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CORPORATE ACCOUNTABILITY AND THE EGG INDUSTRY IN SOUTH AFRICA

ANIMAL LAW REFORM
SOUTH AFRICA

SECTION II

CHICKEN AND EGG: INDUSTRY COMPONENT

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THE NUMBERS: SOUTH AFRICA 2021

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CHICKEN AND EGG DATA

DID YOU KNOW?

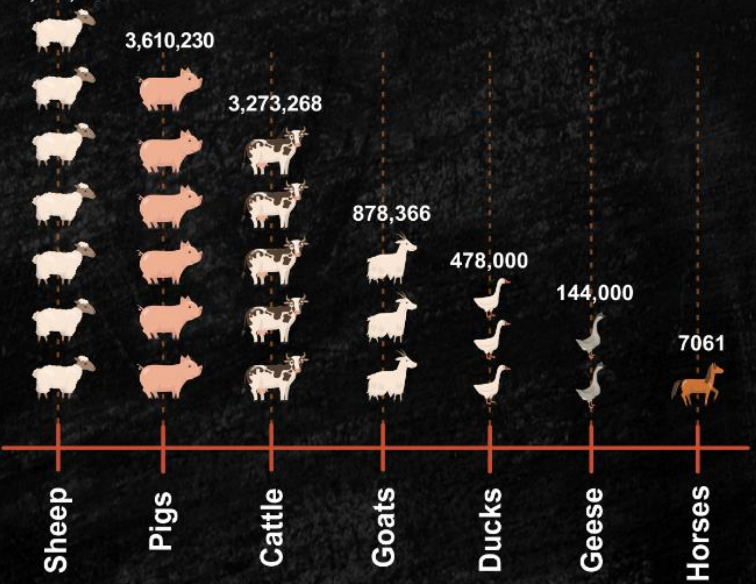
Chickens are primarily used in two industries: the broiler industry (chickens killed for their meat) and the egg industry.

THE MEAT INDUSTRY

THIS IS HOW MANY ANIMALS WERE KILLED FOR MEAT IN SOUTH AFRICA IN 2021[1]

999,478,000 CHICKENS

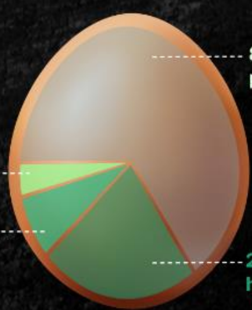
COMPARED TO:



Just one facility alone in South Africa claims to process approximately 700 000 live birds per week (that is around 100,000 chickens killed per day)[2]

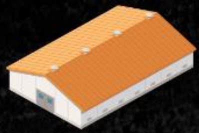
Does not include all types of animals killed for their meat
1. https://www.fao.org/faostat/en/#data/QCL
2. https://sangiro.co.za/
3. South African Poultry Association Annual Report 2021 available at https://www.sapoultry.co.za/wp-content/uploads/2022/06/SAPA-ANNUAL-REPORT-2021.pdf [Based off of reported 706,700,000 dozen eggs per year 2021]
4. Ibid
5. Ibid
6. Supra 3
7. Supra 3
8. http://www.dalrrd.gov.za/index.php/publications/45-statistics-and-economic-analysis/66-statistical-information?download=690:abstract-2022
9. Ibid

THE EGG INDUSTRY



PRODUCTION OF EGGS[7]

1990 / 1991
232,000 tons
2020 / 2021
549,000 tons



HUMAN CONSUMPTION OF EGGS[8]

1990 / 1991
214,000 tons
2020 / 2021
515,000 tons

COST OF EGGS[9]

1990 / 1991
186
2020 / 2021
1,189.15

Grade 1 large eggs per dozen, Weighted average price

SECTION II: CHICKEN AND EGG: INDUSTRY COMPONENT

PART A: CONTEXTUALISING THE EGG INDUSTRY

I. INTRODUCTION AND BACKGROUND

As per our Glossary, reference to the "Egg Supply Chain" means "Every step and role-player involved the production of eggs for consumption by customers from fertilisation to plate, including the steps taken in relation to the supply of eggs by cage and/or feed manufacturers, egg producers, wholesalers or retailers, hotel chains, fast food chains, restaurants, as well as Industry Associations, and Relevant Authorities."

A slightly broader term is also utilised throughout this Initial Report, being the "Egg Industry", which connotes "Any and all economic activity concerned with the Egg Supply Chain".

