OFFLU AIM webinar: June 2024- Questions Answered

The OFFLU AIM webinar, held in both Spanish and English, welcomed stakeholders to learn more about the OFFLU AIM project. The session offered a technical overview, addressed key limitations, and aimed to create an open feedback forum for all attendees.

With 887 participants from diverse backgrounds registered for the event, we were pleased to see representation from 28 countries across Africa, 23 in Asia, 23 in Europe, 14 in North America, 10 in South America, 4 in Oceania, 11 in the Middle East, 6 in the Caribbean, and 6 in Central America.

Participants included professionals from private sector industries such as pharmaceuticals, animal health, and agriculture, as well as representatives from public institutions, government ministries, universities, and national and regional veterinary institutes and research laboratories. Consultants and advisors from various international organizations also joined the discussions.

Though we couldn't address all questions during the live session, we've compiled a summary of the most frequently asked questions from both sessions to continue the conversation and address your insights. The live webinar, held in Spanish and English introduced stakeholders to the OFFLU AIM project, provided a technical overview, discussed its limitations, and aimed to establish a feedback forum for stakeholders. You can continue to give your feedback here:

Frequently Asked Questions - Answered:

- **Q: How can we maintain ongoing awareness of recent bird flu mutations and ensure that countries report any new mutations that differ from current**

immunizations?

A: *Timely sharing of genetic information is crucial for understanding how viruses are evolving. Phenotypic characterization (not just genetic sequencing) is essential to assess the impact of mutations on the effectiveness of current vaccines. Collaboration and exchange of virus samples are vital to ensure comprehensive monitoring and response.*

- **Q: Will you consider the data, methods, and results from the vaccination program in France on ducks and other ongoing trials in Europe (such as Italy on turkeys, the Netherlands on laying hens, and Hungary on geese)?**
- A: *Yes, we will consider data from these vaccine trials and field studies. Integrating this information into the executive summary report helps build a comprehensive profile of the vaccinal immune response and its effectiveness against various HPAI H5 virus threats.*
- Q: **Will raising antisera in animals always be necessary for predicting antigenicity, or will it be possible in the future to make accurate predictions from protein sequences alone? How advanced are we in predicting all important epitopes based solely on sequences?**
- A: *While analyzing genotype to phenotype helps understand the molecular determinants of antigenic evolution, there is still a complex relationship between genetic and antigenic characteristics, especially for current H5 viruses. For the foreseeable future, phenotypic characterization using animal antisera will remain necessary for epidemiologically important strains. Additionally, the choice of sera used in these analyses is crucial and should be linked to the specific questions being addressed.*
- Q: **How do we send samples and what type of samples should be submitted to participate in this program? Some countries do not yet have the capacity to perform antigenic cartography. Can you also help establish this method to support surveillance and monitoring?**
- A: *We welcome as much participation as possible in this program. To produce robust data, we have standardized our antigenic methods among the WOAH/FAO International Reference labs from each region. We encourage the sharing of isolates with the Reference labs to assist in broader analyses. To find out which reference laboratory you can connect with and for any further assistance please contact AIWRL@apha.gov.uk or secretariat@offlu.org.*
- **Q: How should we address the importance of vaccination application alongside the vaccines themselves? Are there differences in vaccine technologies that affect immune responses and matching requirements? When discussing**

vaccination, are we considering only killed vaccines or also recombinant vaccines?

- A: *Successful vaccination depends on multiple factors, including delivery methods and target populations. Hatchery vaccination is often superior to farm vaccination in terms of application efficiency. However, not all vaccines can be delivered this way due to cost and availability. Our focus is on vaccine matching, relevant to all vaccines regardless of delivery method. Different vaccine technologies do have varying tolerances to antigenic changes. For instance, vectored vaccines like those based on HVT technology are more tolerant to antigenic drift than traditional inactivated vaccines. Newer technologies like self-amplifying RNA vaccines or computationally optimized subunit vaccines require further evidence from challenge studies against heterologous viruses to fully understand their efficacy.*
- **Q. Will you also consider the recent AI cases in dairy cattle in the US as part of the analysis to understand the relationships with strains found in poultry?**
- A. Whilst we have not characterized isolates from dairy cows, we are monitoring all avian origin, H5N1 including those outbreaks in mammals, for any changes which may be significant to antigenicity in the case that spillback into poultry or wild birds occurs.
- **Q. Is the current poultry vaccine is effective for ducks?**
  A. Different vaccines have different immunogenicity profiles in different poultry species depending on a number of variables, including adjuvant types, antigenic relatedness to circulating strains and vaccine technology (e.g. vectored vs inactivated, etc). in general, we can say that inactivated whole-virus vaccines are effective in ducks but require ad hoc immunizing schedules that often differs from the ones used in Galliformes. Differences in duck breeds are also relevant (e.g. Pekin vs Muscovy)
- **What will happen with trade restrictions if we start vaccination in Europe?**
  WOAH have been very clear if vaccination is conducted as set out in the WOAH code safe trade should be enabled
- **Has AI H5N1 2.3.4.4 b vaccination been implemented in EU countries?**
  Yes France has started vaccinating fattening ducks using H5 vaccines.