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# ASF Gap Analysis and its implication for Africa



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## Faculty of Veterinary Science

WOAH Collaborating Centre for  
Training in Integrated Livestock and  
Wildlife Health and Management

Reference Centre



World Organisation  
for Animal Health  
Founded as OIE

# Introduction

- GAP Analysis for ASF in Africa, Kampala, Uganda, 7-9 February 2023
- World Café approach: five tables, two facilitators per table
- Five topics: Surveillance, Control, Diagnostics, Vaccines, Epidemiology
- Participants rotate, changing table every 5 minutes
- Topics discussed under Knowledge gaps, Research needs, Policy issues
- Facilitators briefly summarize previous findings when each group arrives to avoid repetition
- Results presented in plenary session

# Results

- Large number of issues identified – some overlap between groups
- For a concise presentation, some triage was necessary
- Gaps for presentation selected using following criteria:
  - Important due to ability to impact on our ability to manage ASF
  - Not addressed by existing information or projects
  - Feasible research was proposed to try to address them
  - Policy issues identified do not appear to be insuperable

## Gaps not covered now

- Gaps not highlighted now not lost - will be covered in the final report
- Issues raised by more than one group not presented here:
  - African wild suids/ticks – there is ongoing research, including mechanisms of resistance
  - ASF genomics and NGS – need to increase capacity and share information
  - Co-infection with other organisms – diagnostic tools are available; more information should be obtained from outbreak investigation
  - Role of recovered pigs as carriers of ASFV – a clear definition is needed but evidence for a long-term carrier state is lacking; however, unsafe LAVs may create chronic infections during which virus persists and this must be avoided at all costs

# Gap 1 – pig demographics and value chains

- Identified in Surveillance & Epidemiology groups – important for control
- Data needed for risk mapping and models to support cost-effective targeted interventions
- Available information from census figures inaccurate/incomplete
- Smallholder sector highly dynamic – regular updates required
- Socio-economic studies required to describe/map pig production and value chains in rural and urban areas

## Gap 2 – Impact of ASF at local/national level

- Identified in Epidemiology & Control groups
- Information needed to convince policy-makers to invest more in ASF management
- Published information on economic impact at district/outbreak level only available for 5 African countries
- One publication (French) on national economic losses – 1996-7 ASF epidemic in Côte d’Ivoire
- Two useful tools for quantifying economic/socio-economic losses piloted for ASF – OutCost Tool (FAO), SELIA (framework for Socio-Economic and Livelihood Impact Assessment developed in Australia) – we should learn how to use them and apply them to gain better information in our context

## Gap 3 – Improving field and lab diagnosis

- Composite of gaps relating to rapid/accurate diagnosis – Diagnostics, Vaccine & Surveillance groups
- 11 knowledge gaps, 16 research needs, 8 policy issues identified
  - Identify, validate and employ sensitive/specific point-of-care tests
  - More validation of lab tests/cognizance of validation by reference labs
  - Improve lab capacity, networking, sharing of resources; proficiency testing; most efficient and cost-effective use of resources
  - Alternative sample types and safer ways to transport clinical samples – inactivation; ways to overcome cold chain issues

## Gap 4 – Safe, efficacious vaccines for Africa

- Composite of gaps identified by Vaccine & Control groups
- Need to expand knowledge of protective antigens
- Safety of LAVS – recombination, variable responses e.g. with co-infections
- Expand options e.g. mRNA vaccines should be on the table
- Study sero-immuno-groups and ASFV genomics to determine potential spectrum of coverage
- Practical considerations/policy issues: affordability, access, packaging for small herds, monitoring (PVM)



## Gap 5 – Improving ASF management

- Identified in Epidemiology, Surveillance and Control groups
- Major challenges in predominantly resource-limited settings
- Transdisciplinary research to understand socio-economic and cultural drivers of behaviour and achieve better sector organization
- Stakeholder/community engagement – participatory identification of feasible biosecurity measures to prevent ASF
- Improve passive surveillance – farmer trust, user-friendly phone-based reporting, monitoring trends in pig trade
- Pioneering work in Uganda – community contracts for better ASF management
- FAO document available at <https://www.fao.org/3/cc7491en/cc7491en.pdf>

# Gap 6 – Lack of collaboration among researchers

- The GARA Africa Chapter was born of the desire to address this gap
- Extend collaboration and networking beyond the laboratory
- Our stated common goal – better management of ASF to improve livelihoods
- Research can become an arms race – intense competition is not always healthy and is a barrier to collaboration
- Let it rather be a relay race – a real collaborative effort to achieve our common goal through our different roles that we respect and value
- Pooling our different skills and resources will get us to the winning post

# What does this mean for Africa?

- The Gap Analysis laid the foundation for much greater collaboration amongst African researchers
- Many of the gaps identified reflect the practical problems that face both researchers in our laboratories and animal health workers in the field
- There are policy issues in terms of improving infrastructure, communications and investment in animal health in general and ASF in particular
- We need a vaccine for ASF, but we are better off without one than we would be with some of the LAVs that have been used elsewhere where chronic disease in a proportion of the pigs (predicted first by Montgomery in 1921, demonstrated in the Iberian Peninsula and warned against in a statement by WOAHP after the SGE-GFTADs Africa meeting in Abidjan in August)
- When we develop our own vaccines, we will need a good strategy for assuring safety under all conditions, and we should never be a guinea pig for a vaccine without very careful consideration

Thank you!

