HPAI in South Africa

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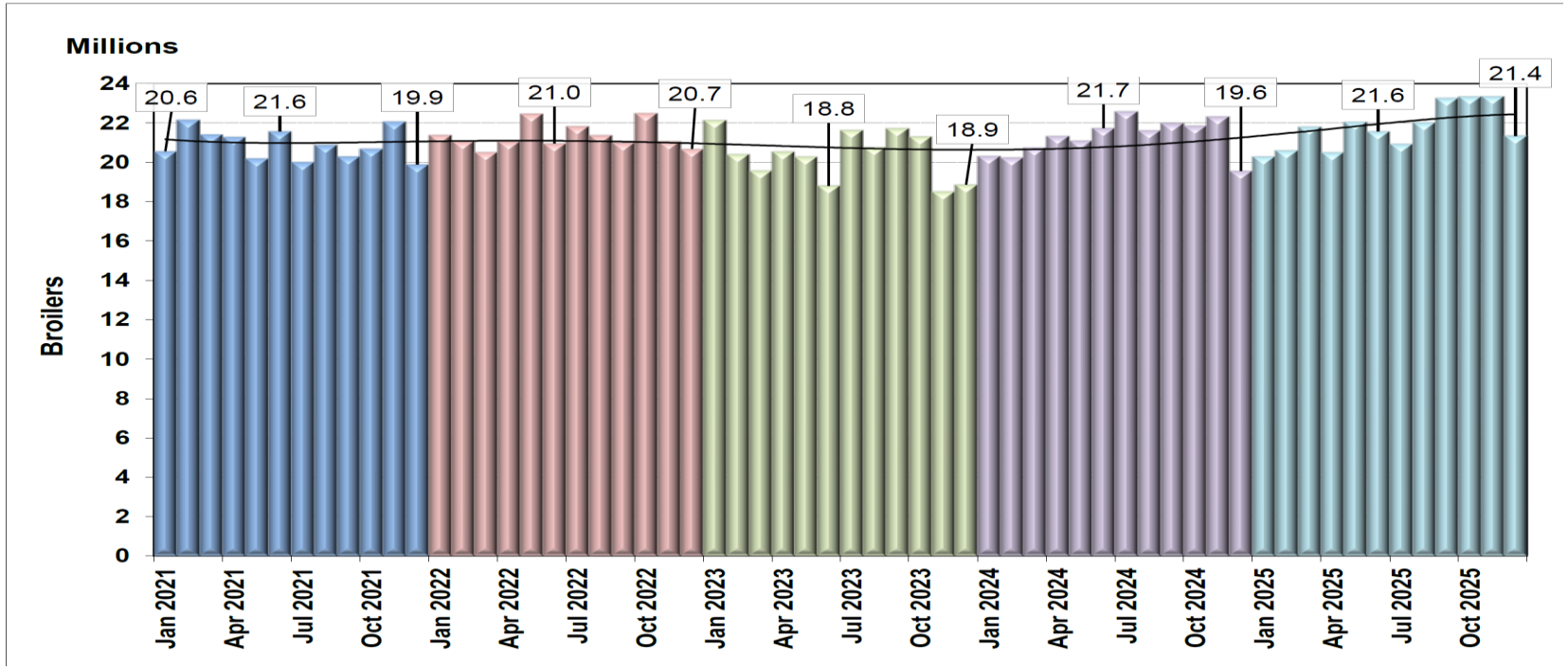
South Africa - Weekly Broiler Production

