

# 2013 Live Bird Marketing System Working Group Report

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*LBMS WG Report - OSA Meeting – Athens, Georgia, June 18-19, 2013*



# Outline

- Participation
- Uniform Standards/Indemnity Report
- Tracking & Accountability Report
- Surveillance Report
- Program Advancement
- Education & Outreach Report

# 2013 LBMS-WG Meeting- Seattle, WA.

## February 20-21

- 55 Participants (Representing 32 States)
  - 13 USDA, 4 Industry, 1 CDC and 37 State participants
- Welcome/Opening Remarks
  - WA. State Veterinarian– Dr. Leonard Eldridge
  - WA. Department of Agriculture – Dr. Lyndon Badcoe
  - USDA-APHIS-VS- AVIC-WA – Dr. John Huntley

# Uniform Standards

- New and Revised Uniform Standards document was published and effective August 2012
- Some of the changes in the new version of the document include:
  - Addition of a definition for - *cleaning and disinfection*
  - Addition of a definition for - *dealers*
  - Definition of poultry was changed to reflect the OIE standard definition
  - Significant changes were made to the Bird Testing and Recordkeeping section
  - The use of rRT-PCR for testing domestic duck cloacal samples was added to the Official Testing of Specimens section

# Uniform Standards

- VS Guidance (8602.1) – Response, Communications, and Investigation of NAI in Domestic Poultry
  - The document is available to all stakeholders. Drs. Hegngi, Brinson, Pelzel-McCluskey and Fox are always available to answer any questions on this document.
    - Applies only to domestic poultry, as defined by OIE
    - Birds kept in captivity for shows/exhibitions/races are not considered “poultry” under the OIE definition
    - NAI refers to H5 and H7 avian influenza viruses - the contents of this document are not applicable to non-H5, non-H7 avian influenza viruses
    - It is very important to completely and accurately fill out the **10-4 form** when submitting samples to NVSL
    - State response to outbreaks varies by state
    - States must request Federal assistance to obtain indemnity capabilities for LPNAI incidents
  - Important to keep state H5/H7 Initial State Response and Containment Plans up to date and each state should keep their Standing Emergency Disease Management Committee actively involved.

# Uniform Standards

- **Umbrella Cooperative Agreement and FY2013 Avian Health Cooperative Agreement Work Plan -- Dr. Patricia Fox and Dr. Angela Pelzel-McCluskey**
  - One of the objectives of the new umbrella agreement is to decrease the administrative burden of cooperative agreements.
  - All previous commodity agreements are organized into one animal health umbrella agreement.
  - Traceability is kept as a separate cooperative agreement.
  - There is no desire to have labs competitively bid against each other. Laboratory fee structures are very complex.
  - Discussed concept to have the funding move directly to the labs instead of being passed through other entities.

# Uniform Standards

- **Umbrella Cooperative Agreement and FY2013 Avian Health Cooperative Agreement Work Plan -- Dr. Patricia Fox and Dr. Angela Pelzel-McCluskey**
  - There was significant concern of separation of the cooperative agreements from the laboratory funding and requiring the labs to move toward a BPA system -- is not desirable and will make things very difficult.
  - Some of the concerns include:
    - This will create significant accounting burden for the laboratories
    - For some labs, BPA funding will not go into the lab budget and instead will be deposited into a general fund
    - Matching the number of samples the labs bill for and the number of samples the states report will be difficult and may require more reporting or more complex reporting systems
    - Some labs may not be able to adequately recuperate the funds they need to operate because the BPA reimbursement system does not cover laboratory infrastructure, laboratory technician training, participation in proficiency tests, etc.
    - States will no longer be able to work directly with the labs on budget and billing

# Uniform Standards

- **Umbrella Cooperative Agreement and FY2013 Avian Health Cooperative Agreement Work Plan -- Dr. Patricia Fox and Dr. Angela Pelzel-McCluskey**
  - Working Group participants should send comments on this issue to Mrs. Ziegler and Drs. Fox, Pelzel-McCluskey and Hegngi.
  - The new umbrella agreement format is organized into four objectives –
    - Education and Outreach
    - Preparedness and Response
    - Surveillance (active and passive) and
    - Laboratory Diagnostics
  - Each objective must have measureable, quantifiable goals.
  - The Working Group participants requested that Drs. Fox and Pelzel-McCluskey provide the states with a submitted cooperative agreement that they think is exceptional so that the states have an example with a suggested format to follow when writing future cooperative agreements.

# Tracking & Accountability

- No significant issue discussed
- Deleted-----*Premises and other forms of identification will be important to the success of the Program from the revised Uniform Standards document.*

# Diagnostic & Surveillance

- **Risks for Avian Influenza and Newcastle Disease from Wild Water Birds in Washington State -- *Dr. Lyndon Badcoe***
  - Reviewed the Washington State poultry industry components, avian influenza virus, Newcastle disease virus and the Washington State Initial State Response and Containment Plans.
  - In 2011, velogenic Newcastle disease virus was detected in Double Crested Cormorants.
  - Low virulent NDV was detected in Muscovy ducks.
  - Collaborating with APHIS-WS on a retrospective study evaluating NDV in Northern Pintail Ducks and Double Crested Cormorants.

# Diagnostic & Surveillance

## ■ Trans Border Communication for Foreign Animal Disease Preparedness -- *Dr. Brad LeaMaster*

- Discussed the importance of effective communication during incidents involving multiple agencies and described communications as part of the incident command system.
- Communications to the general public should be focused and organized and may be handled by Multi-agency Coordinating (MAC) groups.
- The outbreak of HPAI H7N3 in Canada in 2004 – in an area very geographically close to Washington – was described as an example of the importance of effective communication.
- An Assessment Team composed of members from multiple Washington agencies was assembled to start coordinating protective surveillance.
- IT personnel were important to setting up communications.
  - Communication among the team was essential to the surveillance program.
  - Communications systems should be set up that match the needs of the team and their work in the field.