This Industry Component contains an overview of the Egg Supply Chain and Egg Supply Industry in South Africa and background to contextualise certain important aspects of how it operates and its impact on different stakeholders.

As one of South Africa's most important agricultural sub-sectors worth billions of rands, it is not surprising that the Poultry Industry, including the Egg Industry is very well organised. SAPA is the body representing the interests of the industry and has been around for over 80 years. Further information on this body is contained in the Animal Welfare Pillar in Section III. The Egg Industry has a value of ZAR 11.44 billion with a 3.1% share of total agriculture production in South Africa making this industry a key space of engagement.[1] The Egg Industry consists of both formal and informal markets.

While there are many different role-players involved in the Egg Industry, there are several major players with integrated structures, making them very powerful entities with a lot of influence. For example, Nulaid, the egg-layer division of Quantum Foods, is the largest egg producer in South Africa and the only national producer. Emerging egg producers constitute only 1.0 % of the industry.[2]

After embarking on this Project, it became apparent that it was necessary to try to understand and contextualise the Egg Industry as well as the relevant role-players. This Section contains some initial information about the Egg Industry largely sourced from SAPA and DALRRD, as well as a Stakeholder Mapping process that ALRSA undertook as part of the Project. The Stakeholder Mapping process is discussed further in Section IV.

1 South African Poultry Association 2021 Industry Profile.
2 https://quantumfoods.co.za/eggs/.

Under heading II, we describe the animals implicated in the Egg Industry; under heading III, we discuss the different types of eggs and egg production systems; under heading IV, we provide an overview of the South African industry. The Research Component as contained in Section III and the Stakeholder Component in Section IV should be considered against the background of this Industry Component.

II. CHICKENS

Before providing statistical and other information on the Egg Industry, including about the final product involved, eggs, we discuss the animals directly implicated – chickens.

POULTRY INDUSTRY CLASSIFICATIONS

Chickens and other birds in the Poultry Industry are predominantly used in one of two ways: those who are killed for their meat (referred to as "**Broilers**") and those used in the Egg Industry (referred to as "**Layers**" or "**Laying Hens**" or similar terms, although different terms are used depending on how old the animals are). The broiler industry is not the focus of this Initial Report, other than for comparative or contextual matters, as the focus is the Egg Industry. However, many of the same major role-players are active in both the Egg Industry and broiler industry. In South Africa, approximately 74% of the birds are killed for their meat, while 26% are used as Layers.[3]

LIFE CYCLE AND TERMS

A summarised understanding of different stages of the life cycle of and activities relating to chickens in the Egg Industry is included below:

EGG:

- NON-FERTILISED EGG: Generally, end up for distribution in various forms by different suppliers (retailers, restaurants, hotels, etc.) and middlemen (wholesalers and manufacturers using eggs in ingredients)
- FERTILISED EGG: Sent to hatcheries to be incubated. Unhatched eggs which contain live embryos are macerated (i.e. shredded or ground up). Otherwise, eggs are hatched after +/- 21 days of incubation to become "Chicks".

CHICKS / PULLETS:

[Hatcheries→Hatched]

- BROILERS: These birds are sent to broiler facilities where they are grown and killed for meat. *This cycle is not further discussed.*
- EGG-LAYERS: These birds are sent to Layer Farms to be used in the Egg industry. More specifically, day old Pullets are reared on layer replacement farms for 21 weeks after which they are transferred to "laying farms".

SEXING:

[Sent for sexing and sorting]

- MALE CHICKS: Due to the fact that they are deemed useless in the Egg Industry, male Chicks are killed shortly after birth / sexing, including through maceration / grinding up (shredded) alive in a

[3] SAPA Annual Report 2021.

macerator; gassed; ground alive in an auger; or sometimes thrown into plastic containers and suffocated or even dumped.

- FEMALE CHICKS: Pullets and ultimately "Layer Hens" and are generally subjected to a life of Cruel Practices on Layer Farms.

PULLETS: Young hens less than 1 year old who are not yet physically mature enough to lay eggs. Once they reach a certain age (generally 52 weeks or 1 year), they become Laying Hens.

EGG LAYERS / LAYING HENS: These birds grow to reach egg laying age at around 21 weeks. They live their short lives as Layer Hens – in cages and forced to lay eggs. Their eggs are consistently taken away from them. They generally have a +/- 20-month lifespan laying 300 eggs annually and cage confinement throughout their lifespan until they become are considered to be "spent".

