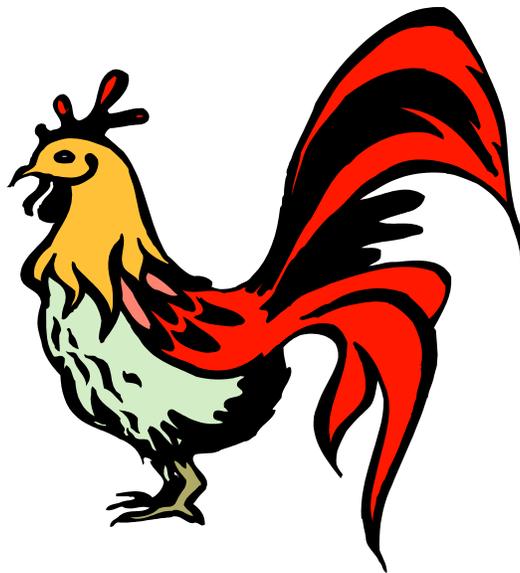


CERTIFIED POULTRY TECHNICIAN

USER GUIDE

Revised December 4, 2016



*Contact laboratory for
testing fee schedule before
sample submission!! There
is a charge for testing of
poultry.*

CERTIFIED POULTRY TECHNICIAN USER GUIDE

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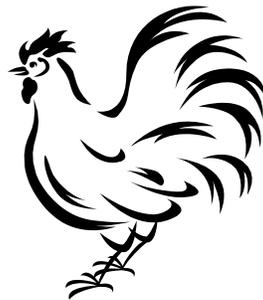
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Certified Poultry Technician Course User Guide

AGENDA

- ◆ Welcome
- ◆ Introductions
- ◆ Overview of the Department of Agriculture's Role for the Poultry Industry
- ◆ Review of Course Objectives
- ◆ Review of Continuing Education Requirements
- ◆ Review of User Guide and Reference Materials
- ◆ *Break*
- ◆ Power Point Presentation
- ◆ Hands-On Training for:
 - Techniques for Sample Collection, Handling, and Submission (refer to the CPT User Guide)
 - ◆ Blood samples
 - ◆ Tracheal, oropharyngeal, and cloacal swabs
 - Techniques for collection of samples and interpretation of results for the Pullorum Rapid Whole Blood Agglutination Plate Test
- ◆ Skills Check
- ◆ Evaluation of the Course



Course Objectives

The Pennsylvania Department of Agriculture Certified Poultry Technicians Course is designed to provide trained technicians for collection of samples from poultry for official testing purposes. These samples may be necessary for various reasons, including testing for large commercial flocks to meet poultry health program standards or for individual birds to gain entry into exhibitions. The importance of proper sample collection, handling, and submission of these samples cannot be stressed enough.

In addition, technicians will be trained to recognize symptoms of diseases in poultry, reporting protocols for suspected disease, and proper biosecurity practices to reduce the risk of spreading disease. Certified Poultry Technicians (CPTs) are vital to the protection of avian health through identifying and reporting birds suspected to be infected with reportable disease and through proper sample collection and submission.

Pennsylvania Certified Poultry Technicians are not authorized to collect samples from poultry outside of Pennsylvania. Certified Poultry Technicians collecting samples for the NY/NJ live bird market system must first be pre-approved and added to the Department's list of CPTs approved to sample for the live bird market system.

The safety of technicians is paramount and can be promoted through learning proper sampling techniques and biosecurity practices.

At the completion of this course, the individual should have the skills and knowledge to:

- ◆ Recognize signs of avian disease.
- ◆ Report suspected reportable disease to the Department.
- ◆ Be familiar with precautions necessary to reduce the spread of disease.
- ◆ Develop and follow proper biosecurity and cleaning and disinfection protocols.
- ◆ Be familiar with proper personal protective equipment and personal safety.
- ◆ Be familiar with the Department's avian health programs and response plans, including testing requirements.
- ◆ Be competent with blood and swab sample collection, handling, and submission.
- ◆ Be competent performing and interpreting the Pullorum Rapid Whole Blood Agglutination Plate Test.
- ◆ If sampling birds for entry into the NY/NJ LBMS, be competent in filling out PICs and understand the rules for entry into the LBMS.

The Pennsylvania Department of Agriculture may monitor any certified poultry technician's performance, including sample collection, sample handling, and record keeping.

Please note: If you are not on the Department's emergency email notification system, please provide your email address to Stacy Rakocy at srakocy@pa.gov. You will be notified of important updates, issues, and events as needed via email. In addition, please include your email address on your license renewal application.



pennsylvania

DEPARTMENT OF AGRICULTURE

Commonwealth of Pennsylvania
Department of Agriculture
Bureau of Animal Health and Diagnostic Services
2301 N. Cameron St.
Harrisburg, PA 17110
Telephone: 717-783-6897
Fax: 717-787-1868

APPLICATION FOR CERTIFIED POULTRY TECHNICIAN LICENSE

Instructions:

- Please Print Clearly.
- Applicants must be at least 18 years of age.
- Please complete every question. Do not leave any blank spaces. Put “none” or “n/a,” as appropriate, in any space you would otherwise leave blank.

1. NAME: _____
Last Middle Initial First

2. ADDRESS: _____
Street or Box Number

_____ City State Zip

3. COUNTY: _____

4. TELEPHONE NUMBER: _____

5. FAX NUMBER: _____

6. E-MAIL ADDRESS: _____

7. CURRENT AGE: _____ 8. DATE OF BIRTH: _____

9. ARE YOU A CITIZEN OF THE UNITED STATES OF AMERICA? Check one: Yes: _____ No: _____

10. HAVE YOU EVER BEEN CONVICTED OF A CRIME OTHER THAN A SUMMARY TRAFFIC CITATION? (note: for purposes of this response, please consider a criminal “conviction” to apply to any crime with respect to which you were found guilty, or entered a guilty plea, or entered a plea of *nollo contendere* / “no contest”.) Check one: Yes: _____ No: _____

If you checked "yes," please provide the following information with respect to **each** criminal conviction for other than a summary traffic citation (note: for purposes of this response, please attach additional pages, if needed):

- a. Location and Name of Court: _____
- b. Criminal charge/offense: _____
- c. Date of Violation: _____
- d. Description of Violation: _____
- e. Sentence Imposed: _____
- f. Whether you are currently on parole or probation for this offense and, if so, until when: _____

11. DESCRIBE THE HIGHEST LEVEL OF EDUCATION YOU HAVE COMPLETED:

- a. If elementary school, highest grade completed: _____
- b. If high school, highest grade completed: _____
- c. If college, number of years completed, and any degrees awarded:

- d. If postgraduate education, number of years completed, and any degrees awarded: _____
- e. Other education: _____

Verification: I understand that this document is an application to the Pennsylvania Department of Agriculture for a Certified Poultry Technician License. I offer the foregoing (and any attachments) in support of this application. All statements in this application are true and correct to the best of my knowledge, information and belief; and I make these statements subject to the penalties of 18 Pa.C.S.A. section 4904 (relating to unsworn falsification to authorities).

SIGNATURE OF APPLICANT: _____
(DO NOT PRINT)

DATE: _____

*What classification best describes your work as a CPT?

Backyard (exhibition) poultry ; **Commercial poultry** ; or
Live bird market system poultry

*Would you like to have your contact information posted on the PDA website to be available to the public? Yes: _____ No: _____

To register for CPT training, please forward this completed application to Stacy Rakocy (srakocy@pa.gov) at the Bureau of Animal Health and Diagnostic Services, 2301 N Cameron St, Harrisburg PA 17110. Fax number: 717-787-1868.

After classroom and field training is successfully completed, please forward the **completed skills checklist and a check in the amount of \$10.00** (made out to Commonwealth of PA) to Stacy Rakocy at the Bureau of Animal Health and Diagnostic Services to receive your Certified Poultry Technician license.



Commonwealth of Pennsylvania
Department of Agriculture, Bureau of Animal Health and Diagnostic Services
2301 N. Cameron St. Harrisburg, PA 17110
Telephone: 717-783-6897 Fax: 717-787-1868

SKILL CHECKLIST FOR CERTIFIED POULTRY TECHNICIAN LICENSE
(Please fill out the contact information and then have the instructor check off the required skills as you demonstrate them).

DATE OF COURSE: _____

NAME: _____
Last Middle Initial First

ADDRESS: _____
Street or Box Number

City State Zip

TELEPHONE NUMBER: _____

SKILLS COMPLETED SATISFACTORILY:

Classroom:

____ Understanding of proper sample handling and submission

____ Understanding of Biosecurity

____ Understanding of LBM requirements and Poultry Inspection Certificates

____ Rapid whole blood agglutination plate test (pullorum)

In field:

____ Blood sample collection

____ Tracheal/oropharyngeal swab collection

____ Cloacal swab collection

SIGNATURE OF CLASSROOM INSTRUCTOR: _____
(DO NOT PRINT) DATE

SIGNATURE OF FIELD INSTRUCTOR: _____
(DO NOT PRINT) DATE

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6. Other Comments:

Your Name (Optional): _____

**We hope you enjoyed the course.
Thank you.**

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SECTION I: CONTACT INFORMATION

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**PA DEPARTMENT OF AGRICULTURE and PADLS
Contact List**

| <u>NAME</u> | <u>DIRECTOR'S OFFICE</u> | <u>ROOM</u> | <u>TELEPHONE</u> | <u>FAX</u> | <u>E-MAIL</u> |
|---|---|-------------|-------------------|--------------|--|
| Dr. David Wolfgang | Director | 412 | 717-783-2200 | 717-787-1868 | davwolfo@pa.gov |
| Dr. Kevin Brightbill | Assistant Director | 412 | 717-705-1626 | 717-787-1868 | kebrightbi@pa.gov |
| Dr. David Zellner | Epizootiology Program Manager | 412 | 717-783-8555 | 717-787-1868 | dzellner@pa.gov |
| Allie Steck | Animal Disease Traceability Coordinator, Premises Registration, Ear Tags | 412 | 717-836-3235 | 717-787-1868 | asteck@pa.gov |
| Tony Arnold | Administrative Officer | 412 | 717-783-9550 | 717-787-1868 | toarnold@pa.gov |
| Mary Martin | Chronic Wasting Disease (CWD) | 412 | 717-783-5309 | 717-787-1868 | marymartin@pa.gov |
| Deb Hepler | Animal Health and Diagnostic Commission, Dead Animal Complaints | 412 | 717-783-8300 | 717-787-1868 | dhepler@pa.gov |
| vacant | Taxidermy, CLO, Dealer-Hauler | 412 | 717-836-3236 | 717-787-1868 | |
| <u>ANIMAL AND POULTRY HEALTH DIVISION</u> | | | | | |
| Dr. Nan Hanshaw | Division Chief | 410 | 717-783-6677 | 717-787-1868 | nhanshaw@pa.gov |
| Stacy Rakocy | NPIP, Pullorum Equivalent program, Poultry Exhibits, Monitored flock program, Leg Bands, CPT licensing | 410 | 717-783-6897 | 717-787-1868 | srakocy@pa.gov |
| JoAnn Hausner | Clerical Supervisor, Cattle Health Charts, MCIP, Brucellosis Vaccination, Cattle Imports/Exports | 411 | 717-783-5301 - | 717-787-1868 | jhausner@pa.gov |
| Susan MacNamara | EIA Tests, TB, Brucellosis Programs, Serology Tests | 411 | 717-525-5301 | 717-787-1868 | smacnamara@pa.gov |
| Barbara Lombardo | Milk Ring Tests, Pseudorabies, Swine Imports Reports, Pseudorabies Traceback | 411 | 717-787-4944 | 717-787-1868 | barlombard@pa.gov |
| vacant | Johne's Disease, Brucellosis and TB Retests, Rabies | 411 | 717-783-6533 | 717-787-1868 | |
| <u>REGULATIONS AND COMPLIANCE DIVISION</u> | | | | | |
| Dr. Lauren Weiss | Division Chief | 412 | 717-783-6851 | 717-787-1868 | laweiss@pa.gov |
| vacant | Regional Liaison, Contracts Reimbursement | 412 | 717-772-2852 | 717-787-1868 | |
| | | | - | - | |

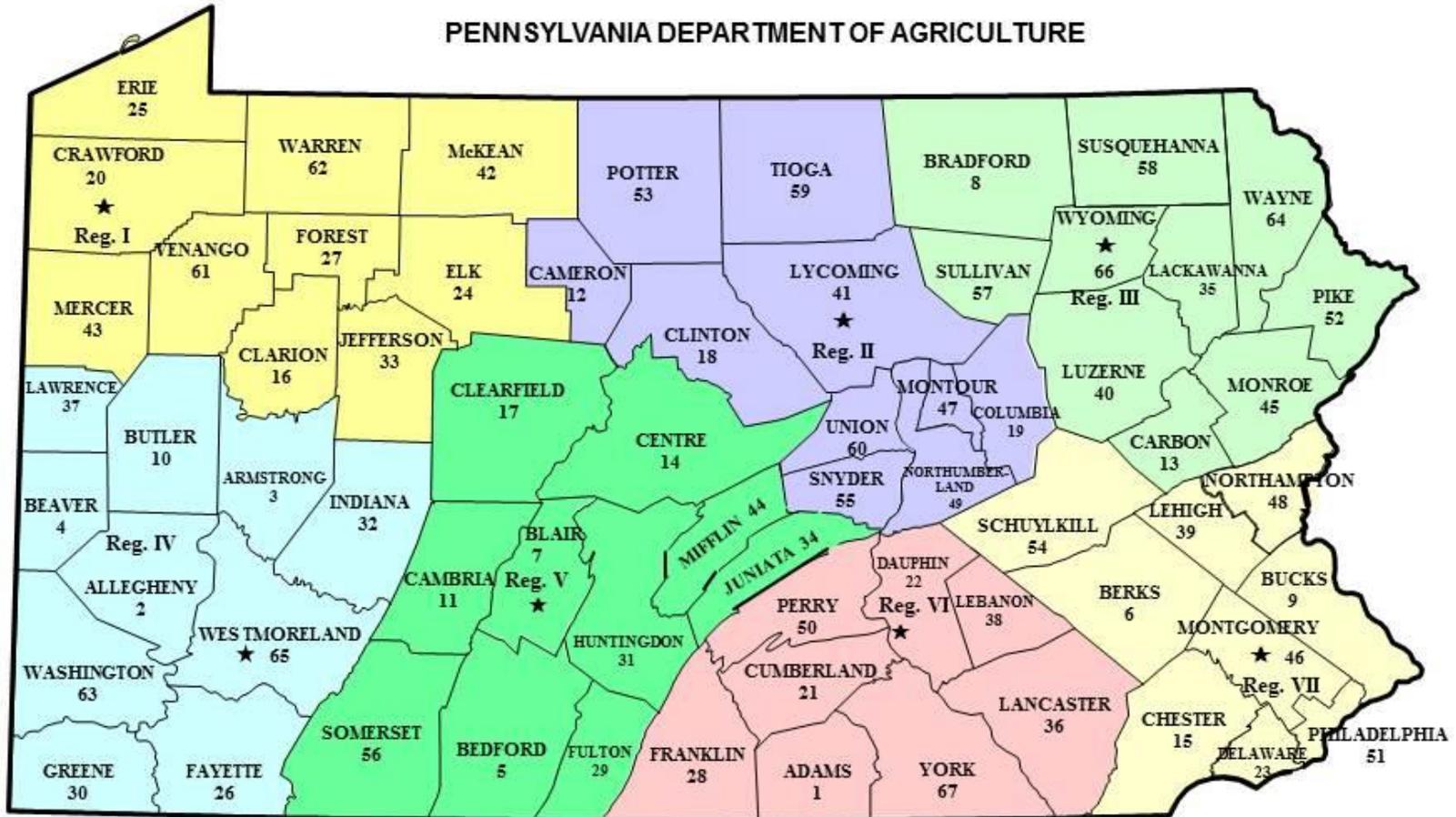
**PA DEPARTMENT OF AGRICULTURE and PADLS
Contact List**

