

# National Poultry Improvement Plan

## General Conference Committee Meeting



### NVSL Outcome

### 5 vs 11 swabs: RT-PCR and ACIA

Mary Lea Killian  
Microbiologist, Diagnostic Virology Laboratory  
U.S. Department of Agriculture  
Animal and Plant Health Inspection Service  
Veterinary Services  
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# 9 CFR §145.14(d)

## Official tests for avian influenza

- Antibody detection tests
  - ELISA
  - AGID
- Agent detection tests
  - RRT-PCR
  - Type A influenza antigen capture immunoassay



# Antigen detection tests

- RRT-PCR
  - Must be conducted using the NVSL official protocol for RRT-PCR (SOP-AV-0001)
  - Must be conducted by personnel who have passed an NVSL proficiency test
  - All matrix positive results forwarded to NVSL for confirmation (regardless of subtyping/pathotyping RRT-PCR results)
- ACIA
  - USDA-licensed kits conducted according to recommendations of manufacturer or producer
  - Positive results forwarded to NVSL for confirmation
  - No NVSL SOP—only manufacturer kit recommendations



# Swab pooling—ACIA

- Synbiotics FluDetect™ Test Strip

## VII. GENERAL PRECAUTIONS

7. Use a separate swab for each sample.

Swabs with wooden handles or containing calcium alginate may interfere with the test and cannot be used.



# Swab pooling—ACIA

- Abaxis *VetScan*® Antigen Test Kit

**MATERIALS NOT PROVIDED**

“Vials or tubes containing 0.5-3.0 ml of transport media”

**3.0 ml will not support pooling 11 swabs**



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# Swab pooling—RRT-PCR

- NVSL SOP for RRT-PCR testing
  - Revised 08 April 2013
- Pooled swabs—11 maximum in 5.5 ml media
- Tube size was not increased
- Requires swirling swab in media, squeezing excess media from swab, and discarding swab

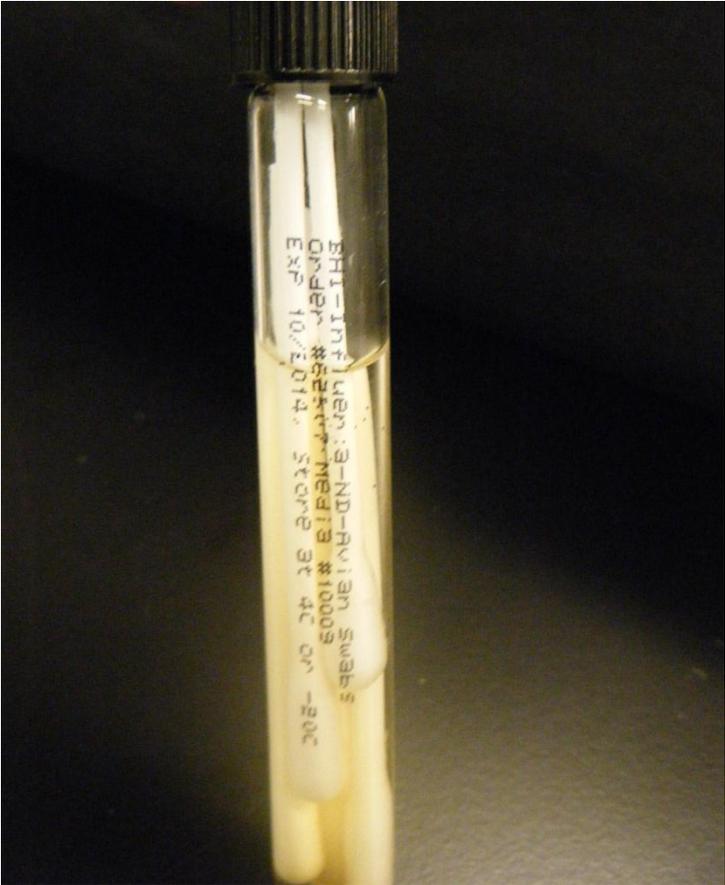


# Swab pooling—RRT-PCR

- Tubes received at NAHLN lab containing more than 5 swabs in the tube are required to be reported as “Not Tested”
  - Insufficient space in tube for all swabs to be immersed



# 5-swab vs. 11-swab pools



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# 5-swab vs. 11-swab pools



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# Swab pooling—RRT-PCR

- Tubes received at NAHLN lab containing more than 5 swabs in the tube are required to be reported as “Not Tested”
  - Insufficient space in tube for all swabs to be immersed
- Language for reporting in SOP-AV-0001, Section 5.1.5
  - Specimen tubes containing more than 5 swabs in the tube will be reported as “Not Tested” since there is insufficient space in the tube for all swabs and for the swab tip to be immersed in the VTM. If tubes are submitted with swabs, no more than 5 swabs are permitted.
  - This also applies to larger tubes supplied to field by state NAHLN laboratory



# Swab pooling—RRT-PCR

- Negative results from dry swabs or swabs not collected in VTM required to be reported as “No Test”.
- Reported result also applies to Virus Isolation testing

# Sample Collection—WI-AV-0020

- Use of saline (PBS) for VTM
  - No protein in media
  - Poor virus recovery
  - Last resort
- Dry swabs or swabs received in saline will be tested with a disclaimer that negative results are not valid



## BHI tubes—5.5 ml availability

- NVSL will deplete stock of 3 ml tubes
  - FAD kit replacement tubes 2013Q2 were 3 ml
- Shipping 5.5 ml volume exclusively
- 40 tubes/box
- Instructions for pooling inside each box



# Swabs—flocked vs. spun

- Flocked swabs show better virus recovery rate (Spackman)
- Spun swabs \$0.25 vs flocked swabs \$1.00
- NVSL will accept samples collected using either type of swab material

# FAD Investigations

- Will switch to 5.5 ml media volume
- NVSL is investigating options for flocked swabs, but will continue to provide spun swabs
- When in doubt, follow the FAD manual!

# Questions?



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# H7N9 in China

- US Commercial Poultry Surveillance Program
  - Current testing allows us to detect all avian influenza, regardless of strain
  - NVSL/CDC working to ensure diagnostics in place to identify an introduction of A(H7N9)



# H7N9 in China

- USDA works hard to prevent introductions of avian influenza from China or other affected countries
- Prohibit import of poultry commodities from countries with HPAI
- All US commercial flocks are tested for AI through industry, State, and Federal efforts

