2016 LIVE BIRD MARKETING SYSTEM WORKING GROUP REPORT UPDATE

2016 USAHA-TRANSMISSIBLE DISEASES OF POULTRY AND OTHER AVIAN SPECIES COMMITTEE MEETING

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ANIMAL AND PLANT HEALTH INSPECTION SERVICE
VETERINARY SERVICES
OCTOBER 17-18, 2016
Outline

- Participation
- Uniform Standards Report
- Diagnostic & Surveillance Report
- Education & Outreach Report
  - 2016 LBMS CE Training Course
- HPAI in the LBMS – General Guidance
LBMS-WG Meeting- Charleston, SC. February 17-18, 2016

- 82 participants
  - 39 USDA, APHIS, VS, 7 LBMS/poultry industry stakeholders, 1 CDC representative, 3 university representatives, 4 State animal health diagnostic lab representatives, and 29 State Department of Agriculture participants representing 31 States

- Welcome/Opening Remarks
  - Director & State Veterinarian, Clemson Livestock Poultry Health Program, Clemson University, South Carolina – Dr. Boyd Parr
  - South Carolina NPIP & LBMS Coordinator - Clemson University Livestock-Poultry Health Division – Dr. Julie Helm
  - USDA-APHIS-VS- AD South Carolina and US Virgin Islands – Dr. Delorias Lenard

- 2017 LBMS-WG Meeting – San Antonio, Texas
  - February 22-23
2016 - Revised Uniform Standards

- At our annual (February 2016) Live Bird Marketing Systems Working Group meeting, **we received over 60 proposed changes** from stakeholders to the 2012 LBMS Uniform Standards. These guidelines are updated every 4 years.

- **Major Changes**
  
  - Changed the title of the Uniform Standard to address H5/H7 Avian Influenza (LPAI and HPAI) in the Live Bird Marketing System and made these changes throughout the document.
  
  - Removed the requirement of having an MOU in place to be a participant of the Live Bird Market System program.
2016 - Revised Uniform Standards

**Major Changes**

- We changed the verbiage throughout the document to reflect the APHIS reorganization.

- Updated and described in detail the five official (approved) tests to align with NVSL protocol:
  - Agar Gel Immunodiffusion
  - Enzyme-Linked Immuno-assay (ELISA)
  - Real-Time Reverse-Transcriptase Polymerase Chain Reaction (rRT-PCR)
  - Antigen Capture Immunoassay Tests (ACIA).

- Added the ELISA as an official test.
2016 - Revised Uniform Standards

- **Major Changes**
  - Provided better guidance on use of USDA-licensed type A influenza antigen capture immunoassay (ACIA) test
    - The ACIA must be conducted using test kits approved by USDA and the State.
  - The ACIA is an NPIP-LBMS approved test used for the detection of influenza A nucleoprotein in swab specimens from birds exhibiting clinical signs of disease (sick birds) or dead birds.
  - It is less sensitive than molecular tests; therefore, those collecting samples should collect additional swab samples and forward both the non-negative sample and additional samples to an approved lab for molecular testing to determine the virus status of the flock following any non-negative ACIA result.
Major Changes

- Significantly shortened test definitions as all is in more detailed in Part IV

- Defined “Appropriate sample”:
  - Samples collected by an animal health official or personnel authorized by the animal health official according to the target species, and type of testing planned; refer to:
    - WI-AV-0020 “Avian sample collection”
Major Changes

- Explained how to collect appropriate swab samples for molecular testing to determine the virus status of the flock following antibody detection in production flocks.

- Explained how to collect appropriate swab samples for molecular testing to determine the virus status of the flock following antibody detection in egg yolk from production flocks.

- Replaced “presumptive positive, presumptive, and suspect positive” throughout the document with “non-negative”
2016 - Revised Uniform Standards

- **Major Changes**

- Defined Non-negative flock/sample/specimen:
  - A flock, distribution system or market from which specimens yielded non-negative results for AI by an official and appropriate test performed at an approved laboratory.

- Any specimen non-negative for AI must be confirmed by the NVSL.

- Confirmation of a non-negative flock or market will be based on results of diagnostic testing and epidemiological data; and collection of additional samples for testing may be needed.
2016 - Revised Uniform Standards

- Major Changes
  - Added environmental PCR option for Post-Cleaning and Disinfection (C&D) environmental samples.
  - For States that are interested in running Post C&D environmental PCR:
    - We encourage them to contact the NVSL for use of a specific virus isolation protocol (NVSL approved internal control to monitor for PCR inhibitors is required).

- On 6/28/2016 Routine surveillance samples were collected from a live bird market in Philadelphia. No signs of clinical illness were noted.

- On 6/29/2016 a Live Bird Market in Pennsylvania was tested and confirmed by NVSL to be positive for LPAI H5.

- This same day a Live Bird Market in NY was also confirmed positive for LPAI H5.