# Diagnostic & Surveillance

## ■ Laboratory Diagnostic Support for FAD Preparedness and Response

-- *Dr. Rocio Crespo*

- Branch Chief of the Avian Health and Food Safety Laboratory (AHFSL) in Puyallup, WA.
- Lab is part of the Washington Animal Disease Diagnostic Laboratory system. The AHFSL provides a wide range of diagnostic services for the poultry industry, including assays for both avian influenza and Newcastle disease.
- Provided a number of case examples in order to describe how laboratories are involved in response to AIV/NDV outbreaks.
- Laboratory preparedness activities for emergency disease response include:
  - establishing and following standard operating procedures (SOPs),
  - maintaining appropriate facilities and sustaining personnel and equipment surge capacities.
- When large numbers of samples are submitted during an emergency response, a laboratory must maintain:
  - an accurate and efficient tracking system
  - provide rapid turnaround time and have a laboratory information management system capable of handling large volumes of data.
- Personnel may have to work long hours during a response effort and it may be necessary to hire additional personnel very quickly.
- Documenting and updating the emergency response plan for the laboratory will significantly aid in laboratory preparedness.

# Diagnostic & Surveillance

## ■ H7N3 HPAI Outbreak in Mexico 2012-2013 -- *Dr. Angela Pelzel-McCluskey*

- The last outbreak of HPAI in Mexico was in 1995.
- Since that time, Mexico has used vaccination extensively, which hinders their ability to conduct serological surveillance for AIV.
- The state of Jalisco is the location of 55% of all layers in Mexico.
- In June 2012, an H7N3 HPAIV was confirmed by IVPI and sequencing. At this time, 3 premises were known to be infected (commercial layers – 1 million birds on the 3 premises). Mexico geared up for the response as fast as possible.
- By July 3, 24 premises were infected and 987,000 birds were dead or depopulated/slaughtered. By July 9, 31 premises were infected – 86% were layers, 7% pullets and 7% broilers. The control zone was expanded to 60 km (encompassing 26 million birds).
- Three commercial facilities in Mexico were tasked with vaccine production. The vaccine is an inactivated, emulsified vaccine made from an H7N3 LPAI seed strain. The vaccine is a good match for the circulating virus.
- The producers were required to pay for the vaccine. By August 27, 44 premises were infected and 119 million doses of vaccine had been administered at 339 farms.
- Mexico continued to conduct surveillance in all states; however, the surveillance was relatively sporadic.

# Diagnostic & Surveillance

## ■ H7N3 HPAI Outbreak in Mexico 2012-2013 -- *Dr. Angela Pelzel-McCluskey*

- At the time of the USDA visit in November 2012, the last infected premises was detected on August 20<sup>th</sup>. Premises were depopulated using carbon monoxide (from car exhaust).
- On January 3, 2013, two infected flocks were detected in Aguascalientes, which is near the previous outbreak.
  - One of the flocks was clinically affected and the second flock was detected on active surveillance.
  - One of the flocks had been previously vaccinated but with only the first vaccine dose and was not vaccinated with the required second dose.
- As of February 12<sup>th</sup>, a new outbreak in Guanajuato has been detected. Thus far, there are 9 infected premises. Vaccination programs have been instituted.
- There are concerns about the risk to the US.
- Currently, there is no legal importation of poultry or poultry products to the US from Mexico.
- Risks include:
  - movement of hatching eggs from US to Mexico and return of conveyances,
  - illegal movements of non-commercial birds from Mexico to the US and movement of poultry industry workers from Mexico to the US.
- Surveillance for this virus in Mexico is challenging due to issues with diagnostic capabilities and difficulty differentiating infected from vaccinated birds, especially since now both H5 and H7 vaccines are used.

# Diagnostic & Surveillance

## ■ Procedures for Flock Plans, Compliance Agreements and Indemnity Claims in Cases of H5/H7 LPAI in Poultry -- *Dr. Patricia Fox and Dr. Angela Pelzel-McCluskey*

- This document provides information on response procedures for an NAI outbreak in domestic poultry.
- The document includes templates for Situation Reports, Epidemiology Reports and Indemnity Requests.
- This document was designed to streamline paperwork, communications and authorizations between a state and the USDA during an outbreak.
- Discussed compliance agreements and how they coordinate these agreements with producers/contractors.
- Described allowable costs, which are listed in the guidance document.
- A USDA employee must approve all charges prior to approval of the compliance agreement
- Proposed expenses must be reasonable; consult with APHIS-VS with questions on expenses.
- This guidance document should be shared with industry members and state personnel during state poultry meetings or when reviewing Initial State Response and Containment Plans.
- APHIS-VS encourages feedback on this document.

# Diagnostic & Surveillance

- **Diagnostics and Surveillance - Janice Pedersen - NVSL**
- Gave a presentation titled: *NVSL Update on Surveillance Testing and Reporting Form Compliance*
  - Domestic duck cloacal swab samples were validated and added to the rRT-PCR Standard Operating Procedure in 2012.
    - This change was approved by the LBMS Working Group and the NPIP.
    - The approval does NOT include goose cloacal samples.
  - No LPAI H7N2 has been detected in LBMs since 2009.
  - No LPAI H5 viruses were detected in 2010 and 2011.
  - In January 2012, H5N2 LPAI detected in 2 different NY LBMs. Markets were quarantined and birds sold down., depopulated and C&D
  - H5 viral RNA (no virus isolated) also detected in upland gamebirds in OH.
  - H5N2 LPAIV was isolated from backyard ducks in NJ.
    - This flock was adjacent to a LBM and the LBM tested negative.
  - No HPAI viruses were detected in any of the wild bird samples submitted to NVSL.
  - LPAI H5N1 was isolated from wild bird specimens from OH, MN, CA.

# Diagnostic & Surveillance

## ■ **Diagnostics and Surveillance - Janice Pedersen - NVSL**

- Jan gave a presentation titled: *NVSL Update on Surveillance Testing and Reporting Form Compliance*:
  - In FY2013, H5 viral RNA was detected in Muscovy ducks in LBMs in NY in January.
  - In FY2013 an H5N2 LPAI virus was isolated from Muscovy duck swab sample from PA.
  - Currently, there are 243 individuals from 55 labs that are proficiency tested and approved for AIV rRT-PCR and 231 individuals from 52 labs for NDV
  - Labs are reporting an increase in a number of duck cloacal specimens positive by rRT-PCR versus when they were only conducting VI. These samples must be sent to NVSL
  - SEPRL has conducted co-infection studies of AIV and NDV in chickens and turkeys:
    - This co-infection is a problem from the clinical view as well as approach for diagnostic testing
    - The study demonstrates that the capability to detect a virus may be hindered by co-infection with another virus.
    - This possibly explains some of the discordant results between state labs and NVSL where one lab detects AIV and the other detects NDV
    - This study will be published soon and Mrs. Pedersen recommends LBMS Working Group members read this publication.