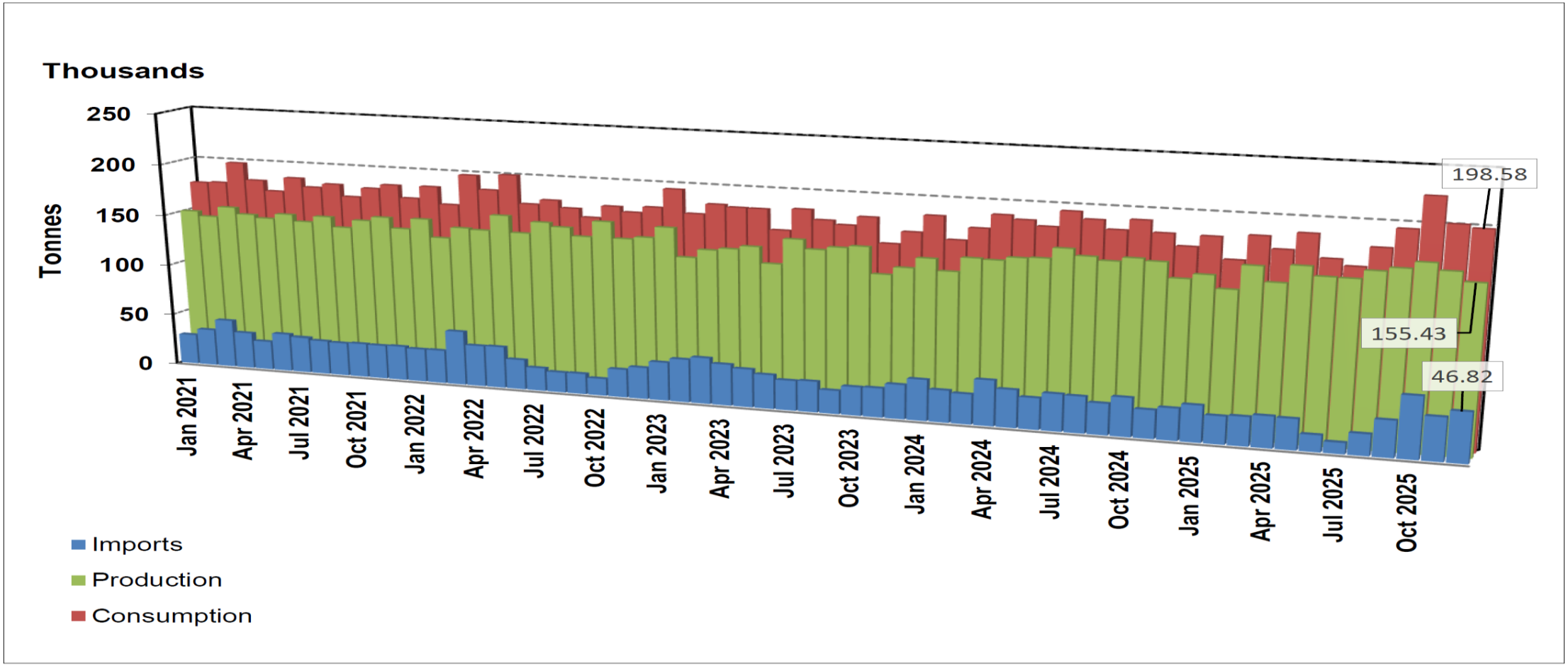


South Africa has a large and well-developed poultry industry

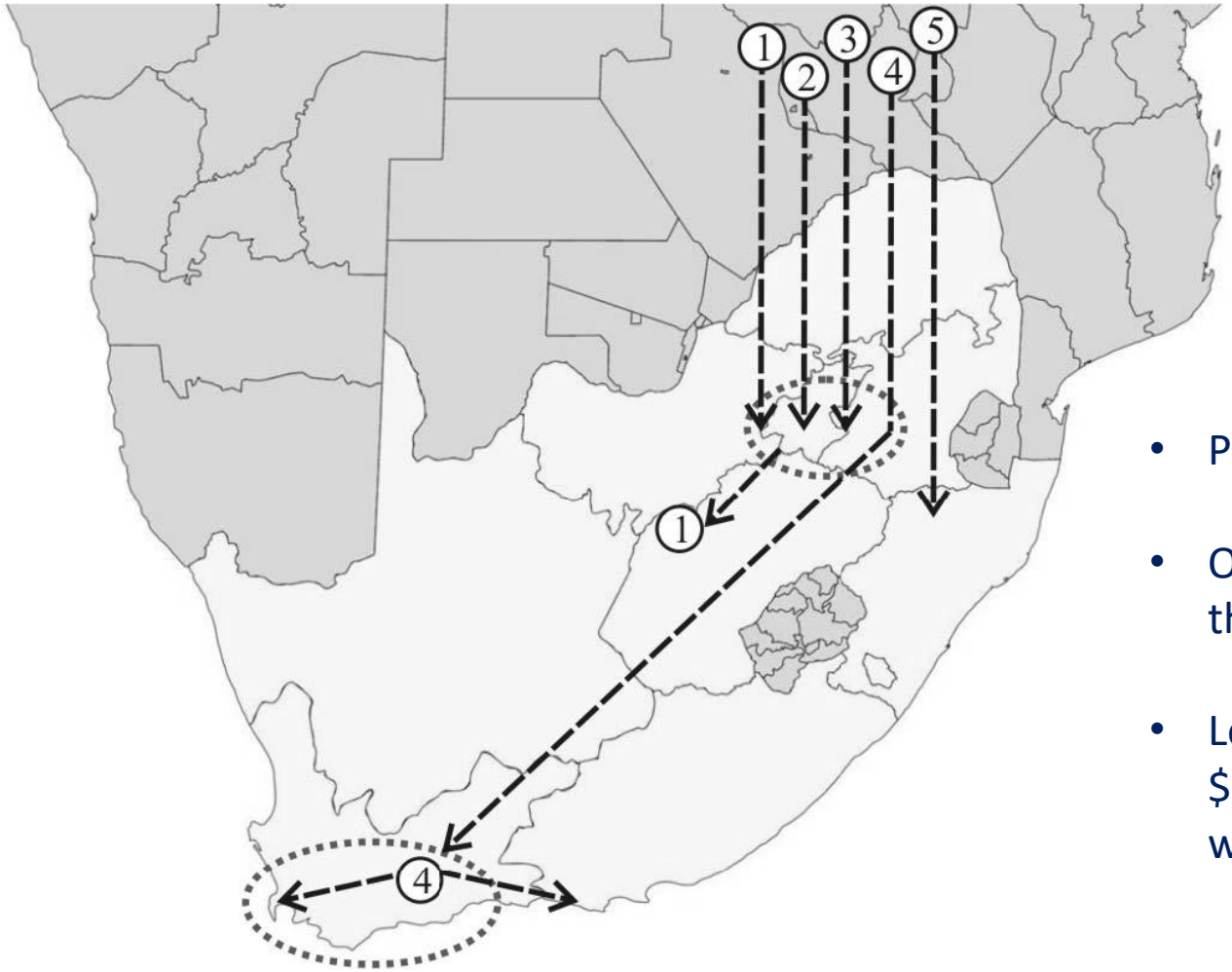
Production is highly efficient and our product is of a high quality – Meat Safety Act is in place, and meat inspection is thorough.