| | <u>BAHDS REGIONAL OFFICES</u> | | <u>TELEPHONE</u> | <u>FAX</u> | |
|------------------------------|--|--|-------------------------|-------------------|--|
| <u>REGION 1</u> | 13410 Dunham Road, Meadville, PA 16335 | | | | |
| Dr. Heather Palm | Veterinary Medical Field Officer | | 814-332-6890 | 814-333-1431 | hpalm@pa.gov |
| Sarah Yurisc | Domestic Animal Health inspector | | 814-332-6890 | 814-333-1431 | syurisc@pa.gov |
| Joel Brocious | Domestic Animal Health Inspector | | 814-332-6890 | 814-333-1431 | jbrocious@pa.gov |
| | | | | | |
| <u>REGION 2</u> | 542 County Farm Road, Suite 102, Montoursville, PA 17754-9685 | | | | |
| Dr. Amy J. Nesselrodt | Veterinary Medical Field Officer | | 570-433-2640 | 570-433-4770 | anesselrod@pa.gov |
| Erin Ackerman | Domestic Animal Health Inspector | | 570-433-2640 | 570-433-4770 | erackerman@pa.gov |
| Karin Ross | Domestic Animal Health Inspector | | 570-433-2640 | 570-433-4770 | kariross@pa.gov |
| | | | | | |
| | | | | | |
| <u>REGION 3</u> | Route 92 South, P.O. Box C, Tunkhannock, PA 18657 | | | | |
| Dr. Tony LaBarbera | Veterinary Medical Field Officer | | 570-836-2181 | 570-836-6266 | alabarbera@pa.gov |
| Maureen Kane-Campbell | Domestic Animal Health Inspector | | 570-836-2181 | 570-836-6266 | mkanecampb@pa.gov |
| | | | | | |
| | | | | | |
| <u>REGION 4</u> | 226 Donohoe Rd. Greensburg PA 15601 | | | | |
| Dr. Erin Moore | Veterinary Medical Field Officer | | (724) 832-1073 | 724-832-1013 | erimoore@pa.gov |
| James Govan | Domestic Animal Health Inspector | | (724) 832-1073 | 724-832-1013 | jgovan@pa.gov |
| David Myers | Domestic Animal Health Inspector | | (724) 832-1073 | 724-832-1013 | damyers@pa.gov |
| | | | | | |
| | | | | | |
| <u>REGION 5</u> | 403 East Christiana Street, Suite 3, Martinsburg, PA 16662 | | | | |
| Dr. Elizabeth Santini | Veterinary Medical Field Officer | | 814-793-1849 | 814-793-1869 | esantini@pa.gov |
| Dawn M. Dilling | Domestic Animal Health Inspector | | 814-793-1849 | 814-793-1869 | ddilling@pa.gov |
| Jennifer Johnson | Domestic Animal Health Inspector | | 814-793-1849 | 814-793-1869 | jenjohnson@pa.gov |
| | | | | | |
| | | | | | |

**PA DEPARTMENT OF AGRICULTURE and PADLS
Contact List**

| | | | | | |
|---|---|--|-------------------------|-------------------|--|
| REGION 6 | 2301 North Cameron Street, Room 411, Harrisburg, PA 17110 | | | | |
| Dr. John Roberts | Veterinary Medical Field Officer | | 717-836-3237 | 717-346-3229 | jroberts@pa.gov |
| Sarah Mcalanis | Domestic Animal Health Inspector | | 717-836-3237 | 717-346-3229 | smcalanis@pa.gov |
| Eric Kessel | Domestic Animal Health Inspector | | 717-836-3237 | 717-346-3229 | ekessel@pa.gov |
| Patricia Massie | Domestic Animal Health Inspector | | 717-836-3237 | 717-346-3229 | pmassie@pa.gov |
| Christine Mooney | Domestic Animal Health Inspector | | 717-836-3237 | 717-346-3229 | chmooney@pa.gov |
| Suzette Thompson | Domestic Animal Health Inspector | | 717-836-3237 | 717-346-3229 | suthompson@pa.gov |
| | | | | | |
| | | | | | |
| REGION 7 | 1015 Bridge Rd., Collegeville, PA 19426 | | | | |
| Dr. Aliza J. Simeone | Veterinary Medical Field Officer | | 610-489-1003 | 610-489-6119 | asimeone@pa.gov |
| Christopher Hosler | Domestic Animal Health Inspector | | 610-489-1003 | 610-489-6119 | chosler@pa.gov |
| B. K. Parambath | Domestic Animal Health Inspector | | 610-489-1003 | 610-489-6119 | bparambath@pa.gov |
| Jennifer Hartlieb | Domestic Animal Health Inspector | | 610-489-1003 | 610-489-6119 | jhartlieb@pa.gov |
| | | | | | |
| | | | | | |
| | <u>PA ANIMAL DIAGNOSTIC LABORATORY SYSTEM (PADLS)</u> | | <u>TELEPHONE</u> | <u>FAX</u> | |
| | | | | | |
| | | | | | |
| PA VETERINARY LABORATORY (PVL) | 2305 North Cameron Street, Harrisburg, PA 17110 | | 717-787-8808 | 717-772-3895 | |
| | Client Services | | 717-787-8808 | 717-772-3895 | |
| | | | | | |
| NEW BOLTON CENTER (NBC) | 382 West Street Road Kennett Square, PA 19348-1692 | | | | |
| | Pathology | | 610-444-5800 | 610-925-8110 | |
| | Toxicology | | 610-444-5800 | 610-925-8117 | |
| | Avian Medicine and Pathology | | 610-444-4282 | 610-925-8106 | |
| | Microbiology PADLS | | 610-444-5800 | 610-925-8116 | |
| | Microbiology | | 610-444-5800 | 610-925-8115 | |
| | | | | | |
| PENN STATE UNIVERSITY Animal Diagnostic Laboratory (PSU ADL) | Animal Diagnostic Laboratory Wiley Road University Park, PA 16802 | | 814-863-0837 | 814-865-3907 | |

PENNSYLVANIA DEPARTMENT OF AGRICULTURE



Dr. Heather Palm
REGION I
 13410 Dunham Rd.
 Meadville, PA 16335
 (814) 332-6890

Dr. Amy Nesselrodt
REGION II
 542 County Farm Rd., Suite 102
 Montoursville, PA 17754
 (570) 433-2640

Dr. Tony LaBarbera
REGION III
 Route 92 South, PO Box C
 Tunkhannock, PA 18657
 (570) 836-2181

Dr. Erin Moore
REGION IV
 226 Donohoe Road
 Greensburg, PA 15601
 (724) 832-1073

Dr. Elizabeth Santini
REGION V
 Martinsburg Commons
 403 Christiana St.
 Martinsburg, PA 16662
 814-793-1849

Dr. John Roberts
REGION VI
 2301 N. Cameron St., G-5
 Harrisburg, PA 17110
 (717) 346-3223

Dr. Aliza Simeone
REGION VII
 1015 Bridge Road
 Collegeville, PA 19426
 (610) 489-1003

02/09/15

GUIDELINES FOR REPORTING SUSPECTED REPORTABLE DISEASE

- Report any signs suggestive of Avian Influenza (AI) or other reportable disease in a flock immediately to the Pennsylvania Department of Agriculture at: 717-772-2852.
- Signs suggestive of AI include the following:
 - Increased mortality;
 - Decreased egg production;
 - Swollen eyelids/sinuses/combs or wattles;
 - Purple or bluish discoloration of wattles and combs;
 - Respiratory snicking; and
 - Generally depressed birds.
 - Commonly, the producer will notice mortality increases and in the case of layers, decreased egg production, which usually follows the increased mortality by several days.
 - These are general guidelines only.

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SECTION II: COLLECTION, HANDLING, AND SUBMISSION OF SAMPLES

Guidelines for Collection, Handling, and Submission of Samples

| | | |
|--|---|--------------|
| PA VETERINARY LABORATORY (PVL) | 2305 North Cameron Street, Harrisburg, PA 17110 | 717-787-8808 |
| NEW BOLTON CENTER (NBC) | 382 West Street Road Kennett Square, PA 19348-1692 | 610-444-5800 |
| PENN STATE UNIVERSITY (PSU-ADL) | Animal Diagnostic Laboratory Wiley Road University Park, PA 16802 | 814-863-0837 |

- ❖ *Blood and swab sample tubes, swabs, cardboard tube boxes, whirlpak bags, virus transport media, and submission forms are available from PVL.*
- ❖ *Samples can be tested at any PADLS laboratory. Call the laboratory in advance to let them know when the samples will arrive.*
- ❖ *Samples can be hand carried to the laboratory (preferred method) or shipped by overnight mail or courier. Samples should be delivered to the laboratory between Monday morning and Thursday noon. Samples should not be delivered on a day before a holiday or on weekends. If shipping samples, send early in the week, preferably before Wednesday morning. **Do not drop samples off at a PDA regional office for shipment unless you have made special arrangements with the regional staff.***
- ❖ **BIRDS TESTED FOR PULLORUM MUST BE LEG BANDED WITH AN OFFICIAL PDA BAND. OFFICIAL LEG BANDS ARE AVAILABLE FROM PDA (717-783-6897). EACH BLOOD SAMPLE TUBE MUST BE LABELED WITH THE BAND NUMBER OF THE BIRD FROM WHICH THE SAMPLE WAS COLLECTED OR A CORRESPONDING NUMBER SO THAT THE SAMPLE CAN BE TRACED BACK TO THAT BIRD.**
 - **IF TESTING COMMERCIAL BIRDS ON SITE USING THE RAPID PULLORUM TEST, ALL SUSPECTS (REACTORS) MUST BE BANDED AND EITHER BLOOD FROM THE REACTOR IS SENT TO THE LAB FOR FURTHER TESTING, OR THE BIRD IS SENT TO THE LAB FOR CULTURE.**
 - **ALL BIRDS TESTED FOR SHOW MUST BE LEG BANDED WITH AN OFFICIAL PDA BAND, EVEN IF TESTED USING THE RAPID PULLORUM TEST.**
 - **ALL BIRDS ENTERING A SHOW MUST BE LEG BANDED WITH AN OFFICIAL PDA BAND (ENFORCED AFTER JUNE 1, 2017).**
 - **APPLICATORS ARE NOT PROVIDED BY PDA BUT ARE AVAILABLE FROM:**

National Band & Tag Company
721 York St., PO Box 72430
Newport KY 41072-0430 USA
859-261-2035
USA FAX: 800-261-8247
nationalband.com

- ❖ *For biosecurity purposes, take only enough tubes and supplies needed for each flock onto a premises. Do not take tubes or boxes onto more than one premises.*
- ❖ Pennsylvania Certified Poultry Technicians are not authorized to collect official samples from poultry located outside of Pennsylvania.
- ❖ Certified Poultry Technicians collecting samples for the NY/NJ live bird market system must first be pre-approved and added to the Department's list of CPTs approved to sample for the live bird market system.

Sample Collection - Blood

Refer to the *Ohio State University Extension Guidelines for Collection of Poultry Blood Samples*.

Large tubes:

- Large (5 ml) tubes should be used when more than one test will be performed on the samples so a greater quantity of blood can be collected.
- Place the necessary number of empty tubes in the cardboard tube box and tilt the box approximately 30 degrees. Brace the box in this position while you collect samples to facilitate clot formation in the samples. If using large, open-top tubes for hand delivery to the laboratory, place a large piece of tape over the tops of the tubes in the box. Do not use open-top tubes with tape over the top for shipping – the labs can provide caps for the large tubes if requested for shipping.
- **Collect 2.5 milliliters (cc) of blood per bird** and place it in a large (5-ml) tube. Place the sample in the tube using only gentle, steady pressure on the syringe to avoid damaging the blood cells.
- **Complete the submission form** and place it on top of the samples. **If samples are to be tested for pullorum, label tubes to correspond to the official band number of each bird sampled.**
- Place the box lid on tightly.
- Label the box (not the lid) with the owner name and Premise ID.
- Place the box into a plastic bag. Seal the bag.
- Disinfect the outside of the plastic bag.
- **Keep the samples cool on frozen ice packs in a cooler during transport – do not use ice. Do not allow the blood samples to freeze.**

Plastic snap-cap tubes:

- If only one test will be performed on the samples, smaller plastic snap cap tubes are acceptable. Plastic snap cap tubes are often used for AI testing for the AI Monitored Flock program.
- If using plastic snap cap tubes, collect **2.0 cc of blood per bird** and place it in a tube. Fill the tube, but leave a small air space at the top so the lid does not pop open during transport. Place the sample in the tube using only gentle, steady pressure on the syringe to avoid damaging the blood cells.
- Plastic snap cap tubes with samples should be placed into a labeled whirlpak bag for submission to the laboratory. Seal the bag.
- Label the whirlpak bag with the owner name and premise ID.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- Keep the samples cool on frozen ice packs in a cooler during transport – do not use ice. Do not allow the blood samples to freeze.
- **The National Veterinary Services Laboratory does not recommend avian influenza AGID testing of blood from waterfowl- collect cloacal swabs from waterfowl for AI testing.**

Sample Submission - Hand Carried Blood Samples (Preferred Method)

After collection:

- Place tape over the top of the tubes if you have not already done so.
- Place the **completed submission form** on top of the samples.
- Place the box lid on tightly.
- Label the box (not the lid) with the owner name and Premise ID.
- Place the box into a plastic bag. Seal the bag.
- Disinfect the outside of the plastic bag.
- Plastic snap cap tubes with samples should be placed into a labeled whirlpak bag for submission to the laboratory. Seal the bag.
- Label the whirlpak bag with the owner name and premise ID.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- If you are not transporting the samples immediately, hold blood tubes at *room* temperature until the serum separates if possible. If it is not possible, keep the samples cool (see next bulleted item).
- **Keep the samples cool on frozen ice packs in a cooler during transport – do not use ice. Do not allow the blood samples to freeze.**
- Deliver samples to the reception area of the laboratory.
- Samples must be delivered to the laboratory between Monday morning and Thursday noon. Samples should not be delivered on a day before a holiday or on weekends.

Sample Submission – Overnight Mail or Courier Delivery of Blood Samples

After collection:

- Do not use open-top tubes with tape over the top for shipping – the labs can provide caps for the large tubes if requested for shipping.
- Place the **completed submission form** on top of the samples.
- Place the box lid on tightly.
- Label the box (not the lid) with the owner name and Premise ID. Place the box into a plastic bag. Seal the bag.
- Disinfect the outside of the plastic bag.
- Plastic snap cap tubes with samples should be placed into a labeled whirlpak bag for submission to the laboratory. Seal the bag.
- Label the whirlpak bag with the owner name and premise ID.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- If you are not transporting the samples immediately, hold blood tubes at *room* temperature until the serum separates if possible. If it is not possible, keep the samples cool (see next bulleted item).
- Keep the samples cool on frozen ice packs in an approved, sealed styrofoam container during transport – do not use ice. Do not allow the samples to freeze. Remember that samples can freeze in cold weather if held too long in a delivery truck.
- If shipping samples, send early in the week, preferably before Wednesday morning.