# Diagnostic & Surveillance

- **Diagnostics and Surveillance - Janice Pedersen - NVSL**
- Jan gave a presentation titled: *NVSL Update on Surveillance Testing and Reporting Form Compliance*
  - Mrs. Pedersen reviewed the approved antibody and virus detection assays used for the LBMS program:
    - AGID is used to detect antibodies to influenza A virus. Occasionally, one sera out of a group will react on the AGID test. These are referred to as single reactors and are reported as AGID positive but are not considered true AIV antibody positive as they cannot be confirmed by HI.
    - ELISA is also used for antibody testing. Any suspect positives can be confirmed by AGID at the state lab or sent to NVSL. If the AGID is negative at the state lab, the sample does not need to be sent to NVSL.
  - Virus isolation is used commonly in the labs but is not well standardized. Mrs. Pedersen suggests we standardize this assay across the state labs/NVSL.
  - Mrs. Pedersen also reviewed rRT-PCR. She reminded the LBMS Working Group participants that this assay will detect live and inactivated virus. Additionally, the cycle threshold (ct) value does not correlate with ability to isolate virus. The current H5 rRT-PCR assay does not detect the Mexico H5 virus (but the matrix assay will detect this virus). NVSL is working on this issue and will add a primer to the assay to detect the Mexico H5 virus.
  - Antigen detection tests are approved by NPIP and LBMS Working Group for testing clinically ill or dead birds only. Flu Detect (Synbiotics/Pfizer) and Vet Scan antigen detections test are available.

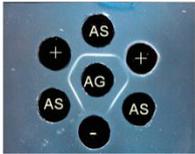
# Diagnostic & Surveillance

- **Diagnostics and Surveillance - Janice Pedersen - NVSL**
- Jan gave a presentation titled: *NVSL Update on Surveillance Testing and Reporting Form Compliance*
- **NVSL 10-4 Submission Form and Reporting of Results**
  - Mrs. Pedersen reminded us to completely fill out 10-4 forms and reviewed the 10-4 form with the Working Group.
  - The following information should be included to assist the USDA in following the correct algorithm for reporting of positive samples:
    - Purpose of surveillance – NPIP or LBMS (write this information either in “purpose of examination”, “examination requested” or “additional data” fields)
    - Type of flock – backyard, LBM, commercial, upland gamebird
    - Initial testing or confirmatory testing
  - All serum samples testing positive for antibodies to AIV by AGID or ELISA should be submitted to NVSL for confirmation.
    - If the sample is H5/H7 antibody negative, the results are reported to the submitter/AVIC.
    - If the samples are H5 or H7 antibody positive, the AVIC is notified. In this case, swabs will be requested for follow-up rRT-PCR and VI testing.
    - If swab samples are rRT-PCR or VI positive, USDA poultry staff are notified.

# Diagnostic & Surveillance

- **The National Poultry Improvement Plan (NPIP) - *Dr. Denise Brinson***
- Provided an overview on NPIP administration, structure of subparts 145,146, 147 and official classifications.
- The NPIP Biennial Conference was held in 2012 in New Orleans, LA and had the largest attendance to date.
- At the conference, 18 of 21 proposed changes and 5 of 7 program standards were adopted. Important changes to note include the following:
  - Testing procedures will be moved from the 9CFR to NPIP Program Standards to allow new tests and changes to tests to be incorporated more quickly
  - IDEXX MG/MS PCR was approved
  - Applied Bio systems Micro SEQ Salmonella species real-time PCR and Salmonella Enteritidis real-time PCR assays were approved
- The charter of the General Conference Committee was approved through October 2014. Upcoming NPIP Diagnostic Workshops include Salmonella (March), Mycoplasma (April) and Avian Influenza (August).
- The Official State Agency/General Conference Committee meeting will be June 18-20, 2013 in Athens. The next Biennial Conference will be in 2014 in Charlotte, NC.
- Directories and most important information are posted on the website.