We already export to neighbouring countries mostly within SADEC with small volumes to the Middle East.

South Africa – Poultry Meat Consumption



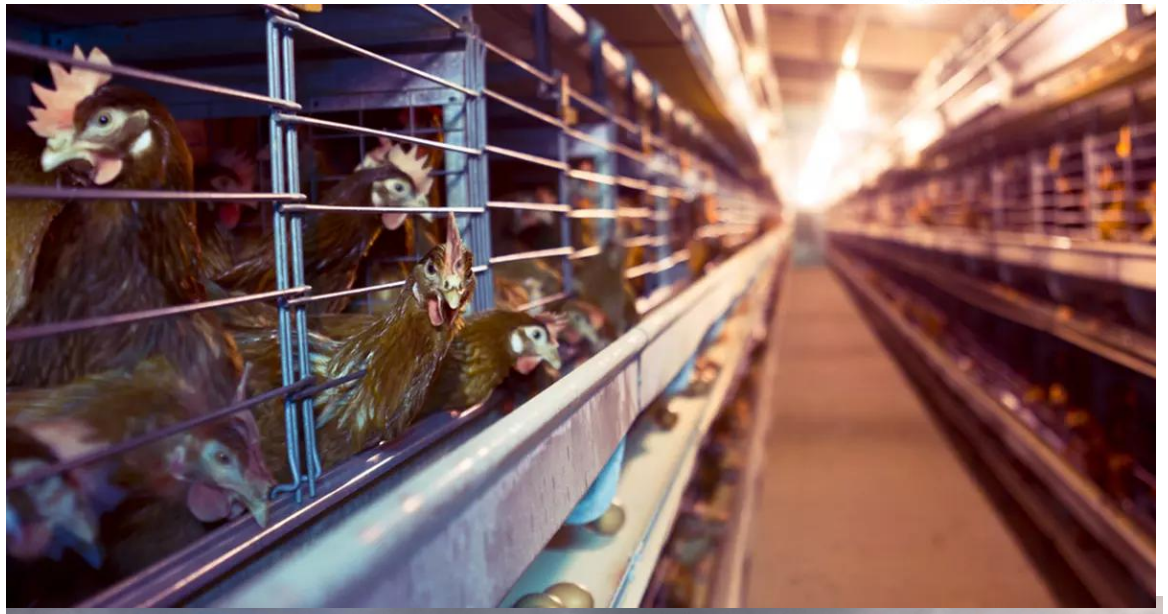
HPAI H5N8 Outbreak – South Africa - 2017