- A common New York distributor was identified and trace out shipments from this distributor had been ongoing.

- There were shipments of Muscovy ducks, delivered to several markets in NY, PA and NJ on shipment dates 6/14, 6/17, 6/21, 6/24, 6/28, and 7/1/2016 from the same distributor in NY.

- Distributor in NY, sourced birds from a supplier in Ontario, Canada.
Pennsylvania (Total of 10 LBMs)

- Depopulation of the PA market in Philadelphia County by USDA and PDA staff was completed the morning of 6/30/2016.
  - 240 chickens, 11 guineas and 35 Muscovy ducks

- Carcasses were disposed of by incineration. An Appraisal & Indemnity Request Form was completed and forwarded to USDA-APHIS-VS.

- PA had 7 additional markets that received these ducks from the index poultry distributor in NY.

- These 7 markets were quarantine by the PA Department of Agriculture and were instructed on sell down procedures and to have all poultry in the market slaughtered within a minimum of 3 days, and start cleaning and disinfection immediately.

- All PA Markets were officially released from quarantine on 7/14/2016
New Jersey (Total of 37 LBMs)

- NJ had traces to 18 LBMs that received ducks from the index poultry distributor in NY.

- **10 LBMs** were confirmed LPAI H5 positive by NVSL
  - 9 linked to index poultry distributor in NY. – positive from Muscovy ducks
  - 1 not linked to the same distributor – positive from guinea fowl sampled during routine quarterly testing.

- The LBMs involved were in the following counties (Passaic-3, Essex-3, Camden- 1, Hudson- 2 and Union- 1)

- New Jersey requested APHIS-VS assistance and District 1 provided resources for a timely testing strategy.

- As of 7-16-16, all H5 LPAI positive markets have completed disease mitigation, had quarantines released, and restocked.
New York (Total of 88 LBMs)

- New York had approximately 58 LBMs that were known to have received or exposed to duck shipments from the same distributor on these dates: 6/14, 6/17, 6/21, 6/24, 6/28 and 7/1/2016.

- Seven LBMs (5 in Kings County, 1 in Queens County and 1 in Bronx County) were confirmed LPAI H5 positive by NVSL.

- New York worked on testing all markets that were exposed or received shipments from this distributor, with a priority on markets that received ducks during the above shipment dates.

- Markets that tested positive were quarantined and allowed a 5 day sell down period followed by a complete depopulation and Cleaning and Disinfection (C&D).

- **New York (Total of 88 LBMs)**
  - NY requested APHIS-VS assistance and District 1 provided resources for a timely testing strategy.
  - **7/14/2016** - Date cleaning and disinfection was completed at all H5 LPAI positive LBMs
  - **7/15/2016** - Date all H5 LPAI positive LBMs had completed disease mitigation, and had their quarantine released by the NYSDAM
  - **7/19/2016** - Date all H5 LPAI positive LBMs were approved to reopen and restock by the NYSDAM

- Most testing of these markets were done at the NAHLN laboratories, in each state, and any positive samples were sent to the NVSL for confirmation

- All samples were negative by the icA H5 rRT-PCR assay targeting the Eurasian H5 gene

- Partial sequence attempted was direct to all specimen:
  - All confirmed H5N2 LPAI – except PA=H5 LPAI confirmed but repeated NA attempts unsuccessful.
  - Preliminary analysis of partial H5s (including PA) and N2s indicates all viruses are highly similar.

- Full genome completed for A/Muscovy ducks/New Jersey/16-021456-4/2016 (H5N2) – all gene segments are of North American Lineages.

- Duck deliveries from the source farm (a farm located in Ontario, Canada), was stopped.

- The existing data establishes a clear link between the Ontario farm and the spread in U.S. LBMs – Same virus. The virus has high identity to the U.S. LBMs (>99%) from full genome sequence.
Epidemiological Investigation of Live Bird Market Positives

- Canada Food and Inspection Agency (CFIA) established an Avian Influenza Control Zone with a 3 km radius around the single confirmed premise confirmed to be infected with LPAI H5N2 in St. Catherines, Ontario.

- The movement of animals, products and equipment in the area were controlled to minimize the spread of the disease. All premises within the control zone were placed under quarantine, and CFIA continued to monitor for signs of disease.

- The poultry industry sector was notified to adopt enhanced biosecurity practices.

- Three other farms owned by the family of the index farm were also placed under CFIA quarantine. Total of 4 premises. One was empty. Owned by different brothers. All one biosecurity unit.