# Tests Approved for the Surveillance of NAI in the LBMS



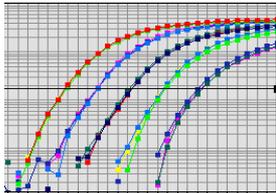
AGID



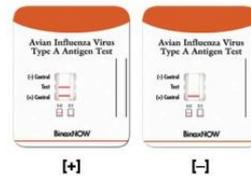
Virus Isolation



ELISA

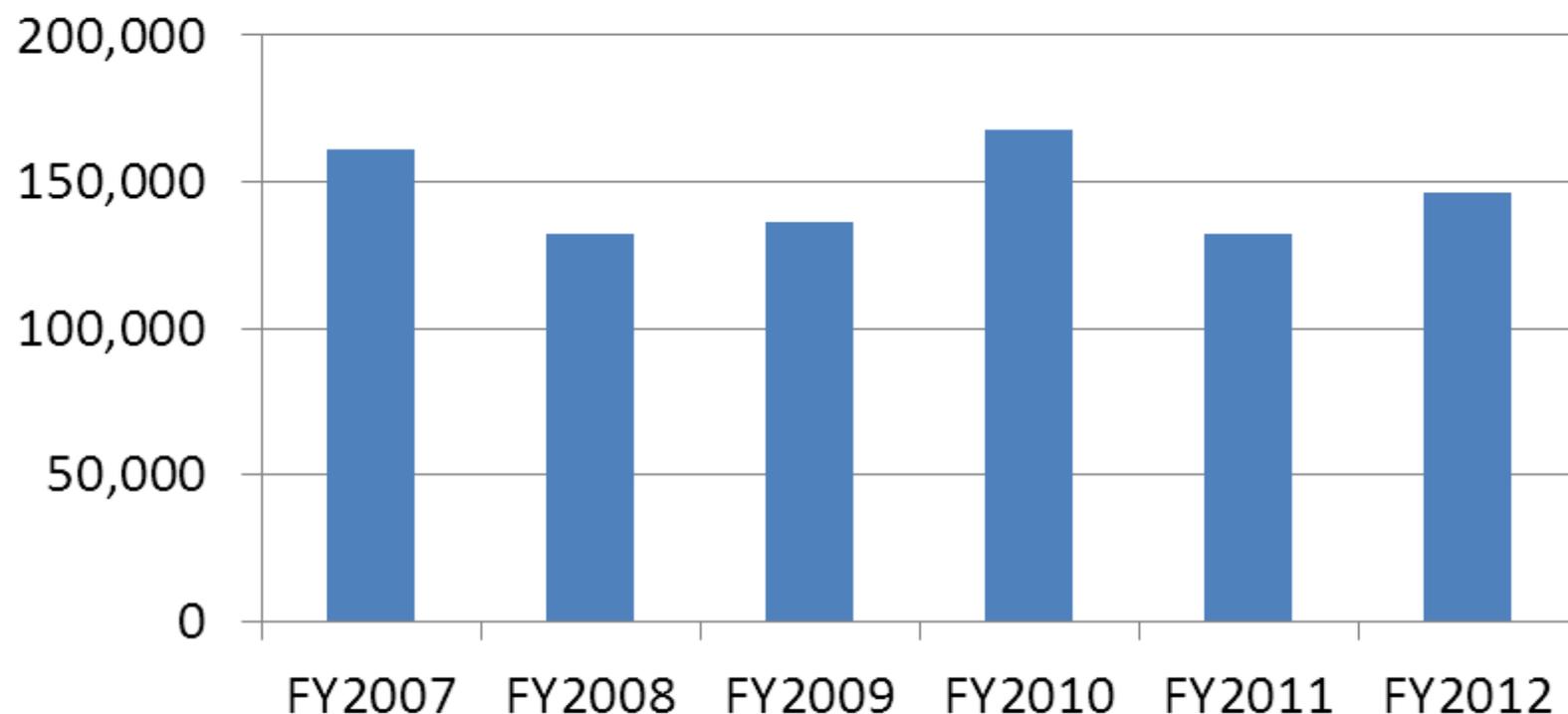


Real-time  
RT-PCR

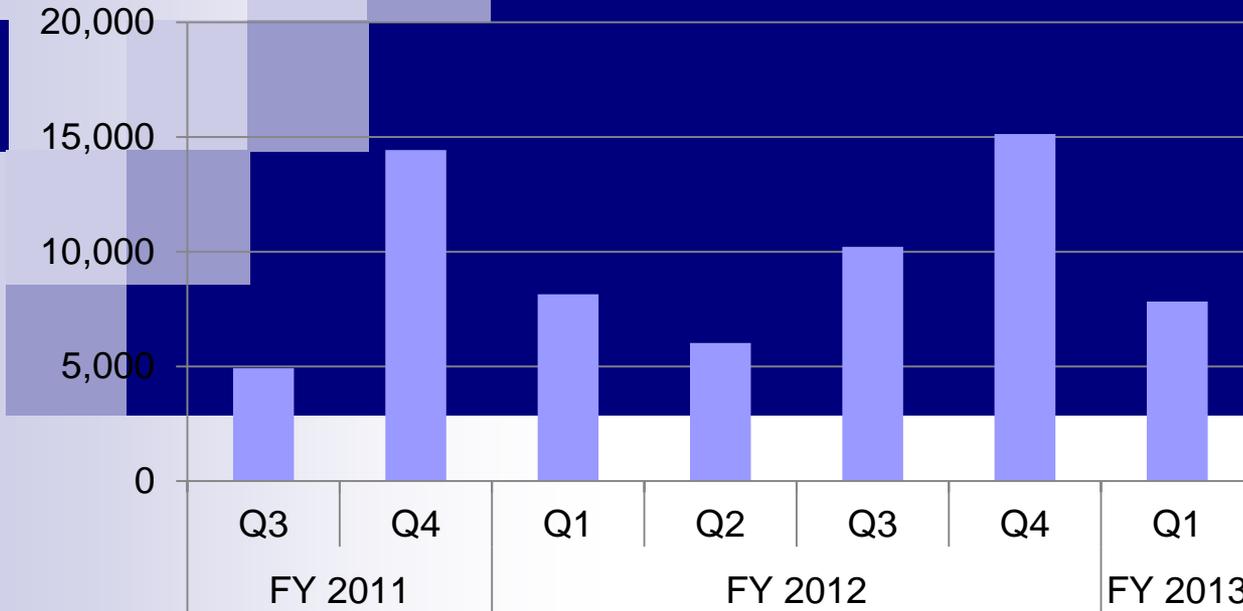


Antigen detection  
(ACIA)