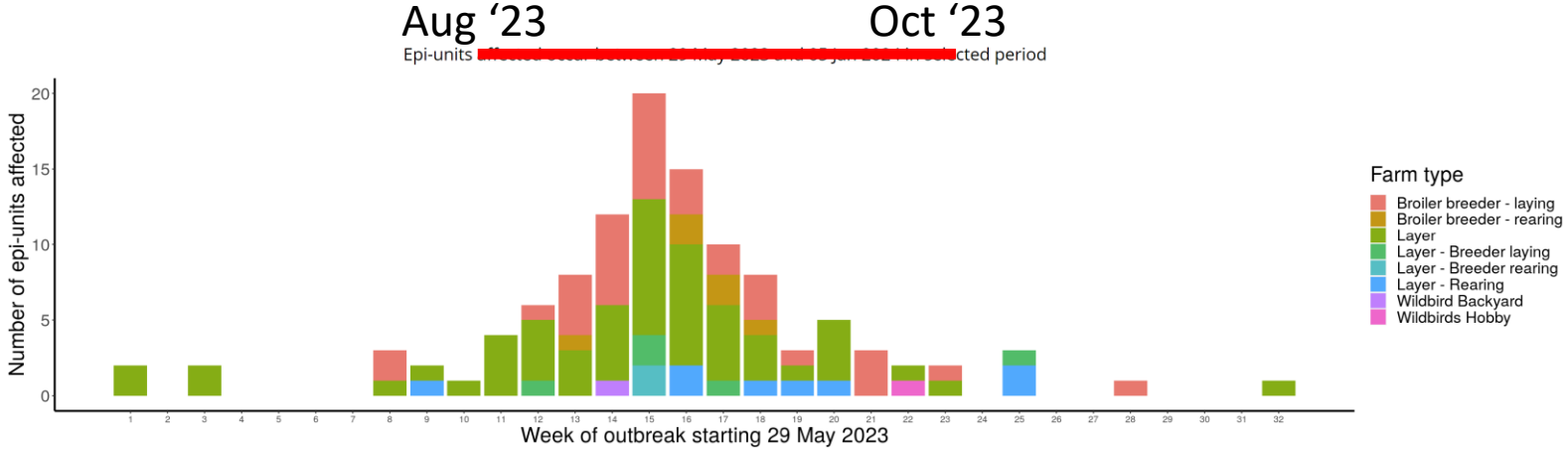
- Probably 5 separate introductions from wild birds.
- Only variant 4 spread to Western Cape Province where the most severe outbreak occurred.
- Losses of 4.7 million birds, mostly egg-laying hens. $140 million. About 20% of national laying industry was lost.

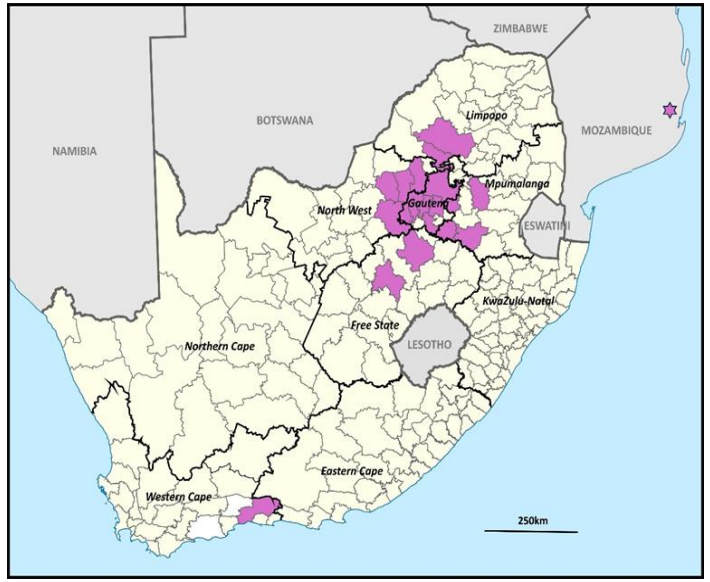
HPAI H5N1 Outbreak – South Africa – 2021-23

- Viruses originated in Senegal – Dec 2020.
- 15 different sub-clades were identified.
- Limited farm-to-farm spread – 83% of cases were point-introductions from wild birds.
- Ostrich cases were point introductions, not linked to poultry cases.
- A coastal sea-bird lineage emerged, spread exclusively within sea-bird populations. Major losses among sea-birds especially communal roosting species. Including endangered species such as the African penguin. This strain persisted into 2023.