Sample Collection – Swabs for AI testing

Tracheal/oropharyngeal swabs:

- Keep Viral transport medium (VTM) tubes or Brain Heart Infusion (BHI) broth tubes refrigerated at all times.
- Use tubes containing 5.5 mls BHI.
- Collect tracheal/oropharyngeal swabs for virus detection testing from birds representative of the flock.
- Insert the **dry** swab and rub the mucosa vigorously.
- Use one swab for each bird.
- Avoid contaminating the swab through allowing contact with other surfaces.
- Place material from up to 11 swabs (from up to 11 different birds of one type) into one tube (gallinaceous birds only). **Do not combine swab material from different bird types in a tube.**
- Do not leave swabs in the tubes- insert each swab into the tube, swirl the tip in the BHI, press the tip against the inner surface of the tube to remove excess material into the tube, and then discard the swab in a biosecure manner. **NVSL permits material from up to 11 swabs per tube of 5.5 mls BHI.**
- Secure tube tops.
- Place tubes into a labeled whirlpak bag. Seal the bag.
- Label the bag with owner name and Premise ID.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- **Keep the samples cool on frozen ice packs in an approved, sealed styrofoam container during transport – do not use ice. If you cannot get the samples to the lab within 48 hours of collection, freeze the swab samples and keep frozen until delivered to the lab. It is recommended that you submit samples as soon as possible after collection to ensure sample integrity.**
- If shipping samples, send early in the week, preferably before Wednesday morning.
 - Please note: Viral transport medium (VTM) is available from PADLS laboratories. VTM should be an orange color when fresh. It becomes a violet color as it becomes unsuitable for use. Do not use VTM that has changed color or that has passed its expiration date. VTM should be kept refrigerated at all times, so keep the tubes on frozen ice packs as you collect samples. Brain Heart Infusion (BHI) broth may be provided instead of VTM for swab submissions. BHI should be clear. Do not use BHI that is cloudy or that has passed its expiration date. BHI should be kept refrigerated at all times, so keep the tubes on frozen ice packs as you collect samples.

For sample collection and handling requirements for other disease testing, contact the laboratory.

Cloacal swabs (waterfowl) for AI testing: All waterfowl tested for exhibition in PA must have cloacal swabs submitted for testing.

- Keep Viral transport medium (VTM) tubes or Brain Heart Infusion (BHI) broth tubes refrigerated at all times.
- Collect cloacal swabs for virus detection testing from birds representative of the flock.
- Use dry swabs.
- Insert the swab and rub the mucosa vigorously.
- Use one swab for each bird.
- Avoid contaminating the swab by allowing it to contact other surfaces.
- Place swabs into tubes containing enough VTM or BHI to moisten and cover the end of the swabs. 5.5 ml BHI tubes may be used.
- **Place up to 5 swabs (from up to 5 different birds of one type) into one tube.**
- **Do not mix duck and goose swabs in a tube.**
- Break off the ends of the swab handles so the swabs fit into the tubes (only the tip with the sample is needed for testing).
- Secure tube tops.
- Place tubes into a labeled whirlpak bag. Seal the bag.
- Label the bag with owner name and Premise ID.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- **Keep the samples cool on frozen ice packs in an approved, sealed styrofoam container during transport – do not use ice. If you cannot get the samples to the lab within 48 hours of collection, freeze the swab samples and keep frozen until delivered to the lab. It is recommended that you submit samples as soon as possible after collection to ensure sample integrity.**
- If shipping samples, send early in the week, preferably before Wednesday morning. Please note: Viral transport medium (VTM) is available from PADLS laboratories. VTM should be an orange color when fresh. It becomes a violet color as it becomes unsuitable for use. Do not use VTM that has changed color or that has passed its expiration date. VTM should be kept refrigerated at all times, so keep the tubes on frozen ice packs as you collect samples. Brain Heart Infusion (BHI) broth may be provided instead of VTM for swab submissions. BHI should be clear. Do not use BHI that is cloudy or that has passed its expiration date. BHI should be kept refrigerated at all times, so keep the tubes on frozen ice packs as you collect samples.

For sample collection and handling requirements for other disease testing, contact the laboratory.

Sample Submission - Hand Carried Swab Samples (Preferred Method)

After collection:

- Place tubes into a labeled whirlpak bag.
- Label the bag with owner name and Premise ID. Seal the bag.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- Keep the samples cool on frozen ice packs in a cooler during transport – do not use ice. If you cannot get the samples to the lab within 48 hours of collection, freeze the swab samples and keep frozen until delivered to the lab. It is recommended that you submit samples as soon as possible after collection to ensure sample integrity.
- Deliver samples to the reception area of the laboratory.
- Samples should be delivered to the laboratory between Monday morning and Thursday noon. Samples should not be delivered on a day before a holiday or on weekends.

Sample Submission – Overnight Mail or Courier Delivery of Swab Samples

After collection:

- Place tubes into a labeled whirlpak bag.
- Label the bag with owner name and Premise ID. Seal the bag.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- Keep the samples cool on frozen ice packs in an approved, sealed styrofoam container during transport – do not use ice. If you cannot get the samples to the lab within 48 hours of collection, freeze the swab samples and keep frozen until delivered to the lab. It is recommended that you submit samples as soon as possible after collection to ensure sample integrity.
- If shipping samples, send early in the week, preferably before Wednesday morning.

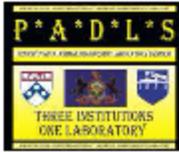
GUIDELINES FOR SUBMISSION OF BIRDS TO THE LABORATORY

Diagnosis of disease can be difficult if the history of the flock is unknown or the specimens for testing are not submitted properly. The following guidelines were designed to assist in the submission of birds to the laboratory:

1. **Submission Form:** It is vital that the submission form be filled out accurately and completely, and that the information is printed clearly. Current contact information must be listed. If the form is not filled out properly, the proper testing may not be done, and/or the submitter may not receive the results.

2. History: Any health problems in the flock should be included on the submission form. A detailed description of any health problems in the flock, including changes in production, symptoms of illness, and mortality, should be included with the submission. In addition, field necropsy findings, recent feed changes, vaccinations, treatments, litter changes, etc. should be included to assist with the diagnosis.
3. Number of Birds in the Submission: As a general guideline, the following numbers may be used:
 - a. Growing and adult chickens and turkeys: 4 to 8 birds
 - b. Baby chicks and poults: 8 to 10 birds
4. Which Birds to Submit: It is important to choose birds for submission which will be most likely to provide the proper diagnosis of the problem in the flock. Please contact the diagnostician at the receiving lab to discuss the problem for further guidance on bird selection. The following guidelines apply:
 - a. If the flock has increased mortality, always include several fresh dead birds representative of the mortality of the day.
 - b. If there are specific symptoms noted (respiratory signs such as snicking, foamy eyes, labored breathing; diarrhea or other changes in droppings; neurologic signs; leg problems; generally depressed; inactive; decreased feed consumption; failing to thrive; poor growth; weight loss; etc.), include live birds that are showing the specific symptom(s) of interest.
 - c. Include birds in different stages of illness if available.
 - d. If possible, contact the diagnostician at the receiving lab to discuss the problem for further guidance on bird selection. Preferred numbers and types of samples can vary based on the specific circumstances of the case.

**SECTION III: PADLS AVIAN SAMPLE SUBMISSION
FORM**



Pennsylvania Animal Diagnostic Laboratory System – Avian Samples

University of Pennsylvania
New Bolton Center
382 West Street Road
Kennett Square, PA 19348
(610) 444-4282

Pennsylvania State University
Animal Diagnostic Laboratory
Wiley Lane
University Park, PA 16802
(814) 863-0837

Pennsylvania Department of
Agriculture
Pennsylvania Veterinary
Laboratory
2305 North Cameron Street
Harrisburg, PA 17110-9408
(717) 787-8808

Bill To:
 Sample Collector
 Owner/Company
 Premises Owner

Report To:
 Sample Collector
 Owner/Company
 Premises Owner

By: Fax Email US Mail

Accession # _____

| | | |
|---|--|--|
| <p align="center">Sample Collector</p> <p>Certified Poultry Tech ID Number _____</p> <p>Name _____</p> <p>Address _____</p> <p>City, State, Zip _____</p> <p>Phone _____ Fax _____</p> <p>Email _____</p> <p>Signature _____</p> | <p align="center">Owner/Company</p> <p>Owner _____</p> <p>Company _____</p> <p>Address _____</p> <p>City, State, Zip _____</p> <p>Phone _____ Fax _____</p> <p>Email _____</p> <p align="center">See back of form if submitting multiple premises</p> | <p>MF# _____ Premises NPIP# _____</p> <p>Premises Identification Number _____</p> <p>Flock ID/Name/House #/Floor #/Pen # or Q # _____</p> <p>Address _____</p> <p>City, State, Zip _____</p> <p>Phone _____ Fax _____</p> <p>Email _____</p> |
|---|--|--|

For a report sent to other than above. Name: _____ Fax/E-mail: _____

Date Collected: _____ Date Submitted: _____ Age of flock: _____ Years _____ Weeks _____ Days

Blood: _____ # Eggs: _____ # Swabs: _____ Swab Source: _____

Chicken Duck Guinea Turkey Other: _____ Breed: _____ Production type: _____

Description (color / distinctive markings): _____

(If submitting multiple species, flocks, or sample types, see back of form to identify samples)

Number of Birds on Premises: _____ Comments/History: _____

Hatchery name where birds originated: _____ If Breeders, hatchery name to incubate eggs: _____

PROGRAM TESTING (Purpose of test): (Check all that apply for this submission) – If applicable, enter individual bird/flock IDs on back.

- **Live Bird Market System (Avian Influenza)**
 - Auction/Swap Meet/Small Sale Backyard Dealer
 - Feed Store Hauler Live Bird Market (At Market)
 - Passive Surveillance Truck/Crate Wash Wholesaler
 - Production Unit (On Farm) – Moving to state of _____
- Pennsylvania Avian Influenza Monitored Flock Program**
- Export/Movement To:** _____
- **National Poultry Improvement Plan (NPIP)**
 - US AI Clean (Breeders)
 - US H5/H7 LPAI Monitored: (Non-Breeders)
 - US MG Clean: Routine Program Test Suspect Retest
 - US MS Clean: Routine Program Test Suspect Retest
 - US MM Clean: Routine Program Test Suspect Retest
 - US Pullorum-Typhoid Clean: Routine Program Test Reactor Retest Bird Culture
 - US Salmonella Monitored
 - US Sanitation Monitored
 - US SE Clean: Routine Program Test Bird Culture
- Related accession number for retests: _____
- **Exhibition/Show:**
 - AI/Pullorum AI Only Pullorum Only Reactor Retest
- **Pennsylvania Pullorum Equivalent:**
 - Routine Program Testing Reactor Retest
- Related accession number for retests: _____
- **FDA SE Egg Safety** Registration Number: _____
 - Eggs Environmental-Layer
 - Environmental- Post-Molt Environmental- Pullet
- **Pennsylvania Egg Quality Assurance Program (PEQAP)**
 - PS1 PS2 LY1 LY2 LY3 LY4 LY5
 - LY6 LY7 LY8 LCD EGG QC
 - Other _____
- Pullet House Name _____
- Layer House Destination _____
- **Regulatory Investigation / Disease**
 - Association Unknown Circle Testing Epidemiology Linked
 - Index Trace Back Trace Forward Quarantine Release
 - Other _____

Diagnostic Test Requests: Enter the number of each type of test requested. (If applicable, enter individual bird IDs on back)

If chicken ELISA testing is requested, please indicate a preference of ELISA test system: IDEXX (ADL) BioChek (NBC)

| | | | | |
|-------------------|-----------------|-----------------|-------------------------------|--|
| _____ MG Plate | _____ NDV ELISA | _____ MG ELISA | _____ Pullorum –Typhoid Plate | AI Virus Detection _____ Virus Isolation _____ RRT-PCR Lab Use Only Grant(s) _____ |
| _____ MS Plate | _____ IBV ELISA | _____ MS ELISA | _____ Pullorum –Typhoid Tube | |
| _____ MM Plate | _____ IBD ELISA | _____ HEV ELISA | _____ Aerobic Culture | |
| _____ AI AGID | _____ REO ELISA | _____ BA ELISA | _____ Salmonella Culture | |
| _____ IBD AGID | _____ AE ELISA | _____ PCR | _____ RapidChek SE Test | |
| _____ Other _____ | | | | |

**SECTION IV: GUIDELINES FOR CONDUCTING
THE PULLORUM RAPID WHOLE BLOOD
AGGLUTINATION PLATE TEST**

**Pullorum Rapid Whole Blood Agglutination Plate Test
Instructions
*NOT VALIDATED FOR TURKEYS***

- **Equipment necessary for testing:**
 - Official leg bands, antigen, testing plate, thermometer, bleeding needle, blood loop (standardized), small glass of water for rinsing loop, disinfectant, a pail of water, soft cloths, and a device to hold birds individually (or in groups of 10 or less) while waiting for the test results.
 - For NPIP birds: NPIP form 9-2 (available from PDA (717-783-6897))
 - For birds not on NPIP, an equivalent PDA rapid plate test form is available for exhibition bird testing (available from PDA at 717-783-6897).
 - Official leg bands are available from PDA (717-783-6897).
***All birds tested individually for entry into a PA show must be banded at the time of test with an official PDA leg band, even if tested with the rapid plate test.**
***All commercial birds with positive reactions on the plate test must be banded with an official PDA leg band. and must either be sent immediately to the laboratory for culture or must have a blood sample collected immediately and sent to the laboratory for testing. Reactors must remain isolated from the flock while a blood sample result is pending.**
 - One source of Polyvalent Pullorum Antigen:

**LOHMANN ANIMAL HEALTH INTERNATIONAL (LAHI)
P.O. BOX 255, WATERVILLE, ME, 04903-0255**

Domestic Order Desk: 207-873-3989, 800-655-1342

International Order Desk: 207-873-3989, 800-639-1581

Fax: 207-873-4975

Website: www.lahinternational.com

Email: info@lahinternational.com

- **Description** (source – LAHI): Pullorum antigen, stained antigen polyvalent type is designed for use in the rapid whole blood test for the detection of pullorum disease and fowl typhoid. When it is added to blood samples of the birds, it reacts to produce a clumping with the blood of an infected bird.

