |
|---|--------------------------|--------------------------|---------------------|
| Fertilised eggs for incubation | 148.6 | 3 669.1 | 26.9 |
| Shell eggs (fresh and preserved) | 148.7 | 9 596.7 | 70.3 |
| Egg product (yolks, raw pulp, albumins) | 8.9 | 387.3 | 2.8 |
| <i>liquid egg product</i> | <i>1.5</i> | <i>49.8</i> | |
| <i>dried egg product</i> | <i>7.4</i> | <i>337.5</i> | |
| Total exports | 306.2 | 13 653.2 | 100.0 |

2. Imports

Total imports of chicken eggs, including shell eggs and egg products (liquid and dried), was 483.9 tonnes in 2017; 267.4 tonnes more (+123.5%) than in 2016. The egg product component amounted to 483.2 tonnes, of which 483.0 tonnes was dried egg product. An additional amount of 0.7 tonnes of preserved chicken shell eggs was imported.

The total value of the chicken egg imports was R39.5 million; a 46.8% increase compared to 2016. Italy was the main country of origin (44.8% of egg imports), followed by France (33.4%), and Denmark (19.6%).

THE GLOBAL EGG INDUSTRY

The IEC's *Annual Review* for 2017 summarised per capita consumption, production cost, and farm and retail prices of eggs for the member countries. In Europe, Denmark, Austria, Germany and Spain topped the list with per capita egg consumptions of 241, 235, 235 and 217 eggs respectively. Countries such as Mexico, Japan, Argentina, the USA, New Zealand, Australia, Canada and Turkey showed an annual growth in per capita consumption in 2016. The survey found that feed cost in battery cage systems ranged from 55% to 60% of total production cost. The average layer feed price in member countries peaked in 2008 and 2012. Thereafter, the annual peaks in feed price declined continually to reach moderate levels in 2015 and 2016.

An IEC study focussing on South America shows that the number of laying hens on that continent increased by 62.3% between 1994 and 2014. In the same period, egg production increased by 94.2%, indicating increased efficiencies brought about by the use of hybrid hens, modern housing facilities and high-quality feed. Brazil has the largest population of hens, but its share dropped from 68% in 1994 to 64.5% in 2014. The greatest relative growth occurred in French Guiana (+190.9%), Peru (+159.1%) and Colombia (+131.1%). The preferred method of housing is battery cages. South American countries play a very minor role in global egg trade (source: IEC *Annual Review*).

The IEC established the Avian Influenza Global Expert Group with the aim of assisting producers worldwide to combat the devastating effects of the virus. Their recent publications, which are available on their website, include the *Practical biosecurity checklist*, an AI vaccination assessment document, as well as regular egg industry updates on AI status and biosecurity practices.

In a big health scare, eggs contaminated with the banned insecticide fipronil were found in 24 out of 28 European Union (EU) countries and 40 countries in total worldwide by September 2017. Non-EU countries included the USA, South Africa, Russia, Hong Kong, Switzerland and Turkey. Fipronil is widely used to control ticks and fleas in pets but is moderately toxic to humans and is therefore banned for use in the food chain. To protect consumers, millions of eggs were pulled from EU supermarket shelves. The damage to the industry was estimated by EU officials at about €33 million, although a Dutch farmers' federation doubled that figure. Two Dutch men, who were running a cleaning company, were arrested in August. As a result of egg shortages, there were huge price increases in the Netherlands, Belgium, Germany and other affected countries. In South Africa, a container of contaminated egg powder was detained in Durban Harbour and the product destroyed.