HPAI H7N6 May 2023-Jan 2024





6.82 million chickens dead or culled

3.97 million layers (20% of national flock)

2.85 million broiler breeders (30% of national flock)

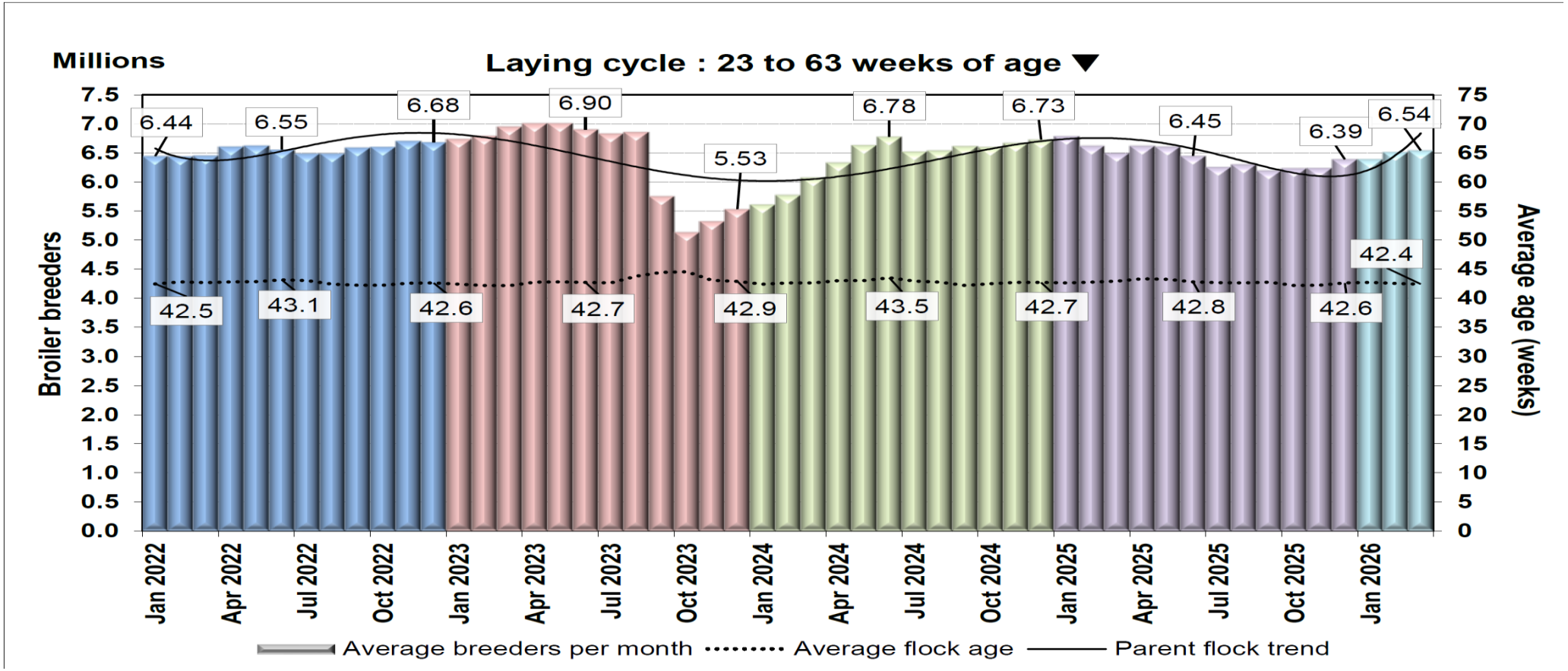
Gauteng Province: >40% of egg layers

>80% of broiler breeders

Egg shortages, increased egg prices

Hatching eggs imported for until September 2024.