- **Antigen:** This product consists of 50 per cent standard U.S. strains and 50 per cent Canadian variant strains of *Salmonella pullorum*. The antigen is harmless because the organisms in it are killed and cannot spread the disease.
- **Indications:** Pullorum disease is caused by bacteria known as *Salmonella pullorum*. This bacterial infection endures in the ovaries of the laying female. The disease is transmitted from mother to chick through the incubated egg. If the egg hatches, the chick is already infected when it leaves the shell. Through the droppings other chicks become quickly infected, until the disease spreads through the brood. The one and only effective control measure for *Pullorum* disease is the elimination of infected breeders. This involves blood testing, so that *Pullorum* “carriers” may be detected and removed from the breeding flocks.
- **Test Procedure:**
 1. Shake the antigen well.
 2. Place a drop of the stained antigen on a test plate with the dropper syringe contained in the bottle.
 3. Draw blood from the bird by lancing the vein under the wing.
 4. Using a wire loop, also supplied with every package, lift a loopful of blood from the wing of the bird, and add it to the stained antigen already on the test plate.
 5. Mix with the Stained Antigen by stirring with the wire loop, and gently rotate the plate (make a smear about 1 inch in diameter).
 6. Rinse and dry the loop between tests to prevent contamination of samples.
 7. Send completed NPIP 9-2 form or PDA equivalent form to PDA to record flock testing in compliance with NPIP and PDA requirements.
- **Reading the test:**
 - Positive reactions are indicated by a clumping of the antigen in well-developed, blue-colored clusters surrounded by clear spaces, within 2 minutes. The greater the agglutination ability of the blood, the more rapid the clumping and the larger the clumps. A lesser reaction shows small, but clearly visible clumps surrounded by spaces only partially clear.
 - A fine, barely visible granulation sometimes occurs and there may be a fine marginal flocculation (clumping) just before the smear dries. These samples should be regarded as negative.
 - Reactions which occur after 2 minutes should not be considered positive.

- Biological reactions may vary between clear-cut positive and negative.
- **Storage:** Keep product in the dark; refrigerate at 2-7°C (35-45°F). Avoid freezing.
- **Caution(s):** It is imperative that the buyer or user of this product comply with the indications for use stated here. The product must be prepared and used as directed to obtain best results.

When testing birds, it is best to do the test in a shaded place; out of the direct sunlight, and where there is a minimum of dust. Rinse and dry the loop between tests in order to prevent contamination of one sample with another.

- **Warning(s):** Care should be taken to avoid contaminating hands, eyes and clothing with the material.
- **Presentation:** 1,000 tests - 50 mL.
- **Things to avoid:**
 - Deteriorated antigen may give false readings. Before testing, check a drop of antigen, without blood, on the plate to check for spontaneous agglutination.
 - Excessive evaporation, high temperatures, or incorrectly interpreting late powder or marginal flocculation as positive reactions may also lead to false readings.
 - Delay in reading tests causes errors; tests should not be read after 2 minutes.
 - Testers should use care, not speed, for the number of birds tested is less important than maximum accuracy.
- **Cleaning the testing surface:**
 - Clean plate with clear, warm or cool water. Hot water may coagulate blood, making it difficult to remove.
 - Soaps, disinfectants, or cleaning compounds may leave a residue which may affect subsequent tests. Grease on plate may prevent blood antigen mixture from spreading properly, and grease may be removed with soap, after which plate must be thoroughly rinsed.
 - After cleaning, polish plate with clean cloth, leaving no blood or lint on the surface.

(References - LAHI and Darrell W. Trampel, D.V.M., PhD. Iowa State University)

SECTION V: ESSENTIAL EQUIPMENT

Essential Equipment List

The following is a list of items you will need to collect samples and/or conduct the whole blood rapid agglutination plate test for pullorum. Additional items may be used as needed, but it is recommended that you take only essential items onto a premises for biosecurity reasons.

- Clean cloth coveralls or new disposable coveralls
- Rubber boots (above ankle) or disposable booties
- Disposable gloves
- Disposable hair cover or washable plastic hard hat
- Disposable face masks (optional)
- Bucket and brush
- Disinfectant
- Hand sanitizer or soap
- Plastic garbage bags for disposable items, also for holding dirty coveralls, etc after collection
- Rapid Whole Blood Agglutination Plate Test supplies as needed
 - Antigen
 - Testing Kit (heating source, testing surface)
 - Loop and lance
 - Official leg bands (PDA bands) and pliers
- Sample collection supplies as needed
 - Syringes/needles
 - Tubes (large tubes or snap cap tubes)
 - Cardboard tube box (if using large tubes for blood collection) and plastic bags; or whirlpak bags (if using plastic snap cap tubes for blood collection or for tubes containing swabs)
 - Marking pen
 - Tape if using large blood tubes and hand delivery
 - Sterile swabs
 - Saline and jar or dish for cleaning needles between birds
 - Official PDA leg bands and pliers - Official leg bands must be obtained from PDA (717-783-6897).

***Show poultry: All poultry tested for PA shows must be leg banded with an official PDA band, even if tested using the rapid pullorum test; and**

***All poultry entering a show must be leg banded with an official PDA band (enforced after June 1, 2017).**

***Commercial poultry: If testing commercial poultry on site using the rapid pullorum test, all suspects (reactors) must be banded and either blood from the reactor is sent to the lab for further testing, or the bird is sent to the lab for culture.**

*** Each blood sample tube submitted to PADLS labs for pullorum testing must be labeled with the band number of the bird from which the sample was collected or a corresponding number so that the sample can be traced back to that bird.**

SECTION VI: BIOSECURITY

Biosecurity Guidelines for Collecting Samples

Certain poultry diseases can be easily spread between flocks by people, clothes, vehicles, and equipment. The following are guidelines designed to reduce the risk of spreading disease between flocks.

Overview:

- It is recommended that you visit only one premises per day. If you must visit more than one premises in one day, for each visit wear clean outerwear, including boots, and wash your vehicle between premises.
- NEVER visit a commercial poultry flock the same day you have been in contact with another flock.

Before entering a poultry house or yard:

- Park as far away from the poultry house/yard as possible.
- Avoid parking on an area where litter has been spread.
- Put on clean cloth coveralls or new disposable coveralls.
- Put on rubber boots which have been cleaned and disinfected or disposable booties.
- Put on a disposable hair cap or plastic hard hat which can be cleaned and disinfected.
- Put on disposable gloves (optional) or sanitize hands.
- Face shields, disposable face masks, or respirators are optional.
- Take only essential equipment and supplies with you. Equipment must always be carefully cleaned and disinfected prior to use on a premises.

Before leaving a poultry premises:

- Do not enter your vehicle until you have removed your dirty outerwear.
- Remove and bag all items worn on the premises before leaving the premises.
- Dispose of any disposable items in a plastic garbage bag, and seal the bag.
- Place any non-disposable clothing, such as cloth coveralls and raincoats, etc, worn on the premises in a clean garbage bag and wash the clothing in warm or hot water before wearing it again.
- Clean and disinfect rubber boots before removal from the premises. Do not wear dirty boots in your vehicle.
- Scrub vehicle tires with a brush to remove organic material and spray the tires with disinfectant before entering another operation.
- Disinfect the outside of sample bags and other non-disposable equipment and supplies.
- Keep samples, dirty clothing, and used equipment in an area separate from clean items in your vehicle to avoid contamination.
- Wash or sanitize hands, including under fingernails.

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Biosecurity on poultry farms – document to stay on target

Gregory P. Martin, Ph.D., PAS. Extension Educator – Poultry Email: gpm10@psu.edu

In preparing for high path avian influenza (HPAI) poultry farmers have been increasing their biosecurity efforts to protect their farms. Steps that would seem appropriate years ago have now been put aside by new steps to help increase the level of biosecurity on the farm. Even on farms with multiple animal systems, the weakest link to biosecurity could affect the entire farm.

An interim rule from USDA has made changes so that in the case of HPAI a farmer would share indemnity payments with the flock owner in order to help keep the farm. The catch to this is that the farm needs to document that a Biosecurity Plan was in place before the outbreak of disease. So, a little paperwork is in order if you do not have a documented biosecurity plan. The major points or elements to consider documenting for a good biosecurity plan include:

- *Biosecurity Coordinator on farm identified and recorded.* This means a name, signature, date and time that the coordinator (someone on the farm) was made responsible for the farm plan.
- *Organized Training with Records of Training done.* A log showing when the coordinator spoke to the farm team about biosecurity steps on the farm.
- *Lines of Separation on buildings w/ required sanitation.* This is a line when entering a building that sanitation steps would be needed. This could mean putting on personal protective equipment (PPE) or washing shoes before entering.
- *Perimeter Buffer areas defined.* This would be setback distances from poultry buildings to help reduce fomite transmission by people or equipment. Also called hot/cold zones.
- *PPE on premise for employees working on farm.* Personal gear & boots to help protect from dragging in viruses that may be sticking to dust on outer clothes. These can be either washed or disposed of as they are used.

- *Vector Control for multiple species of pests.* Flies, wild birds, and rodents are the major targets as pests, but cats and dogs in the house would prove just as bad a risk for virus transmission.
- *Equipment Control in buildings and between buildings.* Shared equipment like tractors, trailers, forklifts, skid steers and hand tools need to be washed down if they are to be moved into another house on the farm. Moving between enterprises like swine to poultry also adds some risk, so wash down is indicated.
- *Mortality Management plan.* Documents how normal and catastrophic mortality would be handled. These may be different because of numbers of birds involved.
- *Manure & Old Materials Management.* Old litter and manure needs to be properly handled so not to spread virus. This also applies to garbage and other farm wastes.
- *Replacements / New stocking.* Bringing in new flocks will require a disinfection step as trucks come on to the farm from other farms.
- *Water Management* Water tested periodically to determine free of any contaminants to poultry. Surface water supplies are of a high concern here.
- *Feed and New Materials Management* New litter and feed should be done to minimize risk. Disinfect delivery trucks by hand that do not have on-board spray systems.

By having this documentation a farm can provide the proof that a plan was in effect even if they should find themselves in a disease control zone. Considering the magnitude of possible payments, it is certainly worth the time to make this document a reality.

For further questions please contact Dr. Martin at gpm10@psu.edu, or see our website at:

<http://extension.psu.edu/animals/poultry/topics/health-and-diseases/avian-influenza>

Adapted from Biosecurity Managers Manual:

http://www.poultrybiosecurity.org/files/Biosecurity_Officer_Info_Manual_15_Sep_2015.pdf

For more information on Interim Rule from USDA:

<http://1.usa.gov/1RsYa25>

rev:3/16

SECTION VII: PREMISES REGISTRATION FORM

PA PREMISES DATA INFORMATION SHEET

Address:

County: Township:

Primary contact (Correspondence and Emergency Contact)

Name: Address:

Home Phone: Business Phone: Cell Phone:

Check all that apply: Land Owner Manager Animal Owner Other:

Secondary contact (correspondence and Emergency Contact)

Name: Address:

Home Phone: Business Phone: Cell Phone:

Check all that apply: Land Owner Manager Animal Owner Other:

Domestic Species at this location?
(Check all that apply & list number)

| | | | | | |
|--|----------------------|-----------------------------------|----------------------|--|----------------------|
| <input type="checkbox"/> Dairy Cattle | <input type="text"/> | <input type="checkbox"/> Sheep * | <input type="text"/> | <input type="checkbox"/> Turkeys | <input type="text"/> |
| <input type="checkbox"/> Heifer Grower | <input type="text"/> | <input type="checkbox"/> Goats * | <input type="text"/> | <input type="checkbox"/> Waterfowl | <input type="text"/> |
| <input type="checkbox"/> Veal Grower | <input type="text"/> | <input type="checkbox"/> Dairy | <input type="text"/> | <input type="checkbox"/> Ratite | <input type="text"/> |
| <input type="checkbox"/> Beef Cattle | <input type="text"/> | <input type="checkbox"/> Meat | <input type="text"/> | <input type="checkbox"/> Upland Game Birds | <input type="text"/> |
| <input type="checkbox"/> Cow/Calf | <input type="text"/> | <input type="checkbox"/> Camelids | <input type="text"/> | <input type="checkbox"/> Pigeons | <input type="text"/> |
| <input type="checkbox"/> Backgrounder | <input type="text"/> | <input type="checkbox"/> Alpaca | <input type="text"/> | <input type="checkbox"/> Chickens | <input type="text"/> |
| <input type="checkbox"/> Feedlot | <input type="text"/> | <input type="checkbox"/> Llama | <input type="text"/> | <input type="checkbox"/> Egg | <input type="text"/> |
| <input type="checkbox"/> Swine | <input type="text"/> | <input type="checkbox"/> Cervids | <input type="text"/> | <input type="checkbox"/> Meat | <input type="text"/> |
| <input type="checkbox"/> Grower | <input type="text"/> | <input type="checkbox"/> Deer | <input type="text"/> | | |
| <input type="checkbox"/> Nursery | <input type="text"/> | <input type="checkbox"/> Elk | <input type="text"/> | | |
| <input type="checkbox"/> Finisher | <input type="text"/> | <input type="checkbox"/> Equine | <input type="text"/> | | |

***If you have a USDA Scrapie ID please list**

SECTION VIII: PA AI MONITORED FLOCK PROGRAM

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Pennsylvania Department of Agriculture

Avian Influenza Monitored Flock Program

Program Overview

Revised 2016

Introduction:

The Pennsylvania Avian Influenza Monitored Flock Program is a voluntary monthly testing program designed to provide an early warning of AI in Pennsylvania poultry and to allow producers to meet requirements for movement of poultry for exhibits and live bird markets.

This program involves participation and cooperation by the Pennsylvania Department of Agriculture and Pennsylvania's poultry flock producers.

Program Overview:

A. Flock Owner Responsibilities:

1. Collection and submission of diagnostic samples:

- a. Samples shall be collected by a certified poultry technician or an accredited veterinarian.
- b. Samples shall be collected from 30 birds **representative of the flock** (birds of testing age tested from all pens and houses on the premises) and tested at a Pennsylvania Animal Diagnostic Laboratory System (PADLS) laboratory every 21-30 days.
- c. Samples shall be collected, transported to the laboratory, and tested at the flock owner's expense.

2. Reporting of possible disease:

Flock owners shall immediately report any evidence or suspicion of avian influenza to the Department, and shall submit any samples requested for testing.

3. Records:

Flock owners shall maintain records pertaining to the flock to include sources of birds, dates of additions to the flock, dates and results of testing, and other records that may be necessary to monitor compliance with this program, shall save these records for two years, and shall make these records available for review by the Department.

4. Compliance with regulations:

a. Marketing and transport:

Flock owners shall market and transport live poultry in accordance with program requirements and utilize only marketing agents and

transportation agents who are licensed or otherwise approved by the Department in accordance with the Domestic Animal Act (Act 100).

b. Import/movement regulations:

Flock owners shall comply with all Department poultry health regulations regarding import and movement of poultry as stated in Title 7 of the PA Code.

5. Biosecurity:

Flock owners shall adopt and implement the minimum biosecurity measures included in the appendix of this document for their flocks, and shall allow periodic inspection by the Department to evaluate flock and premises biosecurity.

B. Department Responsibilities:

1. Monitoring:

The Department will:

- a. Monitor testing and maintain records necessary to administer the program; and
- b. Monitor compliance with program standards through flock inspection; and
- c. Provide certification that a flock has met program standards and is a Pennsylvania AI Monitored Flock.

2. Information:

The Department will, in cooperation with Penn State University and the University of Pennsylvania, provide technical information and advice to flock owners, veterinarians, and certified poultry technicians regarding the prevention and control of avian influenza.

C. Program Requirements:

1. To be certified as a Pennsylvania AI Monitored Flock, a flock must meet the following requirements:
 - a. The flock is in compliance with the requirements set forth elsewhere in this document.
 - b. To qualify as a flock the group must have been together without any additions from untested or unmonitored flocks for a minimum of 21 days prior to testing and no additional birds may be added between the testing date and the date that they leave the farm.
 - c. The flock is tested for avian influenza as follows:
 - i. Samples from 30 birds, three weeks of age and older **from all pens and houses** on the premises shall be collected between 21 and 30 days after the previous collection. *Please note that you must count 21-30 days from the date of the last sample collection-do not use*

calendar dates. For example, a flock sampled on August 24 will be out of compliance if sampled again on September 24 since this is actually more than 30 days.