# LBMS Number of Tests Performed FY 2007 - FY 2012

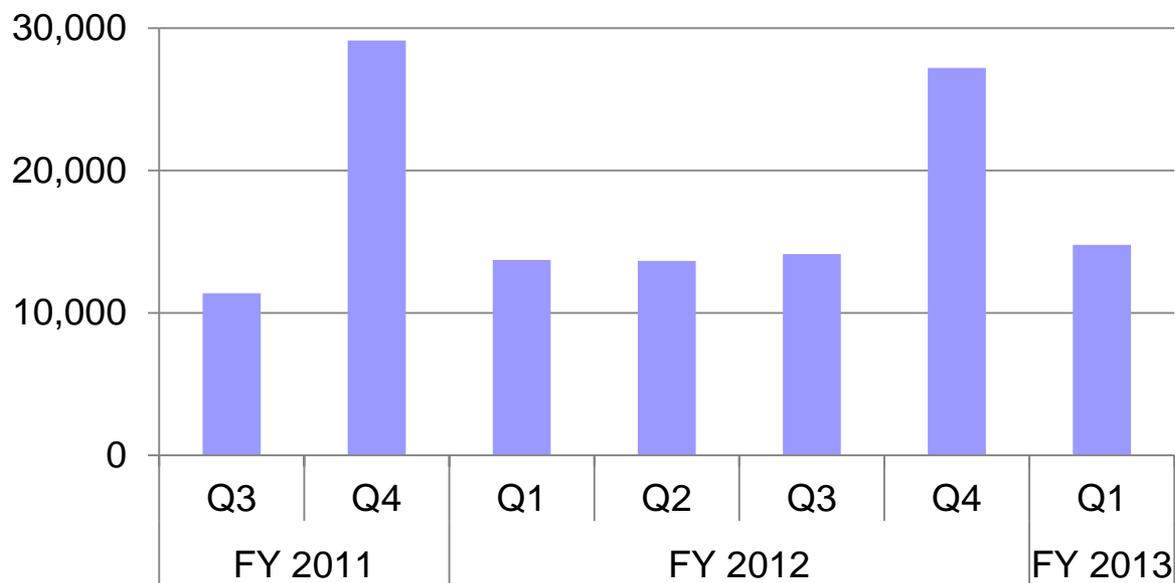


## Number of tests performed on backyard birds by Quarter FY 2011 Q3 - FY 2013 Q1



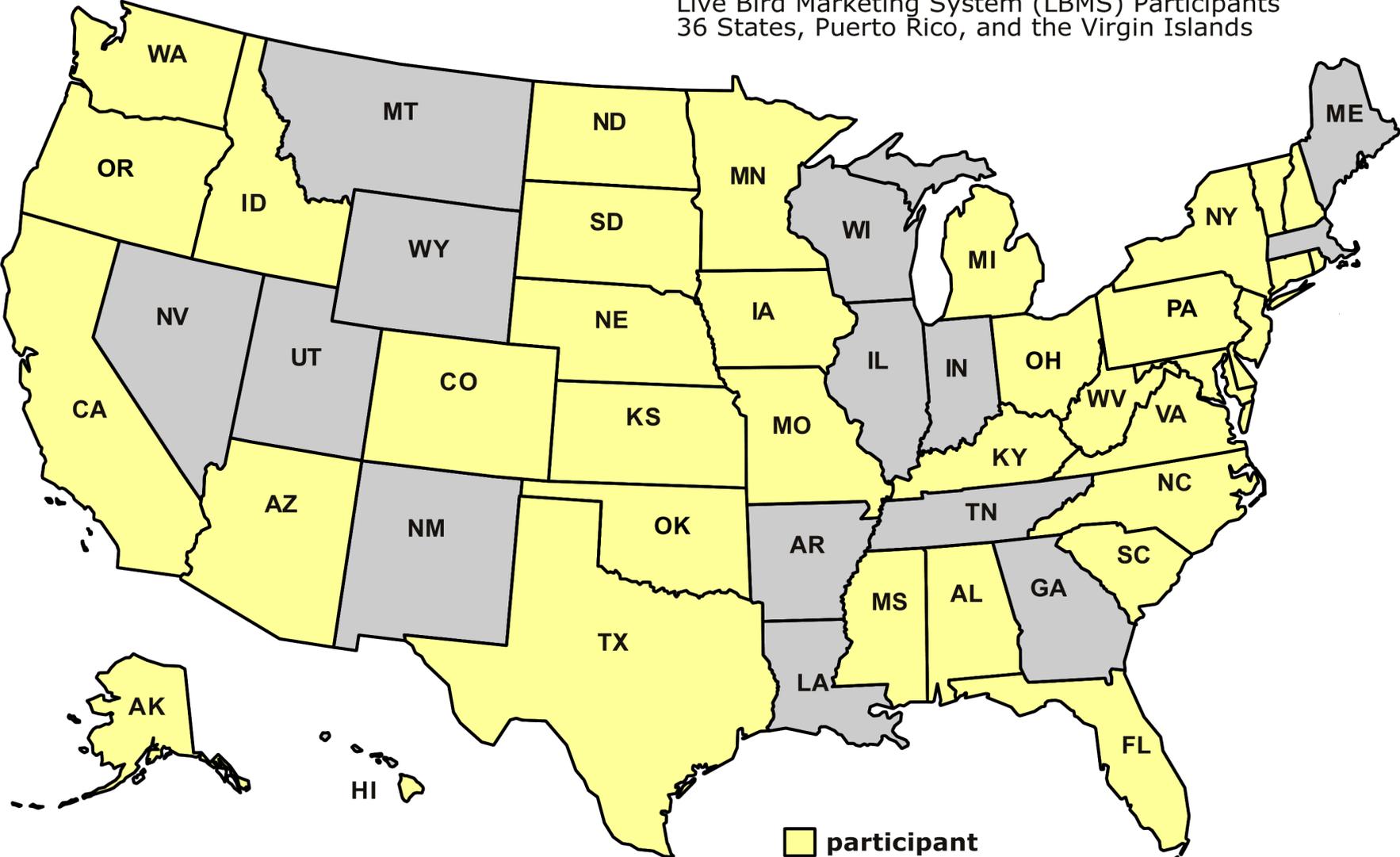
Number of Tests Performed		Total
FY 2011	Q3	4,923
	Q4	14,432
FY 2012	Q1	8,146
	Q2	6,022
	Q3	10,213
	Q4	15,128
FY 2013	Q1	7,828

## Number of backyard birds tested by Quarter FY 2011 Q3 - FY 2013 Q1



Number of Birds Tested		totals
FY 2011	Q3	11,380
	Q4	29,131
FY 2012	Q1	13,722
	Q2	13,656
	Q3	14,135
	Q4	27,201
FY 2013	Q1	14,775

Live Bird Marketing System (LBMS) Participants  
36 States, Puerto Rico, and the Virgin Islands



■ participant  
■ non participant

# Program Advancement

- **Agriculture Research Services Update (ARS):** - *Dr. Darrell Kapczynski*
- Review of recent SEPRL research studies:
  - Vaccination was used as a control measure during the H7N3 outbreak in Mexico.
  - Introduction of this virus was likely from a wild bird source.
  - This virus is very unique because the virus shifted from LP to HP by incorporating part of the chicken host genome.
  - Birds infected with this virus show significant clinical signs of illness including cyanosis and hemorrhage in the comb and wattle, swelling of the face, significant mucus discharge, hemorrhage on the shanks and hemorrhages visible on various organs.
  - The viral titer in tissues is very high.