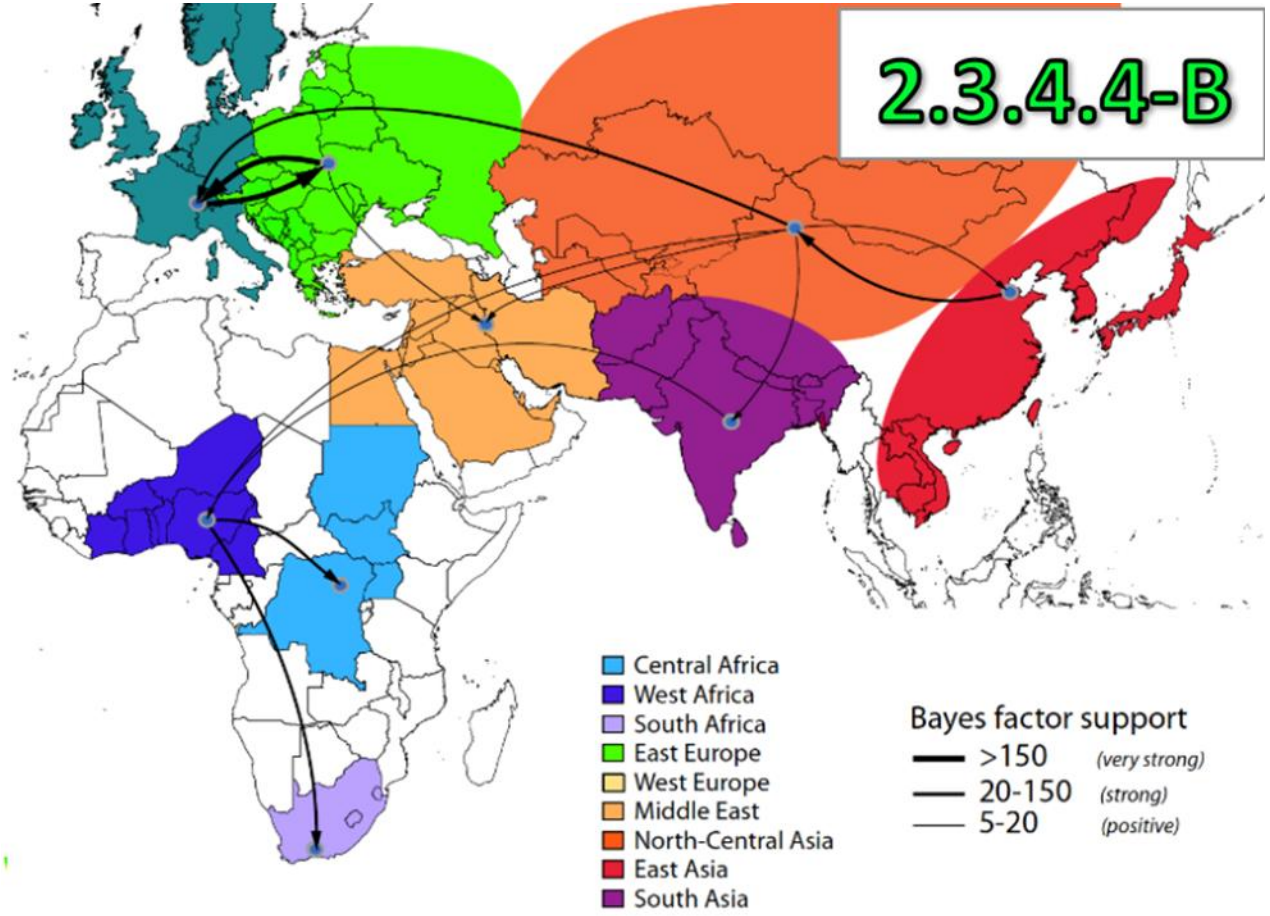
Breeder Flock Losses due to HPAI



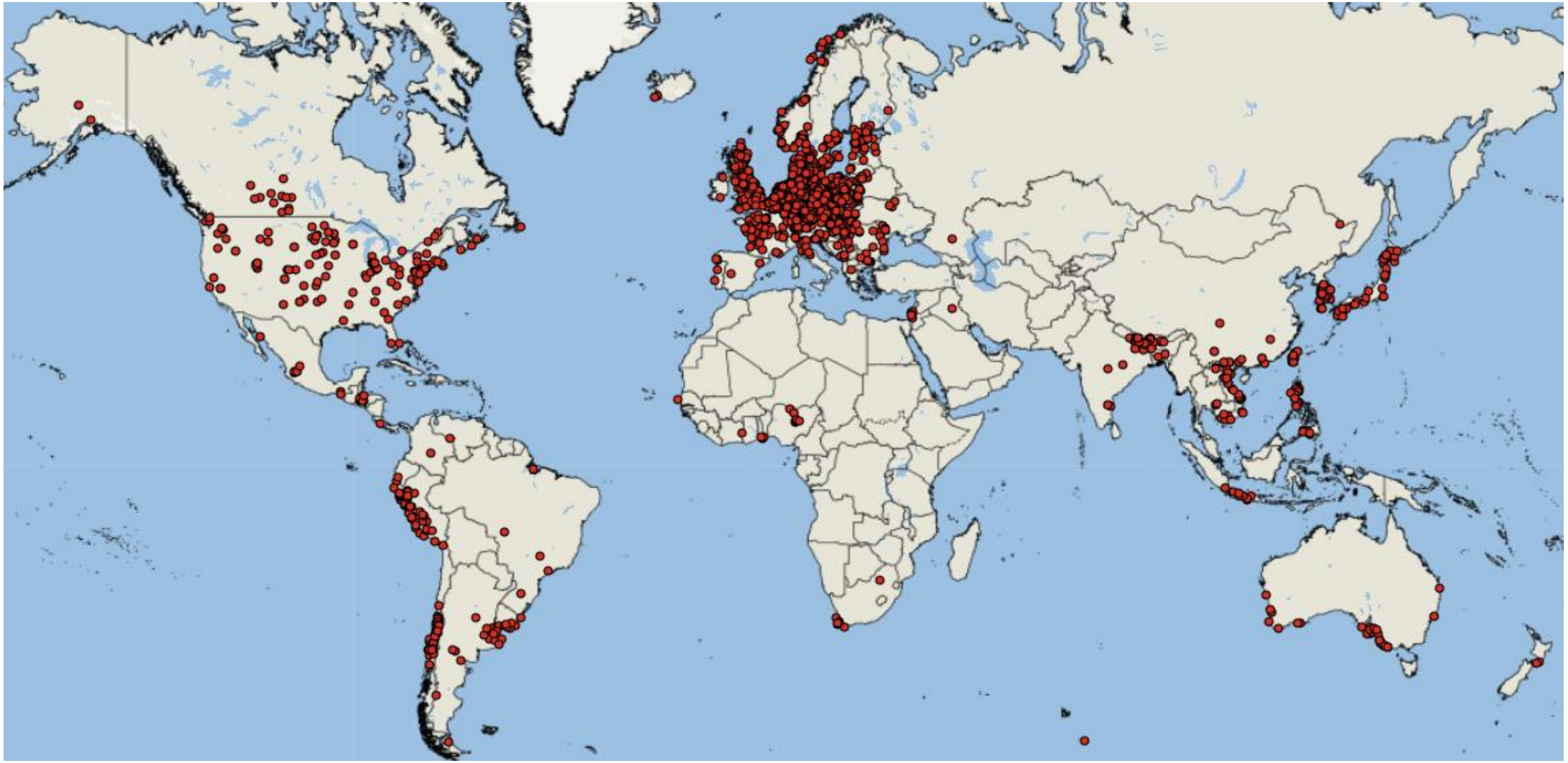
Broiler breeder flock numbers decreased in 2023-24 from 6.9 million to 5.4 million as a result of the 2023 HPAI outbreak.

HPAI in Sub-Saharan Africa

- North-central and South Asia seem to be the major sources of the HPAI Goose/Guangdong/96 H5 strain
- Europe seems to have played a key role in the viral spread to the African continent in 2005-2006 (clade 2.2), while South Asia and North-Central Asia seem to have been the major viral sources for the African countries in winter 2014-15 (clade 2.3.2.1c) and 2016-17 (clade 2.3.4.4-B).
- For all the clades, West Africa seems to have been the most important area of virus introduction into Africa and the most important source of the virus for the other African countries.
- As for clades 2.3.2.1c and 2.3.4.4-B, Africa has mainly acted as a sink of the virus



Recent (2026) FAO Influenza Outbreak Reports