- ii. Flocks must be tested every month-not just the month that they are moving.
 - iii. Waterfowl should be swabbed (cloacal swabs) and tested using virus detection testing. **PCR testing is available for domestic ducks and geese fed a commercial diet.** AGID testing of serum from waterfowl will not be accepted for program purposes. Other birds, such as chickens, may have blood samples submitted for testing. Tracheal or oropharyngeal swabs will be accepted for other birds, but the testing fees for tracheal swabs are higher than for blood testing- more information is available from the PADLS laboratories. Check with PADLS for current fee schedules.
- d. The first test must be conducted within 30 days of placement except for the following:
- i. For serology, sample collection from silkies and other small breeds of chickens may be delayed until the birds are 6-8 weeks of age;
 - ii. For serology, sample collection from guineas, chukars, and quail may be delayed until the birds are 5-6 weeks of age.
 - iii. Eggs from gallinaceous poultry may be substituted for blood samples for testing by AGID only at the discretion of the receiving State.
2. The 30 birds selected for testing shall be selected randomly and shall be representative of the flock (birds of testing age tested from all pens and houses on the premises).
 3. The sample collector is expected to conduct a flock inspection at the time of sample collection to assess the general health of the flock.
 4. The samples shall be submitted to a PADLS laboratory for testing.
 5. The flock owner shall notify the Department if 30 eligible birds are not available for testing within every 30 days.
 6. A flock must be negative for AI on testing for 3 consecutive months before it is considered to be a monitored flock in good standing. *When new birds are added to the premises, birds coming from a source which is of equal or higher status (for example, another monitored flock) assume the monitored flock status of the previous flock and must be tested once as a monitored flock prior to moving into the LBMS. Chicks coming directly from an NPIP AI Clean hatchery must be tested once as a monitored flock before moving into the LBMS. If the added birds are from other sources, the flock must be tested for 3 months consecutively (with negative results) to be a monitored flock in good standing.*
 7. If a monthly test is missed or is done outside of the 21-30 day window on a flock, or birds of lower status are added to the flock;
 - a. The flock must be tested negative within 10 days of movement into the NY or NJ LBMS and moved as a “tested flock”; AND

- b. The flock loses its monitored flock status and must start over with three months of negative testing 21-30 days apart. The flock must move as a tested flock on 10 day poultry inspection certificate; AND
 - c. The previous monitored flock number will be made inactive and should not be used on submission forms or other paperwork until it has been re-activated after three months of testing.
8. Program flocks may be subject to inspections by animal health officials to ensure that the flocks are in compliance with program standards regarding sanitation, testing, and separation from non-program poultry.

D. Termination:

1. Flock owners may terminate participation in this program at any time.
2. The Department may remove a flock from the program on the basis of non-compliance with program requirements.
3. The terminating party will notify the other party of the termination as soon as possible.
4. The Department may terminate the AI Monitored Flock Program at any time, without advance notice to the participating flock owners. If the Department terminates this program, it will provide notice to the participating flock owners as soon as possible.
5. Failure to provide notice of termination described in this paragraph shall not affect termination.

E. It should be further understood that:

1. The accredited veterinarian or certified poultry technician who collects samples may negotiate fees with the flock owner for professional services required by this program.
2. No liability shall accrue to the Department for damages, losses, or injuries incidental to or arising by virtue of participation in this program.
3. Certification as an AI Monitored Flock does not constitute a warranty regarding the presence or absence of AI.

APPENDIX

Biosecurity Guidelines for Participating Flocks

Disease agents such as bacteria and viruses are easily introduced onto a farm by people, vehicles, farm equipment, and animals, including the poultry coming into the operation. Organic material, including manure, feathers, and dust, are the primary means by which the disease agents can be carried.

Listed below are practical measures which can be taken to reduce the risk of bringing disease agents onto a farm. These are minimal biosecurity recommendations and should be used only as guidelines for development of complete biosecurity practices on an individual farm.

- Avoid visiting farms with poor biosecurity practices.
- When visiting other farms or auctions with poultry, wear disposable outerwear and dispose of it, or change your clothes and clean your boots before returning to your own property.
- Limit visitors and reduce vehicular traffic on your property, and keep any visitors away from the poultry.
- Keep your poultry house locked. Allow only essential personnel into your poultry house. Provide clean or disposable coveralls, head covers, and plastic boots or boots that can be cleaned and disinfected for personnel who must enter the house.
- Personnel should change outerwear between poultry houses.
- Disinfecting foot baths are useful and should be placed at outside entries to the poultry house and egg room. Change the disinfectant in the foot baths daily.
- Do not share equipment or vehicles with other farms. If you must, insist that vehicles and equipment entering your premises be cleaned and disinfected. (Personnel and equipment that have been in direct or indirect contact with the live bird markets pose a great risk).
- Trucks from the Live Bird Market should not be going directly to any farm to load birds. It is recommended that birds are taken to a central location for loading onto trucks for the Live Bird Market. Vehicles transporting birds should be thoroughly cleaned and disinfected before returning to the farm. Special attention should be paid to the coops. If you must allow trucks from the LBM onto your premises, do not allow personnel or coops from the live bird markets to enter your poultry house(s) unless those personnel are wearing proper clothing and coops have been cleaned and disinfected.

- Insist that supplies brought to your premises (egg flats, carts, etc.) be new (if disposable) or be washed and disinfected (plastic flats, carts, shelves, or dividers).
- Follow the “all-in/all-out” philosophy of flock management.
- Protect open range or backyard poultry flocks from contact with wild birds and water that may have been contaminated by wild birds.
- Dispose of dead birds safely (incineration, burial, composting, rendering). Never pile dead birds outside of a building or spread in fields.
- If multiple loadouts are required on your farm, try to have all birds off the farm within 3-4 days.
- Create and follow a biosecurity plan for each flock.
- Report any increased illness or mortality to your company or to the Pennsylvania Department of Agriculture at (717) 772-2852.

**PENNSYLVANIA DEPARTMENT OF AGRICULTURE
PENNSYLVANIA AVIAN INFLUENZA MONITORED FLOCK PROGRAM
Compliance Agreement**

1. DATE OF APPLICATION: _____

2. FLOCK OWNER INFORMATION:

a. NAME: _____

b. ADDRESS: _____

c. FEDERAL PREMISE ID NUMBER IF AVAILABLE: _____

d. PHONE NUMBER: _____

e. FAX NUMBER: _____

f. EMAIL ADDRESS: _____

3. INFORMATION FOR FARM WHERE POULTRY ARE HOUSED:

a. NAME OF FARM OWNER: _____

b. ADDRESS: _____

c. FEDERAL PREMISE ID NUMBER IF AVAILABLE: _____

d. PHONE NUMBER: _____

e. FAX NUMBER: _____

f. EMAIL ADDRESS: _____

Additional location information for farm (directions/distance from nearest crossroads, etc):

4. FLOCK MANAGER INFORMATION IF DIFFERENT FROM FLOCK OWNER:

a. NAME: _____

b. ADDRESS: _____

c. FEDERAL PREMISE ID NUMBER IF AVAILABLE: _____

d. PHONE NUMBER: _____

e. FAX NUMBER: _____

f. EMAIL ADDRESS: _____

5. BIRD INFORMATION:

SPECIES, TYPE, AND NUMBER OF BIRDS Please list all types and approximate number of birds of each type on the farm (for example – Chickens/broilers – 50): _____

SOURCE FLOCK: _____

6. HOUSING INFORMATION:

NUMBER OF HOUSES/PENS AND CAPACITY OF EACH HOUSE/PEN (for example – one 2,500 bird broiler house):

7. OTHER INFORMATION:

SERVICE PERSON

- a. NAME: _____
- b. ADDRESS: _____
- c. PHONE NUMBER: _____
- d. FAX NUMBER: _____
- e. EMAIL ADDRESS: _____

INTEGRATOR AND/OR FEED DELIVERED BY (OR FEED PURCHASED FROM)

- a. NAME: _____
- b. ADDRESS: _____
- c. PHONE NUMBER: _____
- d. FAX NUMBER: _____
- e. EMAIL ADDRESS: _____

SAMPLES COLLECTED BY (CPT OR ACCREDITED VETERINARIAN)

- a. NAME: _____
- b. ADDRESS: _____
- c. PHONE NUMBER: _____
- d. FAX NUMBER: _____
- e. EMAIL ADDRESS: _____

8. SIGNATURE:

I agree to abide by the PA AI Monitored Flock Program standards;

Flock owner signature

This agreement may be sent by fax or mail to the Department at:

Pennsylvania Department of Agriculture
Bureau of Animal Health and Diagnostic Services ATTN: Poultry Health
2301 N Cameron St Harrisburg, PA 17110
Phone: 717-783-6897; Fax: 717-787-1868

**SECTION IX: PDA AI IMPORT REGULATION (QUARANTINE
ORDER FOR IMPORTATION OF POULTRY INTO
PENNSYLVANIA)**

Pennsylvania Department of Agriculture

INTERSTATE/INTERNATIONAL QUARANTINE ORDER: Avian Influenza *Recitals*

- A. Avian influenza *is* an infectious disease of poultry.
- B. Avian influenza is designated a "dangerous transmissible disease" of animals under the provisions of the Domestic Animal Law (3 Pa.C.S.A. §§ 2301-2389), at 3 Pa.C.S.A. § 2321(d).
- C. The Pennsylvania Department of Agriculture (PDA) has broad authority under the Domestic Animal Law to regulate the keeping and handling of domestic animals in order to exclude, contain or eliminate dangerous transmissible diseases.
- D. Avian influenza has caused significant loss in the past to the Pennsylvania poultry industry.
- E. Avian influenza is of particular concern to the entire Pennsylvania poultry industry and may severely limit the market for Pennsylvania product.
- F. Avian influenza sub-types HS and H7 are of particular concern due to their potential for developing into a virulent (highly pathogenic) form of disease.
- G. Avian influenza exists, or is suspected to exist, outside this Commonwealth.
- H. The Domestic Animal Law allows (at 3 Pa.C.S.A. § 2329(c)) for the establishment of an Interstate/International Quarantine under the circumstances described above.
- I. Pursuant to that authority, PDA issued its initial Interstate/International Quarantine Order addressing avian influenza on January 24, 2006. In the course of implementing and administering this initial Order, PDA determined the need to refine the conditions of quarantine; and issued a February 7, 2008 and a revised March 16, 2009 Interstate/International Quarantine Order to supplant and rescind its initial Order.
- J. PDA has *again* determined the need to refine the conditions of quarantine. Specifically, PDA seeks to further clarify the testing requirements applicable to poultry flocks.

Order.

PDA enters an Interstate/International Quarantine Order, incorporating the foregoing recitals. This order is entered under authority of the Domestic Animal Law (at 3 Pa.C.S.A. § 2329) and § 1702 of the Administrative Code of 1929 (71 P.S. § 442), and establishes the following quarantine restrictions with respect to the shipment of live poultry into the Commonwealth of Pennsylvania:

1. For purposes of this Order, the term "poultry" includes all domesticated fowl, including chickens, turkeys, ostriches, emus, rheas, cassowaries, waterfowl, and game birds, except doves and pigeons, or as otherwise defined under subpart A of the current version of the National Poultry Improvement Plan (NPIP) and Auxiliary Provisions, and shall be 3 weeks of age or older.

2. Poultry shall only be allowed into the Commonwealth under any of the following circumstances:

a. The poultry originate from a flock that participates in the current version of the National Poultry Improvement Plan and Auxiliary Provisions "U.S. Avian Influenza Clean" or "U.S. H5/H7Avian Influenza Clean" program and the shipment is accompanied by a USDA form 9-3 or other approved NPIP form; or

b. The poultry originate from a flock in which a minimum of thirty (30) birds, three (3) weeks of age or older, were tested negative for avian influenza (serology, virus isolation, or real-time reverse-transcriptase polymerase chain reaction (RRT-PCR)). The date of sample collection must be within thirty (30) days of entry into Pennsylvania and the shipment must be accompanied by the test report. If there are fewer than 30 birds in the flock, all birds must be tested (RRT-PCR, virus isolation, or serology). For waterfowl, virus detection testing (cloacal swabs) is required for entry. RRT-PCR testing is accepted for domestic ducks - virus isolation testing must be used for other waterfowl. No untested birds shall have been added to the flock after sample collection and before entry into Pennsylvania.

c. If a flock is serologically positive, poultry from that flock may be imported only if the flock is determined to be free of virus by virtue of a negative virus detection test (virus isolation or RRT-PCR) of oropharyngeal, tracheal and/or cloacal specimens from a minimum of one hundred and fifty (150) birds. If there are fewer than 150 birds in the flock, all birds must be tested. For waterfowl, virus detection testing on cloacal swabs is required for entry. RRT-PCR testing is accepted for domestic ducks - virus isolation testing must be used for other waterfowl. The date of sample collection must be within 30 days of entry into Pennsylvania and the shipment must be accompanied by the test report. No untested birds shall have been added to the flock after sample collection and before entry into Pennsylvania.

3. Poultry three (3) weeks of age and older, imported into the Commonwealth, shall meet all other import requirements required under PD A's regulations at Title 7 of the *Pennsylvania Code* (accessible through the following web site address: www.pacode.com).

4. Gallinaceous birds, water birds, and ratites three (3) weeks of age and older which are destined to be pet birds or destined to be part of a zoological or menagerie collection; and wild birds three (3) weeks of age and older (gallinaceous birds, water birds, and ratites) destined for domestication, confinement, or as pets must be test negative for avian influenza (swabs tested using virus isolation or real-time reverse-transcriptase polymerase chain reaction (RRT-PCR) techniques). These birds may be individually tested for import. The date of sample collection must be within thirty (30) days of entry into Pennsylvania and the shipment must be accompanied by the test report. RRT-PCR testing is accepted for domestic ducks. For wild water birds, virus isolation (cloacal swabs) is required for entry.

5. All other imported gallinaceous birds, water birds, and ratites three (3) weeks of age and older must meet all AI testing requirements stated for poultry (includes birds intended for release). For water birds, virus detection testing on cloacal swabs is required

for entry (refer to #2 and #4 above). RRT-PCR testing is accepted for domestic ducks. For wild water birds, virus isolation (cloacal swabs) is required for entry.

6. This Order shall not be construed as limiting PDA's authority to establish additional quarantine or testing requirements on imported poultry and/or poultry products.

7. This Order is effective July 1, 2012, and supplants the referenced Interstate/International Quarantine Order of March 16, 2009.

BY THE PENNSYLVANIA DEPARTMENT OF AGRICULTURE


George D. Greig, Secretary

SECTION X: POULTRY BLOOD COLLECTION GUIDELINES

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Extension FactSheet

VME-23-05

Veterinary Preventive Medicine, 1900 Coffey Road, Columbus, Ohio 43210

Poultry Blood Collection

Aaron J. Ison, B.S., Avian Disease Investigation Laboratory

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Teresa Y. Morishita, DVM, Ph.D., Dipl. ACPV

OSU Extension–Veterinary Medicine and Avian Disease Investigation Laboratory

Why Bleed Your Birds?