SPENT HENS / END OF LAY: Once Layer Hens are of no more useful to the Egg Industry / their productivity drops to unprofitable levels:

- CULLING OPERATIONS: They are sent to abattoirs or culling operations to be slaughtered and their bodies processed for secondary products; or
- LIVE BIRDS SOLD: They are sold from spent hen depots in townships, *peri-urban*, *and rural areas*, at auction, or in other areas / for other uses involving their consumption.

THE SEQUENCE OF SUFFERING

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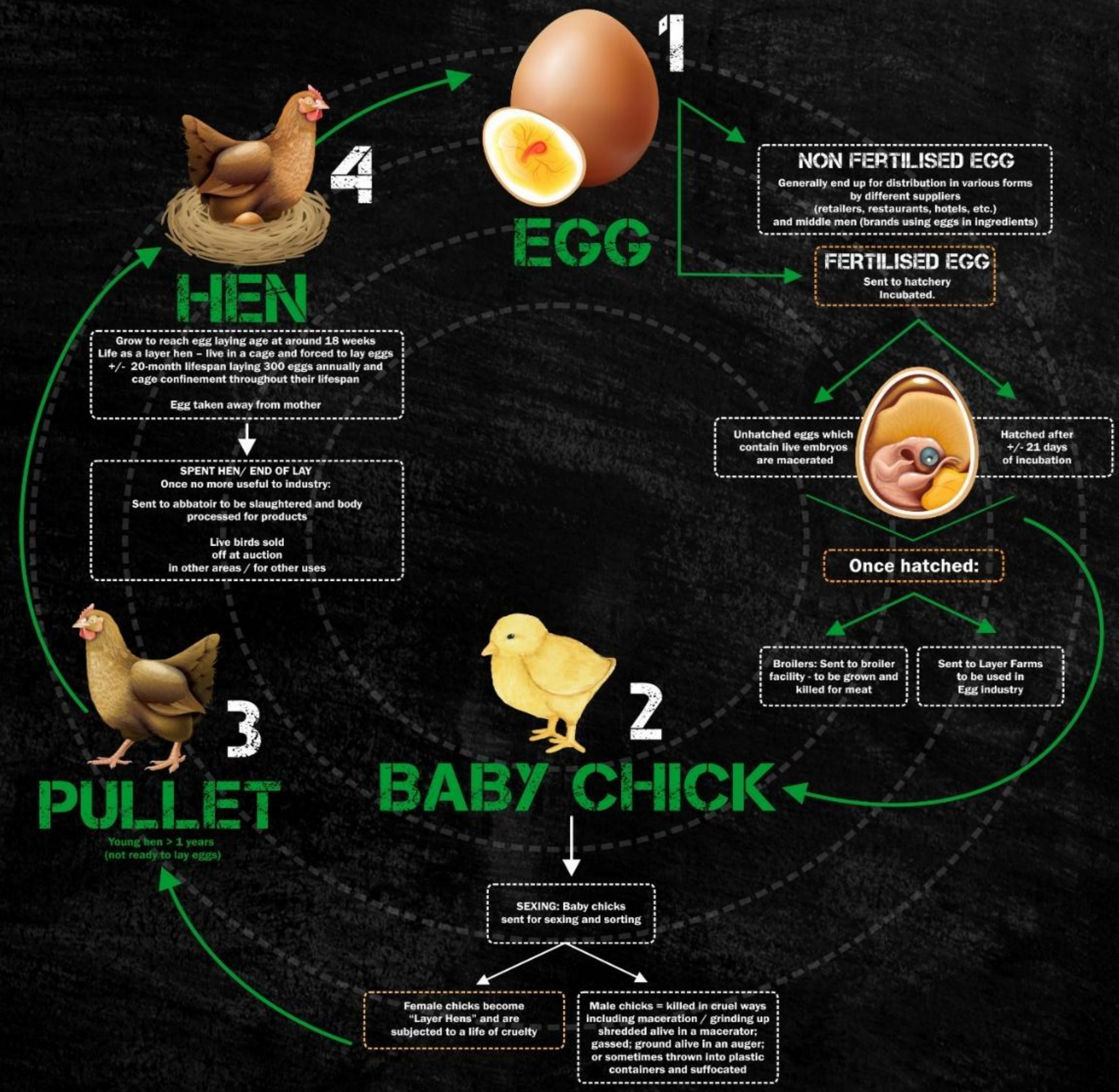
LIFE CYCLE OF CHICKENS IN THE EGG INDUSTRY IN SOUTH AFRICA



III. EGGS

TYPES OF PRODUCTS

Within the Egg Supply Chain various products (in addition to whole eggs) are produced, including but not limited to powdered and liquid eggs. This Initial Report and the Project focuses predominantly on whole eggs including those sold and utilised for sale and consumption by the public. However, other forms of eggs are important and must be considered for future research.