Wild Bird Hosts

Avian Influenza Outbreaks 2024-2025


QUARANTINE AREA
FOOT & MOUTH DISEASE
BIOHAZARD
BIOHAZARD

AVIMUNE
The poultry specialist

HPAI Control Protocol

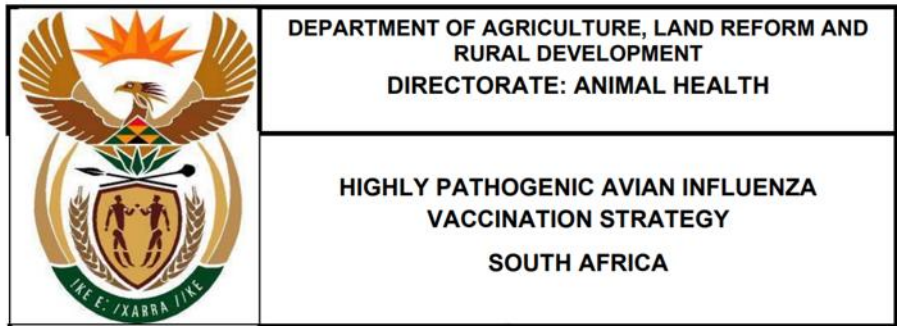
HPAI Control In South Africa

- South Africa has been affected by a series on HPAI outbreaks since 2017. These have had huge economic impacts on the industry.
- Each outbreak has been handled through stamping out of infected populations, followed by good recovery.
- Outbreaks have principally affected broiler breeder and egg layer operations.
- A policy of compartmentalisation has been effectively implemented on poultry farms across the country. This ensures that although the disease persists in wild bird populations, individual farms can be certified as Influenza free.
- Exports, especially of poultry meat can be safely exported from these farms.
- For exports to thrive, trade partners need to accept the compartments.

