STATE OF DIAGNOSTICS FOR HPAI IN UGANDA

A presentation for inception workshop for OSRO/UGA/711/USA

27th March, 2008 , JINJA

INTRODUCTION

Ugandas poultry Industry is estimated at 36,200,000. Eight million are on large-scale farms and the rest are on small backyard farming

Uganda produces approximately 23,000 tons of poultry meat and 27,000 tons of eggs per year, and 20.8 Million day old chicks

MAIIF is responsible for monitoring animal diseases in Uganda

HPAI is a viral zoonoses capable of infecting human and bird species

No cases identified in Uganda yet but the risk is very high. Sudan reported cases of HPAI. Uganda lies along the migratory routes for birds. High contact rates between poultry and human beings in most communities

Key Institutional players: Diagnostics and Epidemiology Unit (MAAIF), National Livestock Resources Research Institute (NALIRRI), Faculty of Veterinary Medicine/Makerere University (FVM/MAK)- under set up, Uganda Virus Research Institute (UVRI) – to concentrate on human aspects

Diagnostics is a key element in the identification, prevention and control of HPAI in Uganda

It includes: sample collection, packaging, transportation, laboratory analysis, result presentation and information dissemination

HPAI tests available:

Agar gel immuno-diffusion test (MAAIF, NALIRRI, UVRI, FVM/MAK)

Antigen detection tests (MAAIF, NALIRRI, UVRI, FVM/MAK)

PCR (NALIRRI, UVRI, FVM/MAK). No PCR reagents at NALIRRI

PROGRESS IN PREPARATION FOR HPAI

Setting up a national task force & strategic plan for the prevention and preparedness in animal health sector

Concept development and capacity building – 5 technicians have been trained on the diagnosis for HPAI (in country). 3 Professional staff have attended laboratory trainning on HPAI (outside), about 80 district staff have been trained on HPAI

Acquired diagnostic materials

Laboratory set up – separate section for sample recording, preservation and diagnostic tests

Epidemio-surveillance: dead birds, randomized surveys

Laboratory tests: Rapid antigen detection tests, Agar gel immuno-diffusion test

LABORATORY RESULTS

YEAR	SAMPLES TESTED (AAT)*	RESULTS
2005	3	0
2006	64	0
2007	11	0

CHALLENGES

Low level of biosecurity. HPAI requires high containment level (P2+) laboratory. Currently no such laboratoty exists for animal diagnostics

Poor laboratory infrastructure

Complexity of surveillance in wild birds

Collection of samples from dead birds is hampered by lack of facilitation for field staff

WAY FORWARD

Develop laboratory facilities to improve biosecurity:

(i) Build a fence around the laboratory (include 3 fences)

(ii) Renovate laboratory infrastructure i.e. poultry house,

(iii) Improve on laboratory equipments: safety cabinets, benches, air conditioner, freezers etc.

Improve the diagnostic capacity of the lab to undertake molecular diagnostic tests: real time PCR, sequencing & characterization

Train field staff in sample collection, trasnsportation and storage

Build the capacity of field staff in HPAI surveillance and diagnostics

Undertake detailed and regular field surveillance studies

Procure data storage and processing equipments and software: laptops, desktops, programmes etc.

Equip all the districts with rapid detection kits – atleast 100 tests for each district for HPAI and NCD

Develop and produce diagnostic manuals

Procure wild bird capture equipment

Procure laboratory consumables

Arrange for staff of diagnostics and epidemiology to attend international training courses


END