TYPES OF EGGS

GRADE / QUALITY

Eggs in South Africa are classified according to grades and size. Eggs that do not comply with the standards for grading are not presented for sale.[4]

Agriculture and Agri-Food regulations define three quality grades that apply to eggs for sale to customers, based on their appearance, condition, and quality of the egg's shell, egg white, and yolk. These are: [5]

- Grade A or 1: sold at retail markets for household use (among other differences, this grade has certain specifications in relation to its yolk, egg white haugh value, air cell depths and other characteristics)
- Grade B or 2: used mostly in bakeries
- Grade C or 3: sent to egg breakers for processing (eggs are sent to egg breakers where they are broken and sold as pulp, dried eggs to industrial bakers or used as emulsifiers in mayonnaise production).

SIZE

Only Grade A eggs are sized according to the weight of each egg: [6]

- Jumbo: at least 70 g
- Extra Large: at least 63 g
- Large: at least 56 g
- Medium: at least 49 g
- Small: at least 42 g
- Pee Wee: less than 42 g

The multitude of egg uses in the Egg Industry and profit produced entails a range of actors involved at the various stages in the Egg Supply Chain. Those involved in egg production use a range of production systems.

4 See for example Regulations regarding the Grading, Packing and Marking of Eggs intended for Sale in the Republic of South Africa 2020.

5 DALRRD, A Profile of the Egg Market Chain 2021. http://webapps1.daff.gov.za/AmisAdmin/upload/Egg%20Market%20Value%20Chain%20Profile%202021.pdf.

6 Ibid.

PRODUCTION SYSTEMS

Eggs are differentiated according to the systems pursuant to which they were produced, as follows:[7]

Organic Free Range

These eggs are produced by free-range hens that are fed on grains and pulses that are grown without pesticides, chemical fertilisers or any other genetically engineered products

Omega 3-enriched

Omega 3 fats, which are excellent for brain functioning, the immune and nervous systems and healthy hearts, are found in oily fish. The hens that lay these eggs are fed salmon oil as part of their diet. Omega 3-enriched eggs are not necessarily free range.

Free range

The chickens that lay these eggs are exposed to sunlight and grass pastures. They have room to scratch, flap and bath in the dust. Their diet is not necessarily vegetarian; it could include insects or fishmeal.

Barn

These eggs are produced by chickens that live inside , but are not kept in cages. Barn eggs are laid by chickens that are fed a

Grain Fed

Grain-fed chickens do not eat commercial feed, which can include fish and chicken meal. These eggs are not free range, and not necessarily barn. The chickens may be kept in cages.

Commercial

These are the cheapest eggs to buy, and so make up the bulk of the eggs consumed in the country. The chickens are kept inside, in cages. They are fed with meal, which includes commercially farmed grains and pulses and processed fish and/or chicken meal. Electric lights are kept on much of the time to encourage the chickens to lay.

[7] http://webapps1.daff.gov.za/AmisAdmin/upload/Egg%20Market%20Value%20Chain%20Profile%202021.pdf.

IV. SOUTH AFRICAN MARKET, ECONOMICS AND IMPACTS

According to SAPA, **the Poultry Industry is the largest single contributor to the agricultural sector in South Africa**. In 2021, approximately 16.6% of the total agricultural gross value and 39.9% of animal product gross value stemmed from poultry production. The 16.6% contribution from poultry products breaks down into 13.6% from poultry meat and 3.05% from eggs. [8]The gross value of egg production for 2021 was recorded at R11.44 billion (+ 0.9 %).[9]

There are numerous actors involved which vary greatly: from single small-scale rural farmers to international and multinational corporations selling eggs as products in global networks. There is an informal sector and formal, commercialised sector. [10]

The Egg Industry's nearest competitor, the beef industry, contributed 11.5% to turnover of all agricultural production and 27.5 % of animal products. The total gross value of animal products was R156.51 billion and the total gross value of agricultural products was R374.81 billion in 2021. Total animal products contributed 41.8 % to the gross value of total agricultural products.[11]