- Enhanced surveillance testing was conducted for a 21 day period. All baseline results on these associated premises had been AI negative. CFIA also implemented dead bird surveillance.
Epidemiological Investigation of Live Bird Market Positives

- **CFIA and VS Conference Call regarding LPAI H5N2 in the U.S. North East LBMs**
  - Are these ducks fully confined (are they all housed completely indoors?) Yes, complete housed indoors. No access to outside.
  - What qualifications does the private practitioner in Canada have to take the samples? He is a very experienced Accredited Veterinarian. Was hired in 2014.
  - How are samples taken (e.g. from representative sample of birds, from cloacae, using proper swabs and media, etc.) 30 random samples. All cloacal swabs.
  - What type of test was performed on the ducks for shipment? PCR.
  - What are the program provisions for a monitored poultry flock in Canada? Test every 3-4 weeks. Owner has volunteered to test 30 random samples every week moving forward.
Epidemiological Investigation of Live Bird Market Positives

- CFIA and VS Conference Call regarding LPAI H5N2 in the U.S. North East LBMs
  - CFIA was asked for a final epidemiology report: The report has not been done. Report will be finalized and shared with USDA when the Post Outbreak Surveillance is complete and CFIA declares freedom to OIE

- The H5N2 viruses from Canada and U.S. LBMs were highly similar across the entire genome.

- Introduction into U.S. LBMs appeared to be due to distribution from a single source based upon available epidemiological and phylogenetic data.
**Education & Outreach**

- **Two Bird Health Webinars & Twitter Chats in FY2016: February and August**
  - Each webinar had 800+ registrants between 200-300 participants
  - The retention rate for the webinars was extremely high.
  - The Twitter chat remains popular. In February, there were 262 tweets and a reach of 1.8 million impressions. In August, there were 230 tweets and a reach of 2.8 million impressions.
  - The webinars and chats included USDA and CDC staff and the Chicken Whisperer.
Social Media

Healthy Harry’s Facebook page grew substantially, gaining more than 3,000 likes. There were just shy of 2 million impressions.

We also saw additional growth from the paid postings we used to promote the webinar/twitter chats and the need for photography for the 2018 calendar. These paid postings gave us close to 2.8 million additional impressions.

We are still looking for content to post, so if you have materials or information you would like to see featured, please share. We will include what we can.

@Healthy_Harry has more than 1,700 followers, gaining more than 200 followers this year.

http://www.aphis.usda.gov/animal_health/birdbiosecurity
Education & Outreach

- Fair Package

- In 2017, we will have fair packages available on a first-come, first-served basis. These will be available as soon as the 2017 calendars are in-hand (anticipated by the end of October).

- No more than 5 packages per year per organization to ensure the materials reach a large audience.

- They will contain calendars, brochures, and fair factsheets.

- If people would like more factsheets, they can print them from the PDFs on our website. Additional calendars can be ordered in quantities of 500 at a time.
Education & Outreach

- Looking Ahead to 2017
  - We are working to complete the 2018 Biosecurity for Birds calendars earlier in the year, at the request of many of our stakeholders. We hope to have them available in summer 2017.
  - We are currently finalizing our 2017 activities. We will continue with our webinars, twitter chats, and social media postings. We are looking to develop additional activities to further engage our target audience.
Education & Outreach

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USDA will handle findings of HPAI in any component of the LBMS the same way it handled detection in a commercial poultry facility.

This includes the finding of HPAI in LBMS environmental samples or when birds are no longer on a LBMS premises.

Specifically, premises with non-negative HPAI results must be quarantined and inventoried.

An epidemiological investigation will be conducted that includes all components of the LBMS.

Rapid and diligent trace back and trace forward investigations of movements from infected hauler, dealer, and wholesaler premises must be implemented.
HPAI in the LBMS – General Guidance

- This tracing will aid in the control of the spread of HPAI virus and limit the impact of the outbreak.

- Infected premises will be depopulated and cleaned and disinfected in accordance with the guidelines available in the HPAI Response Plan: The Red Book (www.aphis.usda.gov/fadprep).

- The results of the epidemiological investigation will determine if additional components of the LBMS, such as haulers’ trucks and dealer and wholesaler facilities require depopulation, disposal, and cleaning and disinfection.

- Control areas will be drawn around infected production premises, according to the HPAI Response Plan: The Red Book.
Conclusion

- State animal health officials, in cooperation with APHIS Veterinary Services, responded swiftly to the detection of H5N2 LPAI in LBMs in New York, Pennsylvania, and New Jersey.

- State animal health officials ordered quarantine and depopulation of the positive LBMs, and cleaning and disinfection procedures were completed with negative results for AI on environmental sampling.

- Epidemiological investigations identified a poultry distributor in New York as the source of birds delivered to all positive LBMs except for one market in New Jersey.

- State measures included quarantine, depopulation, and cleaning and disinfection of epidemiologically linked LBMs and distributor.

- Cleaning and disinfection completion dates were: July 14, 2016, for all positive LBMs in New York; July 14, 2016, for all positive LBMs in New Jersey; and June 30, 2016, for the positive LBM in Pennsylvania.

- The LPAI incidents in LBMs in the three States are considered resolved.
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Thank You For Your Attention!!!