The northern hemisphere experienced severe outbreaks of HPAI in the winter of 2016/17. Wild birds, swans, chickens, geese, ducks, pheasants and turkeys were affected by the highly contagious strain H5N8. Mass cullings took place in Germany, France, the Czech Republic and Slovakia. Outbreaks were also reported in Hungary, Sweden, Denmark, Croatia, Romania, Bulgaria and the United Kingdom (UK), as well as on the African continent in Algeria and Niger. A different virulent strain, H5N6, caused widespread panic and mass culling in China, Japan, India, Taiwan, the Philippines and South Korea. Unaffected countries such as Hong Kong banned the imports of eggs, egg products and frozen chicken in

the interests of public health. In China, trade in live poultry was stopped after cases of human bird flu infections of H7N9 were reported and in January 2017 alone, 79 people died. European free-range flocks were confined indoors in attempts to avoid contact with wild birds.

Vaccination against AI has been implemented in some countries. The Netherlands and Italy have been successful using limited vaccination programmes with a clear exit strategy. In contrast, China, Vietnam and Mexico have created an endemic situation and have to continue vaccinating in order to contain production losses, without hope, at this stage, of ever becoming free of the virus.

In January 2017 Uganda reported its first cases of H5N8 in wild, migratory and domestic birds. Neighbouring countries Rwanda and Kenya immediately banned imports from Uganda. The Democratic Republic of Congo experienced an outbreak shortly thereafter. On 2 June Zimbabwe confirmed the presence of H5N8 on a broiler breeder unit, where subsequently 7 000 birds died and 140 000 had to be culled. This sparked fears that the virus would cross the border via humans or wild birds, especially ducks, into South Africa. Limpopo veterinary authorities were immediately put on high alert. Botswana, Mozambique and South Africa halted trade in live birds, table eggs and chicken meat with Zimbabwe.

AVIAN INFLUENZA IN SOUTH AFRICA

The first case of HPAI in South Africa was confirmed on 19 June 2017, following the isolation of the H5N8 virus on a broiler breeder farm near Villiers in Mpumalanga. DAFF promptly imposed a countrywide ban on the sale of live hens until further notice. Concerns were expressed at the time about the effect of this ban on the informal economy as many township traders rely on these sales for their livelihood.

A second infection was confirmed on 26 June 2017, this time in commercial layers on a farm near Standerton, Mpumalanga. The farm was put under quarantine and no eggs were allowed to move off the premises. With fears of the disease spreading, SAPA, DAFF and agricultural organisations undertook to inform commercial poultry producers and backyard farmers of the need for heightened biosecurity measures. The general public was asked to be on the alert for sick or dead wild birds and to report incidents but to avoid contact with carcasses.

By the end of June, approximately 260 000 birds had been culled. Zimbabwe, Namibia, Zambia, Botswana and Mozambique suspended poultry imports from South Africa. This was considered a major blow to the industry because it could lead to the shedding of about 2 500 jobs. DAFF urged the country's trade partners to continue accepting poultry exports from registered compartments.

The ban on the sale of live birds was lifted, subject to certain conditions. Before any movement of cull hens could take place, a veterinarian or animal health technician needed to certify that the birds on the farm were healthy. Cull bird traders were obliged to register with the PDMA and poultry farmers were restricted to selling culls to registered buyers. This would permit traceability in the event of an HPAI

outbreak. The PDMA was tasked with developing a database of poultry producers and registered cull bird traders, and keeping records of all transactions involving the sale of live birds off the farm. DAFF Minister Senzeni Zokwana implored all stakeholders to comply with the registration and other requirements.

There were several calls for a vaccine to be made available, but experts agreed that it would not be in the long-term interests of poultry producers or the country. Vaccination can potentially create an endemic situation, affecting surveillance efforts and export certification. Vaccinated birds can still become infected and transmit the disease, but the symptoms are masked. Vaccination also has unfavourable trade implications, as some countries do not accept exports from a country that cannot produce an HPAI-free certificate.

Two more commercial layer farms in Gauteng and Mpumalanga were affected in July. The following month further outbreaks of HPAI were confirmed on two broiler breeder farms, two commercial layer farms and two backyard poultry premises in the same provinces, as well as on a commercial layer farm in KwaZulu-Natal. In addition, 11 ostrich, duck and egg producers in the Western Cape tested positive for the virulent virus. The EU subsequently banned imports of fresh ostrich meat. The country was reported to be destroying a million table eggs a day produced by hens placed under quarantine.