HPAI Control In South Africa

- No compensation has been made available to poultry farmers – losses were enormous.
- For effective control through culling, it is essential that there is government compensation in order to ensure the survival of the industry and to encourage cooperation by the private sector with government.
- In the absence of compensation vaccination against HPAI has to be on the table – indeed even wealthy governments have realised that expensive monitoring programmes and mass culling is not financially sustainable.

HPAI Control in South Africa



- Vaccination is already allowed in South Africa we have conservative vaccination guidelines in place – but only a very small number of farms have been vaccinated.
  - Costs associated with monitoring protocol are extreme >US$1000 per shed per month.
  - Vaccinated flocks must be slaughtered through an abattoir at the end of their lives – the live bird market is key in South Africa.
  - The entire commercial layer industry is unable to vaccinate because of the high costs and remains at risk of future outbreaks.

Policy brief

December 2023

Avian influenza vaccination: why it should not be a barrier to safe trade

Executive summary

Since 2005, avian influenza has had a staggering toll, with over 500 million birds lost to the disease worldwide [1]. Its devastating impact extends beyond domestic and wild birds, threatening livelihoods, food security and public health. The recent shift in the disease's ecology and epidemiology has heightened global concern as it has spread to new geographical regions. It has also caused unusual die-offs in wild birds and led to an alarming increase in mammalian cases. The rapidly evolving nature of avian influenza and **changes in its patterns of spread** [2] require a review of existing prevention and control strategies. To effectively contain the disease, protect the economic sustainability of the poultry sector and reduce potential pandemic risks, all available tools must be reconsidered – including vaccination.

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The current spread of avian influenza is a major concern for the poultry industry, public health and biodiversity. Given recent developments in its epidemiology, and the increasing circulation of high pathogenicity avian influenza (HPAI) in wild animals, stricter biosecurity measures and mass culling of poultry may no longer be sufficient to control the disease. With the seasonal north-south migration of wild birds, countries must be prepared for an increase in outbreaks and should consider complementary approaches, such as vaccination, in line with existing international animal health and welfare standards [3].

Key facts

- The epidemiology of avian influenza is evolving: the disease is gradually losing its seasonal nature, and high pathogenicity strains are circulating in wild birds.
- This intensified circulation increases the likelihood of virus evolution and spillover to new species, including mammals, posing a risk to human health.
- All available science-based disease control tools must be considered. In certain epidemiological contexts, vaccination can be an effective complement to other control strategies.
- If properly implemented, vaccination should not be a barrier to safe trade.
- Wider use of vaccination stimulates research innovation, improving the quality of available vaccines.

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HPAI Control in South Africa

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- The South African poultry industry is developing a vaccination protocol that will reduce costs of implementation and improve access for wider vaccination.
- This will protect the national flock and the industry.
- The protocol will comply with international best practice to ensure product safety and assurance for importing countries.
- Compartmentalisation will allow exports from unvaccinated flocks, if required. But broilers will not be vaccinated, further ensuring safety of meat & meat products.

Acknowledgements

- Photo of Cape Gannets – Winfred Bruenken (Amrum) – Wikicommons
- Photo of African penguins – Chris and Monique Fallows/Minden Pictures.

Selected References

- The incursion and spread of Highly Pathogenic Avian Influenza Clade 2.3.4.4 within South Africa. Abolnik *et al*., Avian Diseases 2019, vol 63, No.1 Supplement (2019), pp 149-156. https//www.jstor.org/stable/102307/27108219.
- Disentangling the role of Africa in the global spread of H5 highly pathogenic avian influenza. Fusaro *et al*., Nature Communications, (2019) 10:5310 | https://doi.org/10.1038/s41467-019-13287 www.nature.com/naturecommunications
- The spatiotemporal epidemiology of high pathogenicity avian influenza outbreaks in key ostrich producing areas of South Africa. Marimwe *et al*., Preventative Veterinary Medicine, 196 (2021) 105474. www.Elsevier.com/locate/prevetmed.
- The Molecular Epidemiology of Clade 2.3.4.4b H5N1 High Pathogenicity Avian Influenza in Southern Africa, 2021-2022. Abolnik *et al.,* Viruses 2023, 15,1383. *https://doi.org/10.3390/v15061383*.
- Outbreaks of H5N1 Highly Pathogenic Avian Influenza in South Africa in 2023 were caused by two distinct sub-genotypes of Clade 2.3.4.4b viruses. Abolnik *et al*., Viruses 2024, 16, 896. *https//doi.org/10.3390/v16060896*.