LOCAL MARKET: PRODUCTION AND CONSUMPTION

There is a significant number of producers spread across most provinces. **About 50% or more of the eggs produced are channelled through the formal markets, with 40% to 50% being sold on the informal markets.**[12]

South African per capita consumption of eggs reached the highest level ever during 2020, the first year of the COVID-19 pandemic (159 eggs per person). [13]

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8 South African Poultry Association 2021 Industry Profile. https://www.sapoultry.co.za/wp-content/uploads/2023/01/2021-Industry-Profile.pdf.
9 Ibid.
10 Ibid.
11 Ibid.
12 https://www.farmersweekly.co.za/agri-business/agribusinesses/the-future-of-sas-egg-producers/.
13 South African Poultry Association 2021 Industry Profile. https://www.sapoultry.co.za/wp-content/uploads/2023/01/2021-Industry-Profile.pdf.

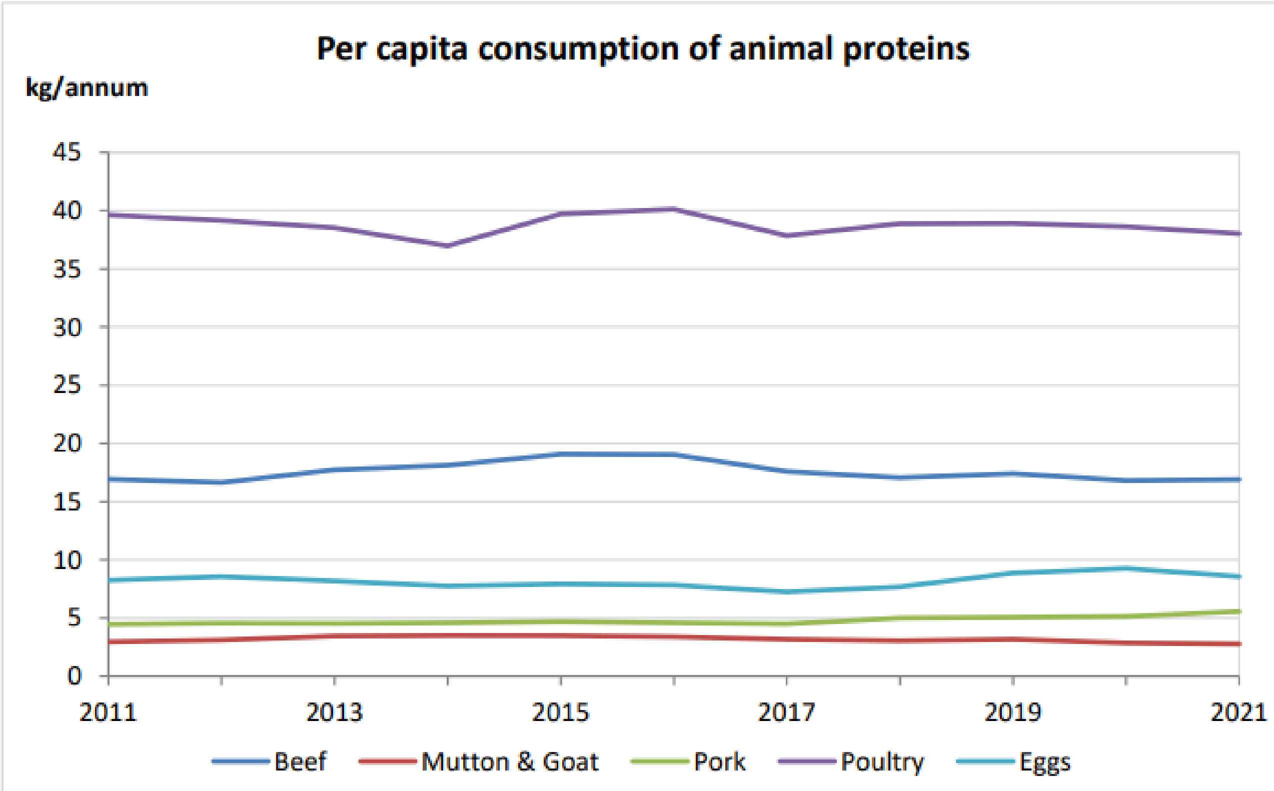

Figure 1. *Per capita consumption of protein sources from 2011 to 2021 (DALRRD)* [14]

In terms of tonnage, more eggs and poultry products were consumed in 2019 than the combined total tons of beef, pork, mutton and goat meat products consumed for the same period (2.9 million tons, compared to 1.5 million). [15]

South Africa is one of the largest producers of eggs in Africa, producing just under 66% of the eggs out of the SADC region in 2020. [16]

14 South African Poultry Association 2021 Industry Profile. https://www.sapoultry.co.za/wp-content/uploads/2023/01/2021-Industry-Profile.pdf.