As fears of potentially huge economic losses increased, DAFF applied for more funding from Treasury to deal with the crisis, while officials met with company CEOs to discuss compensation guidelines and control measures. Industry representatives requested permission to import fertile eggs to close the supply gap, after a layer breeder farm was infected and had to be culled. A task team was established to do a scientific analysis on vaccination as a viable option.

Early in September, cases of H5N8 were reported in hobby birds in North West and in broiler breeders in the Eastern Cape. The Western Cape suffered the greatest losses, however, putting its population of 28 million chickens at risk of decimation. By mid-September, 17 chicken farms in the province had been confirmed as being infected with HPAI, 46 ostrich farms were under quarantine, and more than a million birds had died or been culled. At the same time, DAFF confirmed it would compensate farmers for culling uninfected birds, but not for mortalities or sick birds, the cost of disinfection, or production losses. Chicken traders continued to be affected by the shortage of healthy cull birds in some areas. By the end of September, a joint operations centre had been established in the Western Cape, amidst reports of 36 confirmed cases, 70 quarantined ostrich farms, 2 million dead or culled birds, and projected production losses of R800 million. The wellbeing of retrenched farm workers was a priority for the provincial government. Egg shortages started to take effect because of a 70% reduction in supply. Despite increased control measures, the virus continued to spread rapidly in the Western Cape, bringing the total number of confirmed cases for all types of poultry to 64. There were no new infections on commercial farms after 18 October. It was estimated that at least 1 000 jobs had been lost due to the devastation caused by the virus.

SAPA engaged the services of BFAP to assess the economic impact of the disease, amongst concerns that it would take six months or longer to repopulate flocks, and that some producers would never recover. BFAP was also asked to do a study on the impact of vaccination.

The onset of warmer weather curbed the spread of the disease but, at the same time, the prospect of national egg shortages loomed. With 25 layer farms across the country out of production, an estimated 3.7 million eggs a day were taken out of the market and retail prices reportedly rose by 15%.

It was some consolation to hear that funders such as the Land Bank and the Industrial Development Corporation have offered low-cost loans to assist with the restocking of farms and enhancements to biosecurity. Furthermore, DAFF announced in October that R40 million had been granted by Treasury to support affected farmers. In addition, the Department of Labour has initiated a scheme to discourage farmers from retrenching staff. If employees are retained, the government will pay 75% of their salaries for a period of up to six months.

EMPLOYMENT

The estimated number of employees in the egg industry for 2017 is shown in Table 5. The employment model bases its predictions on the average number of laying hens in South Africa, calculating the number of layer breeders required to produce the commercial layer flocks. Assumptions are made on the staffing requirements per unit in the vertically integrated industry.

The effect of AI on employment numbers is difficult to quantify, but the total number of employees is estimated to have decreased by 505 (-6.3%) compared to 2016.

| Number of employees | Workers | Supervisors | Managers | Total |
|---------------------|--------------|-------------|------------|--------------|
| Grandparent rearing | 14 | 6 | 3 | 23 |
| Grandparent laying | 6 | 6 | 3 | 15 |
| Parent hatching | 33 | 6 | 3 | 42 |
| Parent rearing | 103 | 20 | 5 | 128 |
| Parents | 56 | 15 | 5 | 76 |
| Pullet hatching | 192 | 24 | 6 | 222 |
| Rearing | 1 429 | 136 | 34 | 1 599 |
| Laying | 1 622 | 154 | 77 | 1 853 |
| Packing | 2 019 | 296 | 99 | 2 414 |
| Processing | 66 | 15 | 7 | 88 |
| Support staff | 894 | 0 | 149 | 1 043 |
| Total | 6 434 | 678 | 391 | 7 503 |