



Avian Influenza Vaccine Efficacy Project

OFFLU Project looks at Egyptian vaccination efficacy

Egypt is considered as one of the world's hot spots for H5N1 AI outbreaks in poultry. The first H5N1 HPAI outbreak was recorded in February 2006 and there are still ongoing reports of outbreaks in almost all of the 29 Egyptian governorates.

According to OIE reports Egypt considered endemic country for HPAI in 2008. Vaccination against H5N1 AI was started in March 2006 1 month after the first outbreak was confirmed as one of the measures aimed at controlling the HPAI epidemic. There are at least 21 imported vaccines used in Egypt including both H5N1 (Chinese strain) and H5N2 (Mexican strains) vaccines. No national production currently exists.

Vaccine was used widely in the commercial sector and available data showed that this reduced disease and commercial losses in poultry, but vaccination campaigns in sectors 3 and backyard (sector 4) have had limited impact on disease incidence and this may due to difficulties in obtaining widespread vaccine coverage in backyard and small village farms and not well defined vaccine strategies.



Due to this unstable situation and continuous evolution of H5N1 which can potentially cause serious human disease, the OFFLU team of FAO in collaboration with one of its laboratories (USDA-ARS¹/SEPRL²) and the Egyptian NLQP³ (the National governmental laboratory authorized for AI testing in Egypt) developed the Avian Influenza Vaccine Efficacy Project in Egypt (AIVEP).

The aim of this project is to characterize the circulating H5N1 viral strains in Egypt and to evaluate the efficacy of current used vaccines against the identified strains. The two-year project includes capacity building as a major component and receives funds from USAID and USDA. The project is implemented jointly by the FAO-ECTAD⁴ Unit in Egypt and NLQP. Linkages will be made with other ECTAD-EGY implemented running (SAIDR⁵, AHBL⁶) and up coming new projects, notably on vaccination field data, epidemiological information linked to H5N1 isolates and the vaccination strategy in Egypt.

Through the project activities intensified collection and characterization of AI viruses will take place as will genetic and antigenic mapping in cooperation with Erasmus University (the Netherlands) for the Egyptian isolates. Efficacy studies of some vaccines in use in Egypt will be sought through challenge exposure against selected field strains of HPAI from antigenic mapping study. Vaccination trials will also be carried out using native poultry at NLQP. A capacity building component for NLQP and CLEVB⁷ staff is included in this project with training provided by SEPRL.

OFFLU project aims to provide conclusive recommendations for revision of vaccine strategy in Egypt including criteria for vaccine selection and it is an essential contribution to reduce H5N1 HPAI infection both in Egypt and globally.

¹ United States Department of Agriculture, Agricultural Research Service

² South East Poultry Research Laboratory, Georgia, USA

³ National Laboratory for Veterinary Quality Control on Poultry Production

⁴ ECTAD: Emergency Center for Transboundary Animal Diseases

⁵ Strengthening Avian Influenza Detection and Response

⁶ Animal Health, biodiversity and livelihoods

⁷ Central Laboratory for Evaluation of Veterinary Biologics