International Alliance for Biological Standardization

World Organisation for Animal Health
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Vaccination and Surveillance for High Pathogenicity Avian Influenza in poultry: Current Situation and Perspectives

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Conclusions and recommendations from October 2022 IABS meeting

The International Alliance for Biological Standardization (IABS) organized an important and timely workshop on issues relevant to vaccination against high pathogenicity avian influenza (HPAI) in poultry. The meeting was held 25-26 October 2022 at the World Organization for Animal Health (WOAH) Headquarters in Paris, France. The H5Nx 2.3.4.4b H5Nx goose/Guangdong (Gs/GD) HPAI virus emerged in the autumn of 2020 as the beginning of the largest transcontinental panzootic of HPAI in the past 100 years. This virus has an altered ecology and epidemiology from past emergent HPAI viruses by causing infections in over 400 new species of domestic and wild birds, many with high mortality, and affecting more than 9400 poultry premises resulting in death of over 27 million poultry and the culling of over 320 million poultry.

Conclusions from the workshop:

1. The virus has become endemic in many wild aquatic bird species with markedly increased risk of seasonal introductions and reintroductions into poultry in multiple geographic locations.
2. The continued use of stamping-out programs alone is not sustainable.
3. The global elimination of the virus is not realistic in the short and intermediate term, necessitating additional measures to reduce risks for poultry infections and to decrease the needed for stamping-out programs.
4. Vaccination of poultry can provide an extra layer of protection by increasing resistance of poultry to infection, leading to reduced quantities of circulating virus and its spread and fewer farms on which stamping out is required.
5. Barriers to wider use of vaccination include the threat of non-tariff trade barriers, poor understanding of appropriate surveillance programs in vaccinated populations and inadequate availability of suitable commercial vaccines, can be overcome.

Recommendations from the meeting included:

1. The formation of an international consultative group, involving a wide range of stakeholders, to identify and develop solutions to barriers that will facilitate increased uptake of vaccination.
2. Conduct additional vaccine trials on farms that could be used to assist in the development of appropriate surveillance systems in vaccinated poultry populations.

3. Support the WOAH/FAO Animal Influenza Network (OFFLU) AIM (Avian Influenza Matching) program through provision of sharing isolates, antigens, genetic material and sequence information from new isolates which will provide a global system to assist in analysis and matching vaccine antigens to evolving field viruses.
4. Continue monitoring for antigenic changes in field viruses and, when found, update vaccine seed strains in countries where HPAI virus infections are endemic.
5. Expand translational research to move advances in vaccine technologies from the developmental and basic vaccine research stage to commercial products, especially for mass application technologies and platform systems to facilitate rapid updating of hemagglutinin antigens or inserts in vaccines.
6. Develop templates for risk assessments of onward spread of HPAI for birds and their products from both vaccinated and unvaccinated flocks.
7. Progressively implement poultry production changes to reduce the likelihood of vaccinated flocks being infected including changes in structural and procedural biosecurity, and how poultry production is managed.