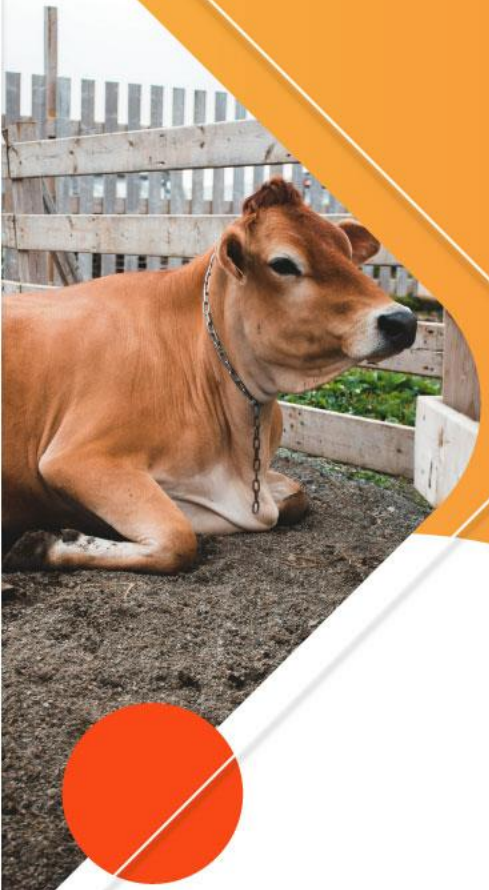
World Organisation for Animal Health

Regional Training Seminar for WOAH National Focal Points for Veterinary Laboratories (cycle III)

8 - 10 July 2025, Gaborone, Botswana



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World Organisation for Animal Health

Emergency management: Nigeria *Country Experiences'*

Pam Luka,

National Veterinary Research Institute, Vom

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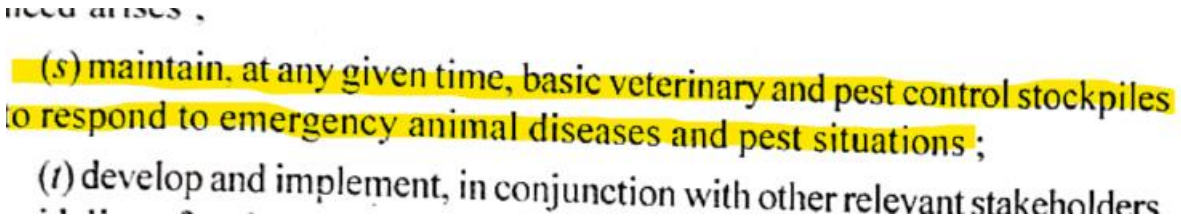
Government laws and policies

- Animal Disease Control Act 2022 (Amended)
  - Routine surveillance
  - Surveillance of diseases of wildlife species
  - Notification
  - Disposal of animal carcass and feed
  - Control of animal movement
  - Biosecurity
  - Prevention & control of TAD and zoonotic animal diseases etc



need arises ;

(*s*) maintain, at any given time, basic veterinary and pest control stockpiles to respond to emergency animal diseases and pest situations ;