Phlebotomy (blood collection) can play an important role in determining the cause of morbidity (sickness) and mortality (death loss) experienced in your flock. In addition, flock health monitoring can be achieved by obtaining serum samples. A veterinarian (or flock specialist) can perform such a procedure to provide the samples needed for laboratory diagnostic testing. Three types of blood samples can be used for diagnostic testing: whole blood, plasma, and serum. Whole blood samples are usually used by the veterinarian or flock specialist to examine, by microscopy, the condition of the erythrocytes (red blood cells), leukocytes (white blood cells), and thrombocytes (platelet-type cells). Plasma samples are often used by the veterinarian to obtain the chemical profile of the bird's blood. Serum samples are used by the veterinarian to obtain antibody titer levels present to determine flock exposure to disease agents.

What Will You Need to Collect Blood?

- 3 mL syringes (1 mL = 1 cc)
- Needles (the higher the gauge, the smaller the diameter of the needle). The 25 gauge x 1 inch length is preferable for most birds.
- Blood collection vials
- Mini cooler (for transportation of blood samples to the laboratory)



Needles and syringes commonly used to bleed poultry.

| Blood Vial | Contents | Collection Sample |
|------------------------|---|------------------------|
| Red | None / No additives—Blood clots on its own; this allows serum to separate from cells | Serum |
| Red with grey marbling | Gel separator / No additives—Centrifugation causes the gel to separate insoluble material (cells) from serum | |
| Green | Heparin-anticoagulant—Contains polysaccharides that inhibit blood clotting by preventing release of coagulating factors | Plasma |
| Purple | Anticoagulant EDTA (ethylenediaminetetra-acetic acid)—Binds calcium salts in blood by chelation to preserve cells | Whole Blood and Plasma |



Note the colored caps/plugs identifying the type of blood vials.



Examples of sick birds that have ruffled feathers and appear “depressed.”



Example of a hematoma.

How Much Blood Can One Collect?

The amount of blood that can be safely collected from a clinically healthy bird is 1% of its body weight, in grams. For example, the maximum amount of blood to take from a 500 g bird is 5 mL (5 cc) of blood. In addition, one should collect less blood from birds that are sick.

Where Are the Blood Collection Sites?

The large vein under the wing (brachial vein)

- Place the bird on a table, setting it on its side.
- Lift up the wing with one hand and part the feathers along the wing. Water can be used to help keep the feathers separated.
- Place the needle at a slight angle, bevel up, against the vein on the underside of the wing. (The bevel is the side of the needle with the angle and the hole.) Insert the needle into the vein and slowly withdraw blood.



Separation of wing feathers, exposing the brachial vein (left). Vein puncture and the withdrawal of blood (right).

- Remove the needle and apply pressure to the vein for a few seconds. This will help to minimize the development of large hematomas, which can be common with poultry. Fill the appropriate vial 1/3 to 1/2 of its full volume. Allow the vacuum in the vial to empty the syringe, rather than pushing on the plunger, as this will prevent hemolysis (rupture of red blood cells). This volume is needed to ensure enough blood is collected to obtain an adequate sample.

The vein on the side of the outstretched neck (jugular vein)

- Place the bird on a table, setting it on its side.
- Stretch out the neck with one hand and part the feathers along the neck. The right jugular vein is usually larger.
- Place the needle at a slight angle, bevel up, against the vein.
- Puncture the vein and slowly withdraw blood.
- Remove the needle and apply pressure to the vein for a few seconds. Fill the appropriate vial 1/3 to 1/2 of its full volume.



Exposed jugular vein (left) and withdrawal of blood (right).

The vein on the inner leg, above the hock (medial metatarsal vein)

- Place the bird on a table, setting it on its side.
- Stretch out the leg with one hand and part the feathers along the hock joint.
- Place the needle at a slight angle, bevel up, against the vein.
- Puncture the vein and slowly withdraw blood.
- Remove the syringe and apply pressure to the vein for a few seconds. Fill the appropriate vial 1/3 to 1/2 of its full volume.

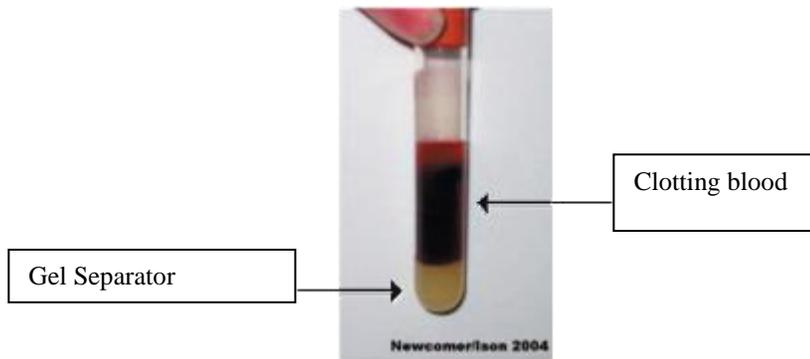


Withdrawal of blood from the medial metatarsal vein.

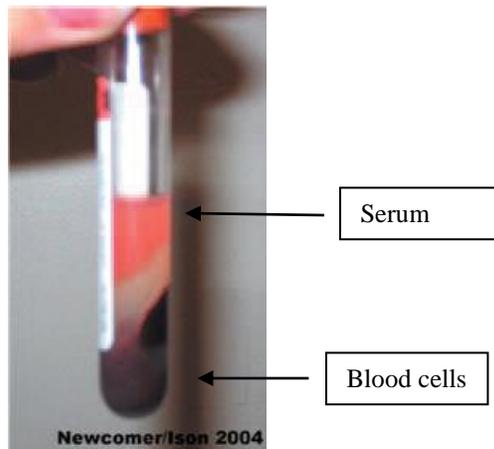
What Should Be Done After the Blood Is Collected?

To obtain whole blood and plasma, gently mix the drawn blood by inverting the tube a few times. This will ensure proper mixing of the anticoagulant with the whole blood. To obtain serum, place the blood vial on a slanted surface for 10 to 15 minutes to allow for clotting. The plasma and serum samples can now be spun by centrifugation. Vials containing the blood samples (serum, plasma, or whole blood) should be refrigerated and sent to a diagnostic laboratory as soon as possible.

Vial with gel separator and whole blood before centrifugation.



Vial with gel separator after centrifugation. Note the gel separator separates the blood cells from the serum.



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Keith L. Smith, Associate Vice President for Agricultural Administration and Director, OSU
Extension TDD No. 800-589-8292 (Ohio only) or 614-292-1868

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Please note: PADLS laboratories may provide plain red-top tubes or serum separator tubes for blood sample submissions.

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SECTION XI: SUMMARY OF POULTRY PROGRAMS AND TESTING REQUIREMENTS

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SUMMARY OF POULTRY PROGRAMS AND TESTING REQUIREMENTS IN PENNSYLVANIA

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Section IV: Waterfowl, Upland Game Birds, and Exhibition Birds

Exhibition Only

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2016

Programs and program requirements may change - please refer to the most current NPIP Provisions.

SUMMARY OF POULTRY PROGRAMS AND TESTING REQUIREMENTS IN PENNSYLVANIA

Section I: Layers

Layers - Avian Influenza

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|---|---------|--|----------|--|---|---|---|
| NPIP U.S. AI Clean | AI | Breeders, Primary flocks | On farm | Blood | 30 | 30 birds tested negative initially, then 30 birds every 90 days or 30 birds during each 90 day period. AND 11 birds tested negative within 21 days of slaughter. | > 4 months of age; H5/H7 |
| NPIP U.S AI Clean | AI | Breeders, Multiplier flocks | On farm | Blood | 30 | 30 birds tested negative initially, then 30 birds every 90 days or 30 birds during each 90 day period. AND 11 birds tested negative within 21 days of slaughter. | > 4 months of age; H5/H7 |
| NPIP U.S. H5/H7 AI Monitored (LPAI Voluntary Control Program) | AI | Commercial table-egg Layers | On farm | Blood OR Eggs | 11 birds or eggs | 11 birds or eggs every 12 months and 11 birds or eggs tested negative within 30 days of disposal (proposal to change to 21 days accepted in 2016) | Flock size; at least 75,000 birds total on premises H5/H7 |
| NPIP U.S. H5/H7 AI Monitored (LPAI Voluntary Control Program) | AI | Commercial table-egg Layer- PULLETS | On farm | Blood | 11 birds | Test 11 pullets within 30 days of movement | Mandatory testing of pullets pre-placement for LPAI layer flock participants |
| PA AI Monitored Flock Program | AI | Poultry | On farm | Gallinaceous birds - blood Waterfowl- cl. swabs recomm. | 30 birds (Min. 3 weeks of age) | Within every 21-30 day period. Age exceptions: Silkies: 6-8 wks Guineas, chukars, quail: 5-6 wks Quail/chukars: may substitute eggs | Must enroll with PDA. Meets NY/NJ LBMS req. |

Layers - Salmonella pullorum

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|-------------------------------------|------------------|--|----------|----------------|--|--|---|
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Primary Flock | On farm | Blood | 300 or entire flock every 12 months | Every 12 months and 4 weeks after molt | >4 months of age; If vaccinate for SE, wait until after blood test or band and then test 300 unvaccinated birds. |
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Multiplier Flock (from P/T Clean primary breeder flock) | On farm | Blood | 300 birds or entire flock every 12 months; at PDA discretion, may be exempt from annual test | Every 12 months and 4 weeks after molt | > 4 months of age: If vaccinate for SE, wait until after blood test or band and then test 300 unvaccinated birds. |

Layers - MG

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|---|---------|---|----------|----------------|--|--|-----------------------------------|
| NPIP U.S. MG Clean | MG | Breeders; Primary Flock | On Farm | Blood/Egg | Initial; 300 or entire flock once, then 150 birds | 150 birds every 90 days or 150 birds in 90 day period | > 4 months of age |
| NPIP U.S. MG Clean | MG | Breeders; Multiplier Flock (from MG Clean primary breeder flock) | On Farm | Blood/Egg | Initial; 150 or entire flock once, then 75 birds or 25 cull chicks or egg yolk testing from 30 eggs taken during 1 day's production | 75 birds every 90 days or 75 birds in 90 day period or 25 cull chicks every 30 days or egg yolk testing every 30 days | > 4 months of age |
| NPIP U.S. MG Clean Started Poultry | MG | Pullets | On Farm | Blood | 75 birds, minimum of 50 birds per house | 15-20 days prior to flock moving to layer house | From MG Clean breeder flock |

Layers - MS

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--|---------|---|----------|----------------|--|---|--|
| NPIP U.S MS Clean | MS | Breeders; Primary Flock | On Farm | Blood/Egg | Initial 300 or entire flock once, then 150 birds | Every 90 days or 150 birds in 90 day period | > 4 months of age; run with MG on same plate |
| NPIP U.S. MS Clean | MS | Breeders: Multiplier Flock (From MS Clean Primary Flock) | On Farm | Blood/Egg | 150 or entire flock once, then 75 birds | 75 every 90 days or 75 birds in 90 day period or egg yolk testing every 30 days | > 4 months of age |
| NPIP U.S. MS Clean Started Poultry | MS | Pullets | On Farm | Blood | 75 birds, minimum of 50 birds per house | 15-20 days prior to flock moving to layer house | From MS Clean breeder flock |

Layers – Salmonella enteritidis

| Program | Disease | Type of Bird | Location | Type of Sample | # of Samples Tested | Frequency of Testing | Comment |
|------------------------------|---------|--------------|----------|-------------------------------|--|--|--|
| NPIP U.S. SE Clean | SE | Breeders | On farm | Environmental swabs; Blood | Environmental swabs; also 300 birds blood-tested once after 4 months of age | Env. swabs at 2-4 weeks of age, then every 30 days | Flock from SE Clean source flock or meconium and chicks which have died within 7 days are cultured. |
| PEQAP | SE | Layers | On farm | Environmental swabs, eggs | Per PEQAP guidelines | Per PEQAP guidelines | |
| FDA Egg Safety Program | SE | Layers | On farm | Environmental swabs, eggs | Per FDA guidelines | Per FDA guidelines | |

Section II: Broilers

Broilers – Avian Influenza

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|---|----------------|--|-------------------------------|----------------------------|-----------------------------|---|---|
| NPIP U.S. AI Clean | AI | Breeders; Primary flocks | On farm | Blood | 30 | 30 birds tested negative initially, then 30 birds every 90 days or 30 birds during each 90 day period. 11- 30 birds tested negative within 21 days of slaughter. | > 4 months of age; H5/H7 |
| NPIP U.S. AI Clean | AI | Breeders; Multiplier flocks | On farm | Blood | 30 | 30 birds tested negative initially, then 15 birds every 90 days or 15 birds during each 90 day period. 11- 30 birds tested negative within 21 days of slaughter. | >4 months of age; H5/H7 |
| NPIP U.S. H5/H7 AI Monitored (LPAI Voluntary Control Program) | AI | Commercial Broiler flocks - slaughter plants | On farm or at slaughter | Blood | 11 | 11 birds tested negative within 21 days of slaughter or 11 birds per slaughter plant shift | Must use enrolled, FSIS inspected slaughter plants processing more than 200,000 chickens/week Plants must enroll with PDA/NPIP |
| PA AI Monitored Flock Program | AI | Poultry | On farm | Gallinaceous birds - Blood | 30 (Min. 3 weeks of age) | Within every 21-30 day pd. Age exceptions: Silkies: 6-8 wks Guineas, chukars, quail: 5-6 wks Quail/chukars: may substitute eggs | Must enroll with PDA. Meets NY/NJ LBM req. |

Broilers - Salmonella pullorum

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|-------------------------------------|------------------|--|----------|----------------|--|--|---|
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Primary Flock | On farm | Blood | 300 birds or entire flock every 12 months | Every 12 months and 4 weeks after molt | > 4 months of age; If vaccinate for SE, wait until after blood test or band and then test 300 unvaccinated birds. |
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Multiplier Flock (from P/T Clean primary breeder flock) | On farm | Blood | 300 birds or entire flock every 12 months; at PDA discretion, may be exempt from annual test | Every 12 months and 4 weeks after molt | > 4 months of age; If vaccinate for SE, wait until after blood test or band and then test 300 unvaccinated birds. |

Broilers - MG

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--|---------|--|----------|----------------|---|---|--|
| NPIP U.S. MG Clean | MG | Breeders; Primary Flock | On Farm | Blood/Egg | Initial; 300 or entire flock once, then 150 birds | 150 birds every 90 days or 150 birds in 90 day period: May test 40 birds at 28 day intervals to meet 150 birds per 90 day period. | > 4 months of age |
| NPIP U.S. MG Clean | MG | Breeders; Multiplier Flock (from MG Clean primary breeder flock) | On Farm | Blood/Egg | Initial; 150 or entire flock once, then 75 birds or 25 cull chicks or egg yolk testing from 30 eggs taken during 1 day's production | 75 birds every 90 days or 75 birds in 90 day period or 25 cull chicks every 30 days or egg yolk testing every 30 days | Before adding breeding males to a multiplier flock, at least 30 birds, 10 per pen, to be added must be tested within 14 days prior to introduction. If less than 30, test all. |
| NPIP U.S. MG Clean Started Poultry | MG | Pullets | On Farm | Blood | 75 birds, minimum of 50 birds per house | 15-20 days prior to flock moving to hatching egg layer house | |
| NPIP U.S. MG Monitored | MG | Breeders; Multiplier Flock | On Farm | Blood | All birds or at least 30 birds per house initially after 4 months of age | Test again at 36-38 weeks, and at 48-50 weeks | Test 15 birds from front of house and 15 from back of house, male and female marked and representative of house |