# Program Advancement

- **Agriculture Research Services Update (ARS):** - *Dr. Darrell Kapczynski*
- Review of recent SEPRL research studies:
  - SEPRL conducted a study to evaluate inactivated LPAI isolates (including current US H7 master seed isolates) as vaccines against the Mexico H7N3 virus.
  - All of the vaccines performed well in challenged chickens.
  - For all vaccines, with the exception of one non-homologous vaccine from a quail, the birds were protected. All vaccines significantly decreased viral shedding (some to zero shedding) and reduced clinical signs of illness.
  - The H7N3 Mexican vaccine (origin A/Cinnamon Teal/Mexico/2817/2006 H7N3) was also evaluated. This vaccine is highly protective and significantly reduces viral shedding.

# Program Advancement

- **Synbiotics Updates:** -- *Kimberly Sprout*
- Provided an overview of Synbiotics competitive ELISA for AI
  - It can be used on multiple avian species and other animals
  - The results are very comparable to AGID
  - The test can pick up antibodies 5 days post infection.
- There is also Flu Detect test kits to detect AI virus
  - This test can be performed using tracheal, oropharyngeal or cloacal swab samples
  - It is recommended to pool 5 or 6 swabs per test
  - This test is best used as a flock test or for sick/dying birds.
  - Make sure to handle samples appropriately.
- Recently, Synbiotics became part of Pfizer. The company has spun off to a company called Zoetis.
- Kim's email is changing to [Kimberly.Sprout@zoetis.com](mailto:Kimberly.Sprout@zoetis.com)

# Education & Outreach

## ■ LBMS & Public Health: Human Salmonella Infections Associated with Live Bird Markets

-- Dr. Stacey Bosch

- Provided a review on Salmonella in the United States:
  - Salmonella is the most common cause of bacterial foodborne illness in the US.
  - Salmonella isolates are compared using PFGE and the Pulse-Net database.
  - Pulse-Net is the national molecular subtyping network for foodborne disease surveillance.
- *Salmonella Schwarzengrund* was isolated in 2007 (62 cases, PFGE patterns 0225, 0240, 0118),
- 2008-2011 (485 cases, PFGE pattern 0240) and
- 2012 (140 cases in 11 states – 51% in New York City, PFGE pattern 0240)
  - A new PFGE pattern (0323) of *Salmonella Schwarzengrund* was detected in 2012 in 16 cases from 4 states (GA, IL, MD, MI).
  - This serotype was associated with live bird markets because some of the humans infected with this serotype shopped at live bird markets in MI and Chicago.
- Shopping at LBMs appears to be a unique risk factor for Salmonella infection in humans:
- Illness is associated with eating meat purchased at LBMs.
- Risk factors potentially include :
  - poor food handling practices,
  - use of riskier body parts for consumption
  - processing birds at home and consumption of poultry products from freshly killed birds
- The CDC is drafting a manuscript highlighting Salmonella outbreaks in the US associated with LBMs and is collaborating with partners to develop educational materials for market consumers.
  - Dr. Bosch and Dr. Hegngi encourage state collaboration with USDA and CDC on the development of these educational materials.

# Education & Outreach

- **NAHMS Urban chicken study & plans for 2013 layer study -- Dr. Lindsey Garber**
- Urban chicken prevalence studies were conducted in Los Angeles (2010), Miami (2012), Denver (2012) and NYC (2012).
- The study was conducted by mail with a follow-up phone survey. Overall, around 1% of urban residences in the four cities owned chickens.
- An additional 5% said they planned to get chickens in the next year. Just fewer than 50% of respondents were in favor of a law allowing for ownership of chickens in their community.
- Around 65% of people surveyed believe that eggs from home-raised chickens are healthier than eggs purchased in a grocery store.
- A second survey study was conducted in feed stores in LA, Denver, NYC and Miami.
- In 2013, a study will be conducted to address *Salmonella Enteritidis* in layer flocks.
  - The study will evaluate farm management practices relevant to SE, estimate prevalence of SE and investigate risk factors for SE.
  - The study will be in survey format and will not include biological sampling.

# Education & Outreach

## ■ Poultry Handling and Transportation Quality Assurance (PHTQA) - Dr. Hegngi for Dr. Chrislyn Wood:

- This project is a collaborative effort between personnel from Pennsylvania State University, Diamond V and USDA-APHIS-VS.
- The program involves certification of training for poultry transporters and catch crews.
- The training covers biosecurity, disease recognition, AVMA approved methods of euthanasia, transportation, safety, emergency response and media relations.
- Training materials are available in English and Spanish.
- Currently, there are 14 trainers nationwide (via a train the trainer system). A written test is required for the certification. Currently there are 32 companies with at least one person certified and a total of 341 individuals are PHTQA certified.
- New for 2013: a 2nd edition of the PHTQA manual is planned if funding is achieved.
  - Planning to include updates in turkey handling and biosecurity Euthanasia guidelines will also be updated when the AVMA releases its new version in 2013
- Penn State University continues to be the 3rd party certifier Penn Ag Industries Association will now be the administrator of PHTQA with possible assistance of US Poultry & Egg Association PHTQA is now funded entirely from private sources, since the AI CAP grant via USDA NIFA has been completed
- The website address for this program is [www.poultryhandling.org](http://www.poultryhandling.org).

# 2012-2013 Education & Outreach Campaign



# Education & Outreach

- **The FY2013 Biosecurity for Birds campaign worked off of a smaller budget than previous years, but was still able to produce a high level of outreach to backyard and hobby bird owners. Highlights include:**
  - Creation, printing and distribution of 2013 Biosecurity for Birds calendars
  - Development of a series of factsheets to use with the scaled back fair outreach program
  - Movement of Bird Health Awareness Week to the late spring timeframe, which better coincides with the start of chicks season
  - Development and execution of a webinar for Bird Health Awareness Week using 3 hosts (Mr. Andy Schneider, Dr. Martin Smeltzer and Dr. Claudia Dunkley)
  - Launch of a photo contest to obtain new photography for the 2014 calendar

# Education & Outreach

## ■ Social Media :

- @Healthy\_Harry continues to tweet to spread the word about healthy birds and our activities and gain followers.
- We continue to promote the Healthy Harry and Dr. Kate YouTube videos and walk-on videos on our website.
- The Chicken Whisperer, who is back for another year as spokesperson, continues to support us and our work through his vast social media network and on his radio show.
- [http://www.aphis.usda.gov/animal\\_health/birdbiosecurity](http://www.aphis.usda.gov/animal_health/birdbiosecurity)

# Education & Outreach

## ■ Fair Package:

- We distributed all 45 available fair packages in 2012, with additional requests.
- For 2013, we are revamping the package to allow us to continue providing them.
- Instead of brochures, we are currently creating a series of 1-page (front and back) designed factsheets.
- We will make 45 printed packages available, but will also place the PDFs on the web so folks can print their own as needed.