(*t*) develop and implement, in conjunction with other relevant stakeholders

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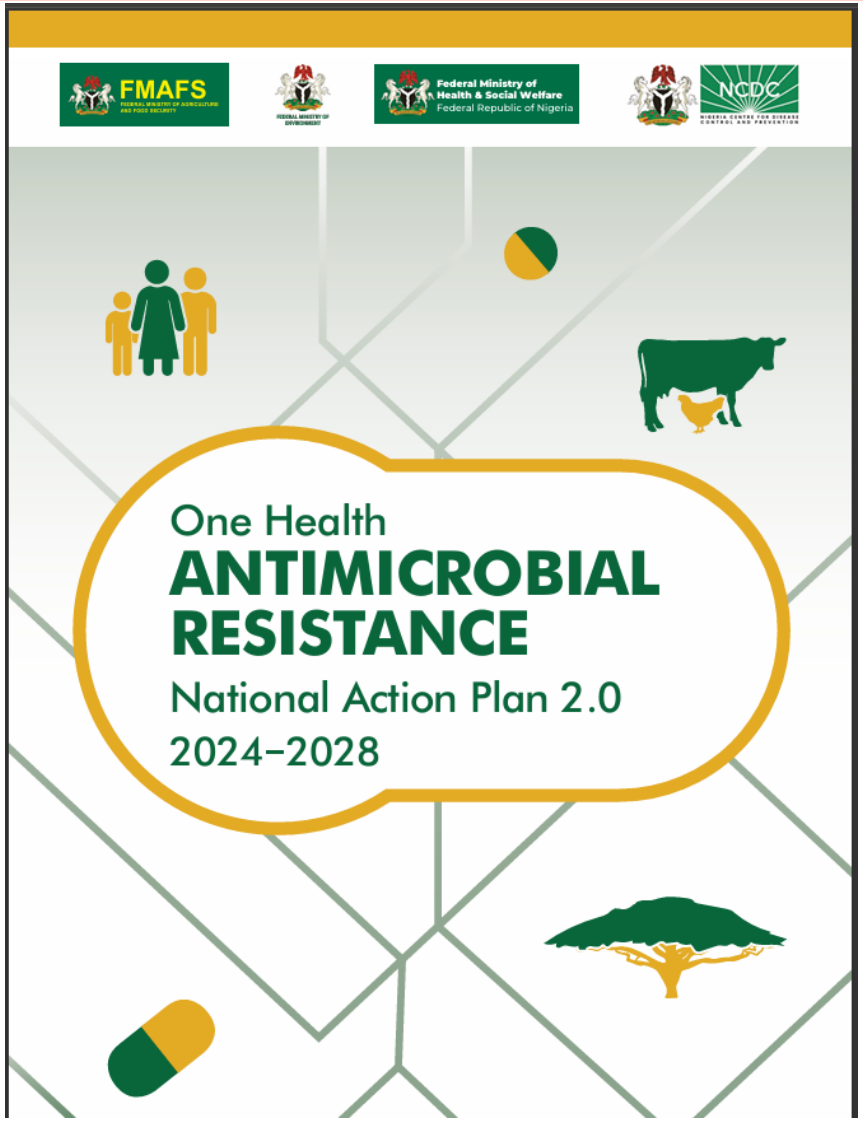

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Case scenario 1: HPAI (2006 – 2008)

- HPAI: Diagnosis
- Training & Capacity building
- Incentives: Compensation for farmers
- Eradication in 2008
- Reference labs: WOAH Ref. Lab. Padova, Italy

Surveillance and outbreak reports

SEROLOGIC AND VIROLOGIC SURVEILLANCE OF AVIAN INFLUENZA IN NIGERIA, 2006-7

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Since January 2006, H5N1 avian influenza has affected Nigeria's poultry population causing enormous loss of resources. The current circulating virus is a potential candidate for pandemic influenza which may severely affect the human and animal population worldwide especially in the resource-poor countries. In this study, we report on our field and laboratory surveillance efforts in Nigeria. A total of 1,821 tissue samples, 8,638 tracheal swabs, 7,976 cloacal swabs and 7,328 avian sera were analysed over a period of two years, with 312 positive results.* We recovered 299 isolates of highly pathogenic avian influenza virus H5N1 mainly from the diagnostic samples of poultry kept in backyard, small scale and free range farms. This finding emphasised the role played by these farming systems in the dissemination of avian influenza in Nigeria and highlights the need for a continued surveillance in humans since human-animal interaction is a key feature in Africa. Furthermore, there is a need for the strengthening of border controls. Since October 2007, there has been no reported and confirmed outbreak of avian influenza in Nigeria.

key economic activity in Nigeria. It contributes significantly to the family income, especially in peri-urban and poor rural communities [8]. The effect of growing urbanisation the rural, peri-urban and urban poultry production and on human-animal interaction has previously been reported [9]. Backyard poultry production thrives in view of the level of poverty and the economic return associated with the venture. Free-range systems of poultry production are also widespread in various parts of the country [10].

Due to H5N1 avian influenza infection in Nigeria, millions of poultry have been destroyed and one human death has occurred. A recent serological survey in humans in those administrative regions in Nigeria that were most heavily affected by HPAI H5N1 showed that, despite the widespread infection in the poultry population, human infection is rare [11]. In this report, we describe our surveillance efforts in Nigeria and discuss the role of poultry and backyard flocks and their implications for humans vis-à-vis our laboratory findings.

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Avian influenza: mortalities and stamping out

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Case scenario II: ASF

- 2018: Stakeholder engagement
- 2019: Seroprevalence of major farm settlements in Lagos state
  - Oke-Aro farm settlement
  - Gberigbe farm settlement
  - Ikorodu farm settlement
- 2020: Major Outbreak
  - Reagents: ASF-RESIST
  - Nigerian Government
  - Incinerator/fumigation/disinfectants
- Reference Lab: Joint FAO-IAEA Lab, Seibersdorf, and WOAH Reference Lab for Classical Swine Fever, Canadian Food Safety Agency

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ASF Surveillance 2019

- 31% seroprevalence
- 2020: Outbreak characterized by
  - Population of pig farmers: 5,000
  - Pig population: over 2 million
  - Total number of farms: 3,072
  - Pig farmers: 900
  - Attendants: 6,144
  - Butchers: 25
  - Pork sellers: 7
  - Feed sellers: 40
  - Total: 7,124 people affected