Broilers - MS

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|---|---------|--|----------|----------------|--|---|--|
| NPIP U.S. MS Clean | MS | Breeders; Primary Flock | On Farm | Blood/Egg | Initial 300 or entire flock once, then 150 birds | Every 90 days or 150 birds in 90 day period. | > 4 months of age |
| NPIP U.S. MS Clean | MS | Breeders: Multiplier Flock (From MS Clean Primary Flock) | On Farm | Blood/Egg | 150 or entire flock once, then 75 birds | 75 every 90 days or 75 birds in 90 day period or egg yolk testing every 30 days | Before adding breeding males to a multiplier flock, at least 30 birds, 10 per pen, to be added must be tested within 14 days prior to introduction. If less than 30, test all. |
| NPIP U.S. MS Clean Started Poultry | MS | Pullets | On Farm | Blood | 75 birds, minimum of 50 birds per house | 15-20 days prior to flock moving to hatching egg laying facility | |
| NPIP U.S. MS Monitored | MS | Breeders; Multiplier Flock | On Farm | Blood | All birds or at least 30 birds per house initially after 4 months of age | Test again at 36-38 weeks, and at 48-50 weeks | Test 15 birds from front of house and 15 from back of house, male and female marked and representative of house |

Broilers – Salmonella enteritidis

| Program | Disease | Type of Bird | Location | Type of Sample | # of Samples Tested | Frequency of Testing | Comment |
|--------------------------------------|------------|-------------------------------|----------------------|---------------------------|---|---|--|
| NPIP U.S. Sanitation Monitored | Salmonella | Multiplier Breeders subpart C | On farm | Environment. swabs | Environmental swabs | Env. swabs at 4 months of age, then every 90 days | May vaccinate |
| NPIP U.S. SE Monitored | Salmonella | Multiplier Breeders subpart C | On farm | Environment. swabs | Environmental swabs | Env. swabs at 16-18 wks & at 40-45 wks | Originate from an SE clean primary flock. |
| NPIP U.S. SE Clean | SE | Primary Breeders Subpart H | On farm, in hatchery | Environment. Swabs; blood | Environmental swabs; also 300 birds blood-tested once after 4 months of age | Env. swabs at 4 months of age, then every 30 days; Also chick samples at hatchery | Flock from SE Clean source flock or meconium and chicks which have died within 7 days are cultured |

Section III: Turkeys

Turkeys – Avian Influenza

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--|----------------|-------------------------------|-------------------------|-----------------------|--------------------------|--|--|
| NPIP U.S. AI Clean | AI | Breeders; Primary Flock | On farm | Blood | 30 | 30 birds tested negative initially, then 30 birds every 90 days or 30 birds during each 90 day period. 6 birds tested negative within 21 days of slaughter. | > 4 months of age; H5/H7 |
| NPIP U.S. AI Clean | AI | Breeders; Multiplier Flock | On farm | Blood | 30 | 30 birds tested negative initially, then 30 birds every 90 days or 30 birds during each 90 day period. 6 birds tested negative within 21 days of slaughter. | > 4 months of age; H5/H7 |
| NPIP U.S. H5/H7 AI Monitored (LPAI Voluntary Control Program) | AI | Commercial Turkey Flocks | On farm or at slaughter | Blood | 6 | 6 birds per farm within 21 days of processing or equivalent number tested at plant. | For enrolled, FSIS inspected slaughter plants processing more than 2 million turkeys/year. Prefer birds > 10 weeks of age with signs of illness; H5/H7; Plants must enroll with PDA/NPIP. |
| PA AI Monitored Flock Program | AI | Poultry | On farm | Blood | 30 | Within every 21-30 days | Meets NY/NJ LBM req. Min. 3 weeks of age |

Turkeys - Salmonella pullorum

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|-------------------------------------|------------------|--|-----------------|--|--|--|-------------------|
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Primary Flock | On farm | Blood (Whole blood plate test NOT ACCEPTABLE for turkeys) | 300 or entire flock | Every 12 months and 4 weeks after molt | > 12 weeks of age |
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Multiplier Flock (from P/T Clean primary breeder flock) | On farm | Blood (Whole blood plate test NOT ACCEPTABLE for turkeys) | 300 birds or entire flock every 12 months; at PDA discretion, may be exempt from annual test | Every 12 months and 4 weeks after molt | > 12 weeks of age |

Turkeys - MG

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--------------------------|----------------|---------------------|-----------------|-----------------------|---|-----------------------------|----------------|
| NPIP U.S. MG Clean | MG | Breeders | On Farm | Blood | Refer to current version of the NPIP Provisions | | |

Turkeys - MS

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--------------------------|----------------|---------------------|-----------------|-----------------------|---|-----------------------------|----------------|
| NPIP U.S. MS Clean | MS | Breeders | On Farm | Blood | Refer to current version of the NPIP Provisions | | |

Turkeys - MM

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--------------------------|----------------|---------------------|-----------------|-----------------------|---|-----------------------------|----------------|
| NPIP U.S. MM Clean | MM | Breeders | On Farm | Blood | Refer to current version of the NPIP Provisions | | |

Turkeys – Salmonella enteritidis

| Program | Disease | Type of Bird | Location | Type of Sample | # of Samples Tested | Frequency of Testing | Comment |
|---|---|--|--|---|--|---|--|
| <p style="text-align: center;">NPIP U.S. Sanitation Monitored</p> | <p style="text-align: center;">Salmonella</p> | <p style="text-align: center;">Breeders; Multiplier flocks</p> | <p style="text-align: center;">On farm</p> | <p>Hatchery debris and dead poult from breeder flock; Environmental swabs from breeder flock; and Dead poults and/or hatchery debris from poults produced from hatching eggs from breeder flock</p> | <p style="text-align: center;">Environmental swabs; hatchery debris, dead poults</p> | <p style="text-align: center;">Env. swabs at 12-20 weeks of age; again at 35-50 weeks of age; and at midlay. Hatchery debris, dead poults.</p> | <p style="text-align: center;">May vaccinate</p> |

Section IV: Waterfowl, Upland Game Birds, and Exhibition Poultry

Waterfowl, Upland Game Bird, and Exhibition Poultry – Avian Influenza

| Program | Di-sease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--|-----------------|--|---|---|--------------------------|--|---|
| NPIP U.S. AI Clean | AI | Breeders, Primary flocks; Waterfowl,Upl and Game Birds | On farm | Game birds: Blood, swabs; or eggs for approved types of game birds. Waterfowl: Cloacal swabs | 30 | 30 birds tested negative initially, then 30 birds every 180 days or 30 birds during each 180 day period. | > 4 months or sexual maturity; H5/H7 |
| NPIP U.S. AI Clean | AI | Breeders, Multiplier flocks; Waterfowl,Up land Game Birds | On farm | Game birds: Blood, swabs; or eggs for approved types of game birds. Waterfowl: Cloacal swabs | 30 | 30 birds tested negative initially, then 30 birds every180 days or 30 birds during each 180 day period. AND 30 birds tested negative within 21 days of slaughter. | > 4 months or sexual maturity; H5/H7 |
| PA AI Monitored Flock Program | AI | Poultry | On farm | Within every 21-30 day pd. Waterfowl; cloacal swabs | 30 | Within every 21-30 day period (count number of days from last sample collection; do not go by calendar date) | Meets NY/NJ LBMS requirements (Min.3 wks of age) Age exceptions: Silkies: 6-8 wks Guineas, chukars, quail: 5-6 wks Quail/chukars: may substitute eggs |
| NPIP H5/H7 LPAI Monitoring Program – Commercial Waterfowl and Commercial Upland Game Birds | AI | Meat – type Waterfowl and Game Birds | On farm(with in 21 days of slaughter) or at slaughter | Game birds: Blood, swabs Waterfowl: Cloacal swabs | 11 | Per shift or on farm within 21 days of processing | Plant processes > 50,000 birds per year |
| NPIP H5/H7 LPAI Monitoring Program –Raised for Release Waterfowl and Upland Game Birds | AI | Raised for Release Waterfowl and Upland Game Birds | On farm | Game birds: Blood, swabs Waterfowl: Cloacal swabs | 30 | 30 birds within every 90 days | Flocks with > 25,000 birds |

Waterfowl, Upland Game Bird, and Exhibition Poultry - *Salmonella pullorum*

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|-------------------------------------|------------------|--|----------|----------------|---|--|--------------------------------------|
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Primary Flock | On farm | Blood | 300 birds or entire flock every 12 months | Every 12 months and 4 weeks after molt | > 4 months of age or sexual maturity |
| NPIP U.S. Pullorum-Typhoid Clean | Pullorum/Typhoid | Breeders; Multiplier Flock (from P/T Clean primary breeder flock) | On farm | Blood | 300 birds or entire flock every 12 months | Every 12 months and 4 weeks after molt | > 4 months of age or sexual maturity |

Waterfowl, Upland Game Bird, and Exhibition Poultry - MG

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--------------------------|---------|---|----------|-------------------------------------|---|----------------------|---------|
| NPIP U.S. MG Clean | MG | Primary Breeder flock | On Farm | Blood | Refer to current version of the NPIP Provisions | | |
| NPIP U.S. MG Clean | MG | Multiplier Breeder flock (Originated as MG Clean baby poultry from primary flock) | On Farm | Blood initially, then blood or eggs | Refer to current version of the NPIP Provisions | | |

Waterfowl, Upland Game Bird, and Exhibition Poultry - MS

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|-----------------------|---------|--|----------|-------------------------------------|---|----------------------|---------|
| NPIP U.S. MS Clean | MS | Breeders; Primary Flock | On Farm | Blood | Refer to current version of the NPIP Provisions | | |
| NPIP U.S. MS Clean | MS | Breeders: Multiplier Flock (From MS Clean Primary Flock) | On Farm | Blood initially, then blood or eggs | Refer to current version of the NPIP Provisions | | |

Exhibition Birds

Section V: Exhibition Birds (All birds entering a show must be banded with official PDA leg bands as of June 1, 2017.)

| Program | Disease | Type of Bird | Location | Type of Sample | # of Birds Tested | Frequency of Testing | Comment |
|--|----------|---|----------|--|--|------------------------------|--|
| AI testing for PA birds going to PA exhibition | AI | Exhibition 3 weeks of age and older | On farm | Blood unless waterfowl— then cloacal swabs | <p>Pennsylvania Birds: 30 birds from the flock must be tested negative on an official test within the 30 days prior to entrance into the exhibition.</p> <p>Out of state imports: Refer to the current “Interstate, International Quarantine Order” for AI testing import requirements.</p> | | Ducks and geese fed a commercial diet may have cloacal swabs tested using VI or PCR. One bird type per tube. |
| Pullorum testing for PA birds going to PA exhibition | Pullorum | Exhibition poultry, except waterfowl | On farm | Blood | All birds except waterfowl and pigeons going to exhibition must come from NPIP P/T Clean Flock, OR A PA Pullorum Equivalent Program Flock, OR must be tested within 90 days. | Within 90 days of exhibition | |
| PA Pullorum Equivalent Program | Pullorum | Exhibition poultry, except waterfowl | On farm | Blood | 300 or entire flock if less than 300 birds | Every 12 months | Must enroll with PDA, annual inspection |

SECTION XII: AVIAN DISEASE FACT SHEETS

Highly Pathogenic Avian Influenza (HPAI)

HPAI in Poultry: What To Expect If You Suspect

Highly pathogenic avian influenza (HPAI) is a serious poultry disease that spreads very quickly. With this threat, it's more important than ever for you to keep strict biosecurity measures at your poultry operations and watch your birds closely for any signs of the disease. We need you to quickly report problems in your flocks and work with us to respond. Your help will be vital in protecting the U.S. poultry industry from this deadly disease. The faster we can respond and depopulate sick birds, the faster we can stop the virus from spreading.

Be on the lookout for HPAI. Here's what to watch for, where to report, and what to expect from State and Federal responders if you have a suspected case in your birds.

Know the Warning Signs

- Sudden increase in bird deaths without any clinical signs
- Lack of energy and appetite
- Decrease in egg production
- Soft- or thin-shelled or misshapen eggs
- Swelling of the head, eyelids, comb, wattles, and hocks
- Purple discoloration of the wattles, comb, and legs
- Gasping for air (difficulty breathing)
- Coughing, sneezing, and/or nasal discharge (runny nose)
- Stumbling or falling down
- Diarrhea

Report It!

If your birds are sick or dying, report it right away. This is one of the most important things you can do to keep HPAI from spreading. Call:

- Your flock or local veterinarian,
- The State Veterinarian,
- The State animal health/poultry diagnostic laboratory, or
- USDA toll-free at **1-866-536-7593**.



Complete paralysis

USDA file photo

HPAI is a deadly disease for poultry. It can infect all types of chickens and turkeys, plus many other kinds of birds. HPAI can strike suddenly and spread fast. It is devastating for poultry industries.



Swelling of the tissue around the eyes and neck

USDA file photo

Exotic Newcastle Disease

Exotic Newcastle disease (END) is a contagious and fatal viral disease affecting all species of birds. Previously known as velogenic viscerotropic Newcastle disease (VVND), END is probably one of the most infectious diseases of poultry in the world. END is so virulent that many birds die without showing any clinical signs. A death rate of almost 100 percent can occur in unvaccinated poultry flocks. Exotic Newcastle can infect and cause death even in vaccinated poultry.

Clinical Signs

END affects the respiratory, nervous, and digestive systems. The incubation period for the disease ranges from 2 to 15 days. An infected bird may exhibit the following signs:

- Respiratory: sneezing, gasping for air, nasal discharge, coughing;
- Digestive: greenish, watery diarrhea;
- Nervous: depression, muscular tremors, drooping wings, twisting of head and neck, circling, complete paralysis;
- Partial to complete drop in egg production;
- Production of thin-shelled eggs;
- Swelling of the tissues around the eyes and in the neck;
- Sudden death;
- Increased death loss in a flock.

How END Spreads

END is spread primarily through direct contact between healthy birds and the bodily discharges of infected birds. The disease is transmitted through infected birds' droppings and secretions from the nose, mouth, and eyes. END spreads rapidly among birds kept in confinement, such as commercially raised chickens.

High concentrations of the END virus are in birds' bodily discharges. Therefore, the disease can be spread easily by mechanical means. Virus-bearing material can be picked up on shoes and clothing and carried from an infected flock to a healthy one. The disease is often spread by vaccination and debeaking crews, manure haulers, rendering truck drivers, feed delivery personnel, poultry buyers, egg service people, and poultry farm owners and employees.

The END virus can survive for several weeks in a warm and humid environment on birds' feathers, manure, and other materials. It can survive indefinitely in frozen material. However, the virus is destroyed rapidly by dehydration and by the ultraviolet rays in sunlight.

Smuggled pet birds, especially Amazon parrots from Latin America, pose a great risk of introducing exotic Newcastle into U.S. poultry flocks. Amazon parrots that are carriers of the disease but do not show symptoms are capable of shedding END virus for more than 400 days.