# Biosecurity Tips:

## SIX WAYS TO PREVENT POULTRY DISEASE

If you are a backyard or pet bird owner, you know your birds depend on you. There are some basic practices you can follow to help keep them healthy.

### 1. Keep Your Distance.

Restrict access to your property and your birds. Consider fencing off the area where you want to form a barrier between "clean" and "dirty" areas. The clean area is the immediate area around your birds, and the dirty or buffer area must be considered to be infected with germs. Birds appear healthy and disease free.

Allow only people who take care of your birds to come into contact with them. Your car should not attend bird shows or other events where birds are present. If visitors to your property want to see your birds, be sure they wash up first and clean their shoes. Better yet, keep your visitors from wearing shoes. If your visitors have birds of their own, do not let them near your birds.

Game birds and migratory waterfowl should not have contact with your flock because they carry germs and diseases. If your birds are outdoors, try to keep them in a screened area.

### 2. Keep It Clean.

You wouldn't think of tracking dirt and disease into your house, where it could infect you. Don't do that to your birds either! Germs can be picked up on shoes and clothing and brought from one area to another.

To keep your birds "germ-free," keep a pair of shoes and a set of clothes to wear only around your birds. Many people keep these clean clothes in a covered pail at the entrance to their bird area. Clean and disinfect your shoes and launder your clothes before you check on or work with your birds.

Scrubbing your shoes with a long-handled scrub brush and disinfectant will remove droppings or debris. Clothes should be washed in a washing machine with laundry detergent. Wash thoroughly with soap, water, and a disinfectant before entering your bird area.

Keep cages, food, and water clean on a daily basis. Clean and disinfect equipment that comes into contact with your birds or their droppings. That includes tools such as feed scoops, shovels, and brooms. All manure must be removed before disinfectant can work, so clean surfaces and water first. Properly dispose of dead birds by burial or incineration or take them to a local facility. Check on local ordinances for acceptable disposal methods.

### 3. Don't Haul Disease Home.

Car and truck tires, poultry cages, and equipment can all harbor "germs." If you travel to areas where other birds are present, or even to the feed store, be sure to clean and disinfect your equipment before you return to your property.

Taking some of your birds to a fair or exhibition? Keep those birds separated from the rest of your flock and watch them for at least 2 weeks after the event to ensure that they didn't pick up any germs. New birds should be kept separate from your flock for at least 30 days before putting them back with the rest of your birds. To prevent disease, it is best not to mix young and old birds or birds from different sources.



# Biosecurity for the Birds:

## AVIAN INFLUENZA

Avian Influenza (AI) or "bird flu" is a contagious disease that can infect all types of birds. All bird owners should be aware of the avian influenza basics and know what to do about it. After all, you are the best protection your birds have.

### Know the Signs of AI

- Sudden death without clinical signs
- Lack of energy and appetite
- Decreased egg production and/or soft-shelled or misshapen eggs
- Swelling of the head, eyelids, comb, wattles, and hocks
- Purple discoloration of the wattles, combs, and legs
- Nasal discharge, coughing, sneezing
- Incoordination
- Diarrhea

### How AI Spreads

AI spreads quickly by bird-to-bird contact. Viruses can be carried by manure, equipment, vehicles, egg flats, crates, clothing, shoes, and people who have come in contact with the virus. Migratory waterfowl can also carry the disease.

### Practice Backyard Biosecurity

To prevent the possible spread of disease:

- Restrict traffic onto and off your property.
- Disinfect shoes, clothes, hands, egg trays or flats, crates, vehicles, and tires.
- Avoid visiting other poultry farms or bird owners.

More >

veterinary Services



APHIS • USDA

# Education & Outreach

## Looking Ahead to 2014:

We'll make the most of what resources we have available.

We do not know if there will be 2014 calendars.

Our other efforts will continue.

# Education & Outreach

Questions?



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# Live Bird Market CE Training Course

## *Course Objectives/Goals*

1. Understand how to properly evaluate and define Live Bird Marketing System (LBMS) stakeholder activity and compliance with applicable state laws, program standards, and licensing and registration requirements through audit and evaluation of paper records
2. Define important concepts of poultry respiratory diseases and national surveillance;

# Live Bird Market CE Training Course

## *Course Objectives/Goals (continued)*

3. Identify and evaluate biosecurity and disease risks in the auction and flea market segments of the LBMS;
4. Demonstrate the ability to perform proper techniques of bird restraint, swabbing, necropsy and blood sampling;
5. Provide education and outreach information on appropriate mitigation techniques, e.g., cleaning, disinfection, best practices in biosecurity, and transport to retail;
6. Demonstrate knowledge and risk communication skills during a “teach back” session.