15 Ibid.

16 SAPA Annual Report 2021.

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

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

[17]

EXPORT MARKET

South Africa is required to meet standards for the export of its products outside of the country. Imports in South Africa are largely exchange rate driven while exports are mainly affected by sanitary rules that the European Union ("**EU**"), United States of America ("**USA**"), and others apply.

17 SAPA Annual Report 2021.

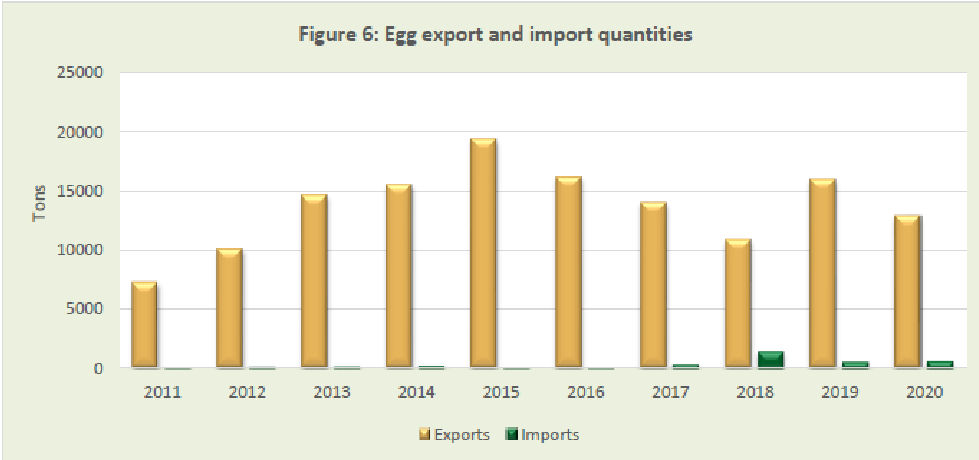

Figure 6: Egg export and import quantities

Source: Quantec Easydata [18]

Generally, South Africa's egg exports are much higher than its imports, which makes the country a net exporter of eggs. Approximately 90% of the exports were of eggs in shell, whilst highest imports are mainly dried eggs (90%). Most of South Africa's eggs are exported to Mozambique.[19]