	Serum	Positive by ELISA Results
Oke Aro (Old Site Farm)	23	3
Oke Aro (Old Site abattoir)	16	6
Oke Aro (New Site Farm)	20	11
Oke Aro (New Site abattoir)	15	7
Ikorodu Farm Set (Slaughter site)	2	0
Ikorodu Farm Settlement	11	7
Gberigbe Farm Estate	22	2
Agege Abattoir	20	4
Total	**129**	**40**


AMERICAN SOCIETY FOR MICROBIOLOGY | Microbiology Resource Announcements

GENOME SEQUENCES

First-Time Presence of African Swine Fever Virus Genotype II in Nigeria

Adeyinka J. Adedeji,[a,e] Pam D. Luka,[a] Rebecca B. Atai,[a] Toyin A. Olubade,[a] Dupe A. Hambolu,[b] Mary A. Ogunleye,[c] Vincent B. Muwanika,[d] Charles Masembe[e]

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Case scenario III: COVID-19

- 2021: Activation of NVRI BSL-3 lab for diagnosis for Northeast region (7 states)
- Materials and reagents:
  - Government and donors
- Output:
  - The first two with the highest

Test output

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AOSIS

Page 1 of 6 Proceedings

Applied One Health: Nigeria National Veterinary Research Institute COVID-19 pandemic response

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The COVID-19 pandemic has caused the death of 7.1 million people worldwide as of 7 July 2024. In Nigeria, the first confirmed case was reported on 27 February 2020, subsequently followed by a nationwide spread of SARS-CoV-2 with morbidity and mortality reaching 267 173 and 3155, respectively, as of 7 July 2024. At the beginning of the pandemic, only a few public health laboratories in Nigeria had the capacity for SARS-CoV-2 molecular diagnosis. The National Veterinary Research Institute (NVRI), already experienced in influenza diagnosis, responded to the public health challenge for the diagnosis of COVID-19 samples from humans. The feat was possible through the collective utilisation of NVRI human and material resources, including biosafety facilities, equipment, reagents and consumables donated by international partners and

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Government interventions to Emergency management due to PVS reports (2010 - 2019)

- **Regional Disease Surveillance Systems Enhancement (REDISSE):**
  - Solar energy (panels to NVRI outstation laboratories to enhance sample and vaccine storage
  - Surveillance vehicle

- **Livestock Productivity and Resilience Support Project (LPRESS)**
  - buying Lyofast for NVRI to aid in vaccine production
  - MOA on free testing for pathogens such as HPAI and Rabies

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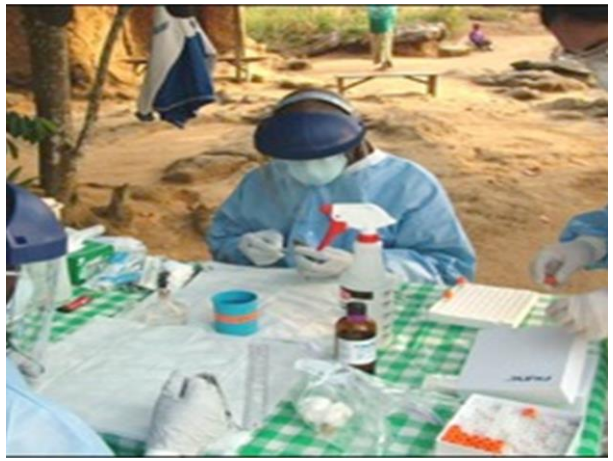
- Laboratory network with NVRI as the National Reference lab for rapid response (AMR/Fleming Fund)
  - Outstation labs (23)
  - Veterinary Teaching hospitals (11)
  - Private laboratories (Animal Care, Zoetis etc)
  - Training: Federal Epidemiology Officers, State Epidemiology Officers, Disease Surveillance and Notification officers (DSNO)
- AMR database and disease reporting platform



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One-Health Strategic plan

- Emergency Operation centres (e.g PHEOC): Joint response
- Four states (Lagos, Kano, Borno and Bauchi) have keyed in
- Lassa fever response
- Sample shipment training in the pipeline
- Fleming Fund/Management Sciences for Health (MsH)
- 6 Laboratory Sentinel sites in the control controlled by NCDC
- Collaboration with NVRI on vaccine production
- Capacity building of officers
- Disease reporting

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Recommendations from the PVS report

- Formalize and strengthen laboratory networks.
- Optimize the Quality Management System and biosafety and biosecurity management.
- Ensure relevant data management.
- Define and implement Animal Health Surveillance Programmes for priority animal diseases
- Enhance the veterinary workforce by strengthening VPP
- Training of DVS to key into communication tools to enhance VS delivery

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Thank you
For your attention

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