## Live Bird Market CE Training Course

### *Three Day Training that consists of:*

- ✓ Lectures
- ✓ Laboratory
- ✓ Field Trip

# ***2011 LBM CE Training Course (NCSU)***

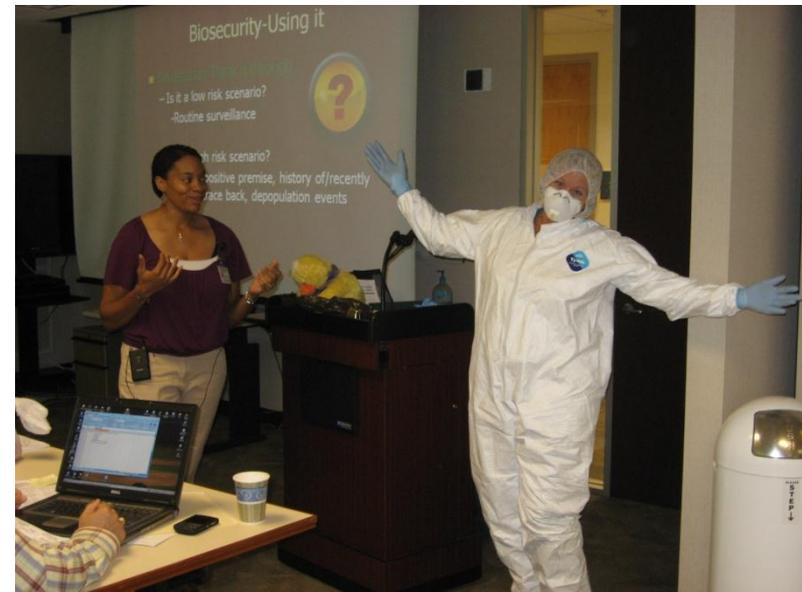
## ***Day One***

- ✓ Overview of the USDA-APHIS Notifiable Avian Influenza Surveillance Program
- ✓ Overview of Pastured Poultry
- ✓ Overview of NAI Cooperative Agreement
- ✓ Biology of Avian Influenza
- ✓ Respiratory Diseases of Poultry (excluding AI)
- ✓ National Veterinary Services Laboratories (NVSL) Update on Surveillance Testing
- ✓ North Carolina Avian Influenza Response Plan
- ✓ Live Bird Market System (LBMS) Working Group Report

# 2011 LBM CE Training (NCSU)

## Day Two

- ✓ Biosecurity and Records Auditing
- ✓ Investigation and Enforcement Services (IES)
- ✓ Cultural and Religious Awareness
  - • Hmong Culture and Customs
  - • Halal and Kosher Slaughter
  - • Amish and Mennonite



# ***2011 LBM CE Training (NCSU)***

## ***Day Two Rotations***

- Wet Lab – NC State College of Vet Med
  - ✓ Handling
  - ✓ Swabbing
  - ✓ Sampling
  - ✓ ACIA Testing
  - ✓ Euthanasia and Necropsy



# 2011 LBM CE Training (NCSU)

## Laboratory Exercises



# 2011 LBM CE Training (NCSU)

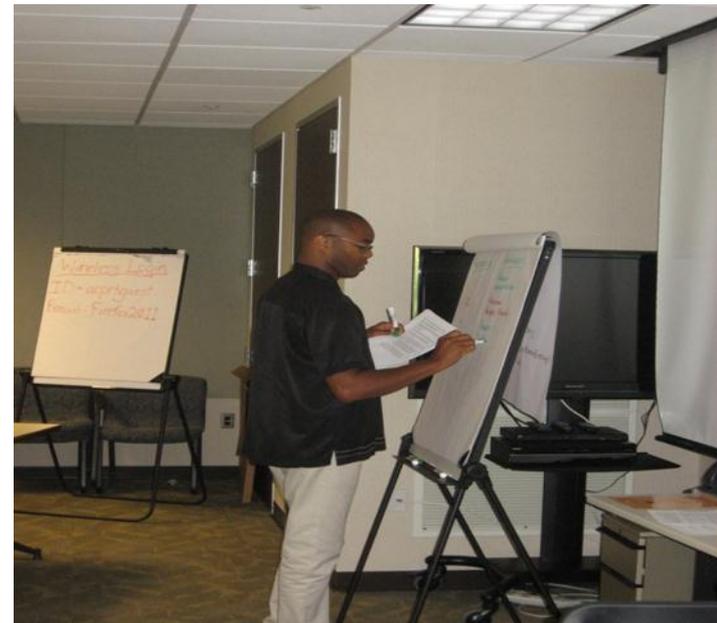
## Laboratory Exercise



# **2011 LBM CE Training Course(NCSU)**

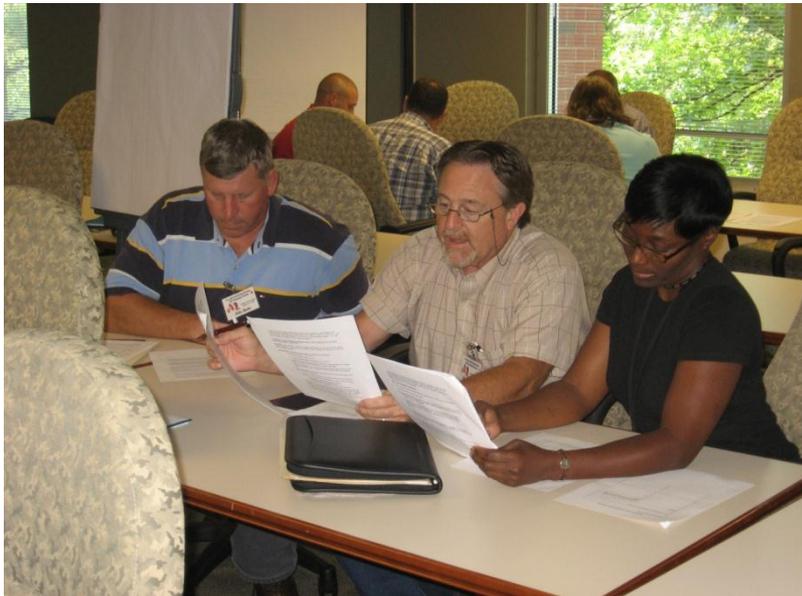
## *Day Two Rotations*

- Communication Teach Back –NC State Centennial Campus
- Dr. David Ewey



# ***LBM CE Training Course***

## ***Communication Teach Back***



# **LBM CE Training Course**

## *Communication Teach Back*



# 2011 LBM CE Training Course(NCSU)

## Day Three

- ✓ Sylvan Heights Waterfowl Park Tour - Scotland Neck, NC
- ✓ Lectures
  - Basic Epidemiology 1
  - Basic Epidemiology 2
  - Risk Communication

# Sylvan Heights Waterfowl Park



# Sylvan Heights Waterfowl Park



# Sylvan Heights Waterfowl Park



# Sylvan Heights Waterfowl Park



# LBM CE Training Course

## Day Three Lectures



**The 2013 Course will be held at Western University of Health Sciences,  
College of Veterinary Medicine, Pomona, CA. August 13-15, 2013**

# QUESTIONS?



**Thank you!!**