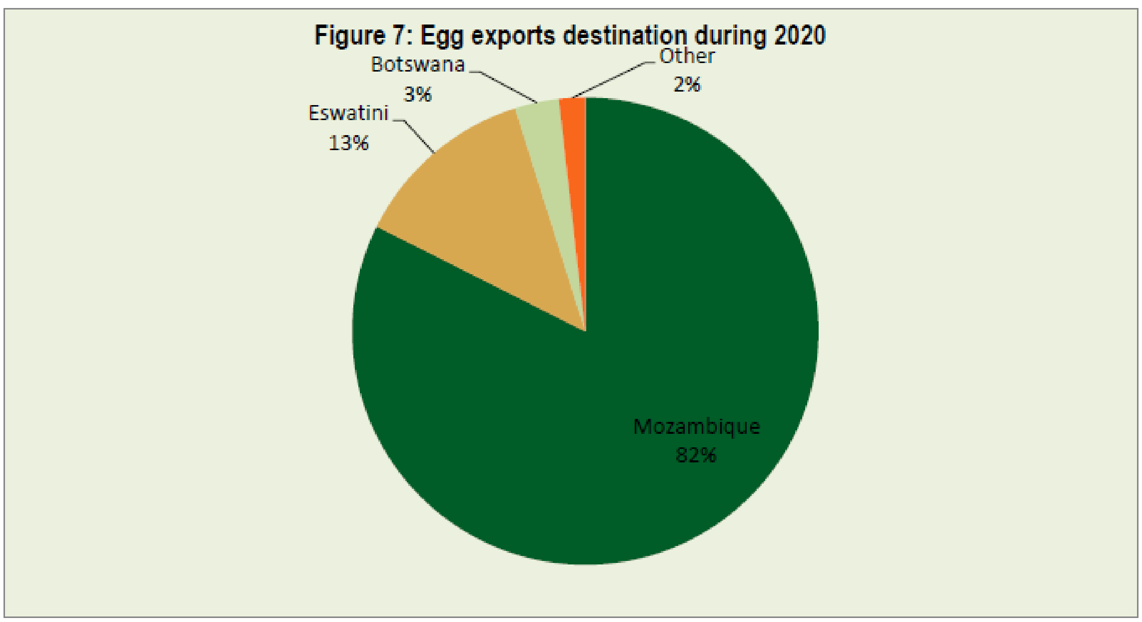

Figure 7: Egg exports destination during 2020

Source: Trade map, 2020 [20]

JOBS

18 South African Poultry Association 2021 Industry Profile. https://www.sapoultry.co.za/wp-content/uploads/2023/01/2021-Industry-Profile.pdf.

19 Ibid.

20 Ibid.

It is estimated that the Egg Industry provides direct and indirect employment to over 110 000 people; is the second largest consumer of maize in the country; and supports many peripheral businesses (including the feed industry) and those downstream in the value chain.[21] Worker's rights are further discussed in Social Issues and Rights Pillar in Section III below.

COST / ECONOMICS

The average producer price of eggs in 2021 was R22.75 per kg (R16.68 per dozen; all sizes; SAPA). In 2021 the egg producer price increased by 14.1 % compared to the 2020 price (R19.93). [22]

Feed accounts for approximately 70% of an egg producer's input costs. [23]

According to SAPA, eggs remain the cheapest animal protein available to consumers, with per capita consumption of 159 eggs per person in 2020.[24]

"Externalities" are not factored into these calculations around price. An externality is a side effect or consequence of an industrial or commercial activity that affects other parties without this being reflected in the cost of the goods or services involved, for example the environmental costs.[25]

With the promotion and progressive move by commercial poultry producers towards the adoption of industrialised farming methods, the commercial Egg Industry operates at scales only possible through intensive Layer Hen farming.[26]

In the 2019/20 production period, the gross value of commercial egg production in South Africa was just above R10.4 billion.[27] In that period, three egg producers (Eggbert, Nulaid and Highveld) dominated the market, commanding around 51% collectively.[28]

21 South African Poultry Association 2021 Industry Profile. https://www.sapoultry.co.za/wp-content/uploads/2023/01/2021-Industry-Profile.pdf.
22 Ibid.
23 Ibid.
24 Ibid.
25 Rocío Abín, Amanda Laca, Adriana Laca, Mario Díaz. **Environmental assessment of intensive egg production: A Spanish case study**. *Journal of Cleaner Production*, 2018; 179: 160 DOI: 10.1016/j.jclepro.2018.01.067.
26 https://www.animallawreform.org/wp-content/uploads/2021/12/LiveKinder-Farm-Animal-SA-Report-1.pdf.
27 A Profile of the South African Egg Market Value Chain 2021 Annual Report published by the DALRRD. https://www.dalrrd.gov.za/doaDev/sideMenu/Marketing/Annual%20Publications/Egg%20Market%20Value%20Chain%20Profile%202021.pdf.
28 A Profile of the South African Egg Market Value Chain 2021 Annual Report published by the DALRRD. https://www.dalrrd.gov.za/doaDev/sideMenu/Marketing/Annual%20Publications/Egg%20Market%20Value%20Chain%20Profile%202021.pdf.

INDUSTRY CHALLENGES AND THREATS

Challenges identified by SAPA in the recent profile include: "bird welfare legislation, plant-based alternatives to eggs and broiler meat, regulations governing the use of antibiotics in production, and environmental sustainability issues".[29]

Additional challenges are highlighted in Section III of this Initial Report, including in relation to the cost of feed, load shedding, zoonotic diseases and others.

Threats identified in the Who Owns Whom Industry Report: The Poultry and Egg Industry in South Africa 2021 ("**WOW Report**") include: competition from cheap imports; diseases and losses; increasing production costs, including rising electricity costs; statutory compliance costs; and increasing foreign competition for local export markets.

[29] South African Poultry Association 2021 Industry Profile. https://www.sapoultry.co.za/wp-content/uploads/2023/01/2021-Industry-Profile.pdf.

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