How Poultry Producers Can Help Control and Prevent END

The only way to eradicate END from commercial poultry is by rapidly destroying all infected flocks and imposing strict quarantine and in-depth surveillance programs. Poultry producers should strengthen biosecurity practices to prevent the introduction of the disease to their flocks. Biosecurity is also important to protect backyard and hobby flocks. The following are tips on proper biosecurity practices:

- Permit only essential workers and vehicles on the premises.
- Provide clean clothing and disinfection facilities for employees.
- Clean and disinfect vehicles (including tires and undercarriages) entering and leaving the premises.
- Avoid visiting other poultry operations.
- Maintain an "all-in, all-out" philosophy of flock management with a single age flock.
 - Control the movement of all poultry and poultry products from farm to farm.
 - Do not "skim" mature birds from a flock for sale to a live-poultry market.
 - Clean and disinfect poultry houses between each lot of birds.
- Do not keep pet birds on the farm. Do not hire employees who own pet birds.
- Exclude vaccination crews, catching crews, and other service personnel who may have been in contact with other poultry operations within 24 hours.
- Protect flocks from wild birds that may try to nest in poultry houses or feed with domesticated birds.
- Control movements associated with the disposal and handling of bird carcasses, litter, and manure.
- Take diseased birds to a diagnostic laboratory for examination.

Infectious Laryngotracheitis Virus (ILT) Facts

What is ILT?

Infectious Laryngotracheitis virus is a herpes virus that causes respiratory disease in chickens, turkeys, pheasants, and some other species of birds.

Can ILT survive in the environment?

ILT cannot survive for a long period of time in the environment, since the virus is susceptible to heat and sunlight. It is also killed by most disinfectants.

How long are birds contagious?

Once a bird is infected with ILT, it becomes a life-long carrier of ILT and can shed the virus during times of stress, infecting other birds. A bird is most contagious while it is showing clinical signs of disease.

How is ILT transmitted?

The main source of transmission is the infected bird, which infects other birds. The proximity to other poultry that are infected with either the vaccine or field strain of ILT can cause disease in susceptible birds nearby. Especially at risk are farms located near major highways that have live poultry truck traffic or houses down-wind of egg-type pullet houses that use ILT vaccine on a routine basis. In addition, farms that practice multiple harvests in which crews take out only a part of the flock at a time greatly increase the risk of introducing ILT due to contamination from trucks, coops, and the crew's clothing, since ILT can also be spread by contaminated clothing, boots, equipment, and other mechanical carriers.

What clinical signs are present in ILT-infected birds?

Birds infected with ILT initially show signs similar to other poultry respiratory diseases. These signs include:

- Discharge from the eyes;
- Nasal discharge;
- Sneezing;
- Decreased growth and a failure to thrive; and
- Decreased egg production.

As the disease progresses, the birds may show worsening signs, including:

- Bloody discharge from the mouth and nose;
- Difficulty breathing and gasping for air; and
- Coughing, which may include coughing up bloody mucus.

Morbidity can range from 50% to 100%.

Will infected birds die?

The course of the disease varies with the severity of the lesions caused by the virus, but most birds recover in 10-14 days. Mild forms of the disease result in very low mortality (less than 2%). Severe forms of the disease result in variable mortality (5-70%), with an average mortality of 10-20%.

Is treatment available?

There is no treatment effective against ILT, but antibiotics may be used to control secondary infections in severe cases. Some relief from signs is obtained by keeping the birds quiet, and lowering the dust level. Maintaining a clean water system may avoid transmission between flock members.

How is ILT diagnosed?

Since the clinical signs of ILT can also be seen with other diseases, including AI, it is important to get a rapid diagnosis. Sick or dead birds should be submitted to a diagnostic laboratory for testing.

What is seen on post-mortem examination?

Usually infected birds have severe laryngotracheitis, often with blood in the lumen, and caseous plugs may be present. Microscopically, there are often intranuclear inclusions in the tracheal epithelium.

Can ILT be transmitted to people?

No.

Is it safe to eat meat and eggs from birds with ILT?

Yes. ILT does not affect human health, and cooking will destroy any virus that is present.

Is a vaccine available?

Yes, 3 vaccine types are available; 1) chick embryo origin (CEO), 2) tissue culture origin (TCO), and 3) a pox-vectored recombinant vaccine. The CEO vaccine is given by eyedrop preferably but the water and spray routes are also used. CEO vaccines have the capability of reverting to virulence and causing full-blown ILT signs. The TCO vaccine is only given by eyedrop and does not spread significantly or revert to virulence and is therefore a very safe vaccine to use for show birds. The pox-vectored recombinant vaccine is given by the wing-web route to birds that are at least 8 weeks of age, as are all pox vaccines. If a bird has had previous exposure to pox prior to being given the pox-vectored recombinant, immunity to ILT will be minimal. If pox exposure is not a problem, this vaccine would also be very safe for use in show birds.

Vaccination in the face of the outbreak in egg-type layers is used quite often to reduce the severity and longevity of the disease. In this case, double dosing of vaccine is done by administering one dose of chick embryo origin (CEO) vaccine per bird via water early in the morning followed by the second dose once the first dose has been consumed. The appropriate amount of vaccine is placed in about 10 gallons of drinking water per 1000 birds (about 8 gallons of stock solution metered at one ounce per gallon drinking water for 100,000 birds). This is done following a short water starvation period. Dye is added to the vaccine solution (3 Fort Dodge Dye Tabs per gallon of stock) so that when starting to add the vaccine to the water lines the lines can be opened at the end of the line and closed when water containing dye is viewed.

Which vaccines are approved for Farm Show?

Only the TCO vaccines may be used for birds going to the PA Farm Show. The CEO vaccines may NOT be used for birds going to the PA Farm Show.

How can I prevent ILT from infecting my flock?

Egg-type birds –

- Apply one dose of CEO vaccine at 6 to 8 weeks by eyedrop followed with a booster vaccination of one dose of CEO vaccine at 12 to 15 weeks (by eyedrop preferably, but can also be applied by water or coarse spray).
- Use good biosecurity measures to reduce exposure, especially during movement of birds out of pullet houses and into or out of layer houses.

Broilers –

- Broiler vaccination is not routinely done as it increases the problems associated with upper respiratory diseases.

ILT should be prevented by using good biosecurity:

- Keep out possibly contaminated fomites (mechanical carriers):
- Wild birds in the house or nesting in the air inlets;
- People - feed truck drivers, catch crews, coops, repairpersons, pest management persons, gas haulers, veterinarians, servicepersons, etc. Persons can be allowed entry if the proper procedures of clean hands, headgear, clothing, and footwear are followed;
- Equipment - litter hauling, tractors, pest management equipment, etc. Equipment can be allowed into the house if proper precautions of cleaning and disinfection are done; and
- Practice all-in all-out marketing if possible. If multiple harvests will be done, be sure that the equipment and catch persons' clothing are decontaminated prior to use.
- For the next flock placed following a break or flocks at high risk of infection:
 - *Complete cleaning and disinfection of the house is recommended.
 - * If built up litter is to be used, close up the house and heat the house to 100 + degrees F for three days prior to placement, in an effort to kill the ILT herpesvirus.
 - * Vaccinate the birds at 12 days using a half dose per bird of CEO vaccine. For fount or trough drinkers, use about 4 to 5 gallons of vaccine solution per 1000 birds (25 % of the total daily allotment). Add 1 lb. of non-fat dry milk to each gallon of ILT vaccine solution prior to mixing vaccine as a stabilizer. Water starve overnight and add the vaccine solution to the waterers early in the morning. If using a proportioner, use 0.4 gallons of stock solution per 10,000 birds if metered at 1 ounce per gallon of drinking water. Water-starve overnight and vaccinate early in the morning. Add dye to the water (3 Fort Dodge dye tabs per gallon stock) and allow the vaccine water to fill the lines before letting the birds drink.

References: Dr. Eric Gingerich, DVM
Donna K. Carver, DVM, PhD, ACPV

Mycoplasma synoviae Facts

Mycoplasma synoviae is generally a subclinical upper respiratory bacterial infection of chickens and turkeys. The microorganism is transmitted by direct contact although egg transmission (breeder flocks) and carrier birds (multi-age flocks) can contribute to infection. Systemic infection can result in inflammation of synovial membranes, resulting in exudates in the joints (arthritis), tendons sheaths and sternal bursae of infected birds (Figure 1). Affected birds are usually immature and are lame or recumbent with swollen hocks, footpads or sterna bursae. Infected layer flocks can have decreased egg production.

Mycoplasma synoviae was first recognized as an acute to chronic infection of chickens and turkeys that produced an exudative tendinitis and synovitis (infectious synovitis); it now occurs most commonly as a subclinical infection of the upper respiratory tract, especially in multi-age layer flocks. *M synoviae* infection is also a complication of airsacculitis in association with Newcastle disease or infectious bronchitis. It is distributed worldwide and is seen primarily in chickens and turkeys, but ducks, geese, guinea fowl, parrots, pheasants, and quail may also be susceptible. Serum (preferably swine) and nicotinamide adenine dinucleotide (NAD) are required for growth in mycoplasma media.

M synoviae isolates vary widely in virulence, and suspected virulence factors include adhesins, sialidase, nitric oxide, cell invasion, and antigenic variation and immune evasion.

Epidemiology and Transmission

M synoviae is egg transmitted (transovarian), but the infection rate in breeder hens is low, and some hatches of progeny may be free of infection. Horizontal transmission is similar to that of *M gallisepticum*, primarily via the respiratory tract, with direct and indirect routes.

The incidence of *M synoviae* infection in commercial poultry in the USA has decreased because of the National Poultry Improvement Plan control programs implemented for chicken and turkey breeders. However, *M synoviae* infections of multiple-age layer flocks are common and may contribute to decreased egg production.

Clinical Signs and Lesions

Although slight rales may be present in birds with *M synoviae* respiratory infection, usually no signs are noticed. Birds under stress or with concurrent infections are more likely to be clinically affected. The first signs of infectious synovitis include pale-bluish head parts and lameness in many birds with a tendency to sit. The more severely affected birds are depressed and found resting around feeders and waterers. Hocks and footpads are swollen, and sternal bursitis (breast blisters) may be seen. Morbidity is usually low to moderate with mortality of 1%–10%. Effects on egg production are usually not apparent, but instances of transient egg production drops have occurred in layer flocks.

Respiratory lesions may be absent, or consist of mild mucoid tracheitis or sinusitis with airsacculitis when birds are stressed from poor air quality or challenged with Newcastle disease or infectious bronchitis. Early in infectious synovitis, a creamy to viscous yellow-gray exudate is present in most synovial structures but most commonly seen in swollen hock and wing joints. In chronic cases, this exudate may become inspissated; livers are enlarged and sometimes green, spleens are enlarged,

kidneys are enlarged and pale, and birds may be weak and thin with breast blisters from sternal recumbency.

Diagnosis

Skeletal abnormalities and trauma must be eliminated as the cause of lameness. Differential diagnoses include viral tenosynovitis as well as staphylococcal and other bacterial joint infections.

A presumptive diagnosis based on clinical signs and gross lesions should be confirmed by laboratory tests. Serum plate agglutination or ELISA are used to detect *M synoviae* antibodies, but cross-reactions with *M gallisepticum* and other nonspecific reactions may occur. These reactors are confirmed as seropositive by hemagglutination-inhibition or by culture, isolation, and identification of the organism. PCR may be used to rapidly detect *M synoviae* DNA from pre- or postmortem specimens. In turkeys, the agglutination test for *M synoviae* may not be reliable, especially in birds with predominantly respiratory infection.

Treatment, Control, and Prevention

The National Poultry Improvement Plan coordinates control and serology-based surveillance programs for *M synoviae* similar to those for *M gallisepticum*. These programs have resulted in eradication of the infection in most primary breeder flocks of chickens and turkeys in the USA. Chicks and poults should be obtained from *M synoviae*-free breeders and raised with biosecurity to prevent introduction. Antibiotics in the feed may be beneficial in prevention of synovitis but are expensive and not very effective in established cases. When *M synoviae* involvement in airsacculitis is an anticipated problem, preventive antibiotic therapy during the time of respiratory reaction to Newcastle disease and infectious bronchitis vaccines may be helpful. A live temperature-sensitive vaccine (MS-H) is commercially available and permitted in some areas.

The Merck Manual:

Last full review/revision September 2013 by David H. Ley, DVM, PhD



Photo source -Minnesota Veterinary Diagnostic Laboratory

Mycoplasma gallisepticum Facts

M. gallisepticum is commonly involved in the polymicrobial "chronic respiratory disease" of chickens; in turkeys, it frequently results in swollen infraorbital sinuses and is called "infectious sinusitis." These diseases affect chickens and turkeys worldwide, causing the most significant economic losses in large commercial operations, and are commonly seen in noncommercial flocks. Infection also occurs in pheasants, chukar partridges, peafowl, pigeons, quail, ducks, geese, and psittacine birds. Songbirds are generally resistant, although *M. gallisepticum* causes conjunctivitis in wild house finches (and some similar species) in North America.

M. gallisepticum is the most pathogenic avian mycoplasma; however, considerable strain variability is manifest in a range of host susceptibility, virulence, clinical presentation, and immunologic response. Integral membrane surface proteins (adhesins) that attach to receptors on host cells, allowing for colonization and infection, are important virulence factors involved in antigenic variation and immune evasion.

Epidemiology and Transmission

M. gallisepticum is transmitted vertically within some eggs (transovarian) from infected breeders to progeny, and horizontally via infectious aerosols and through contamination of feed, water, and the environment, and by human activity on fomites (shoes, equipment, etc). Infection may be latent in some birds for days to months, but when birds are stressed horizontal transmission may occur rapidly via aerosols and the respiratory route, after which infection and clinical disease spread through the flock. Flock-to-flock transmission occurs readily by direct or indirect contact from the movement of birds, people, or fomites from infected to susceptible flocks. Some potential reservoirs of *M. gallisepticum* in the USA are noncommercial (backyard) flocks, multiple-age layer flocks, and some free-ranging songbird species. Good management and biosecurity practices are necessary to ensure that *M. gallisepticum* infections are not introduced to commercial poultry from these and other sources. In many outbreaks, the source of infection is unknown. Cold weather, poor air quality or crowding, concurrent infections, and some live virus vaccinations may facilitate infection, disease, and transmission.

Epithelium of the conjunctiva, nasal passages, sinuses, and trachea are most susceptible to initial colonization and infection; however, in severe, acute disease, infection may also involve the bronchi, air sacs, and occasionally lungs. Once infected, birds may remain carriers for life. There is a marked interaction (polymicrobial disease) between respiratory viruses, *Escherichia coli*, and *M. gallisepticum* in the pathogenesis and severity of chronic respiratory disease.

Clinical Findings and Lesions

In chickens, infection may be inapparent or result in varying degrees of respiratory distress, with slight to marked rales, difficulty breathing, coughing, and/or sneezing. Morbidity is high and mortality low in uncomplicated cases. Nasal discharge and conjunctivitis with frothiness about the eyes may be present. The disease is generally more severe in turkeys than in chickens, and swelling of the infraorbital sinuses is common. Feed efficiency and weight gains are reduced. Commercial broiler chickens and market turkeys may suffer high condemnations at processing due to airsacculitis. In laying flocks, birds may fail to reach peak egg production, and the overall production rate is lower than normal.

Uncomplicated *M gallisepticum* infections in chickens result in relatively mild catarrhal sinusitis, tracheitis, and airsacculitis. *E coli* infections are often concurrent and result in severe air sac thickening and turbidity, with exudative accumulations, adhesive pericarditis, and fibrinous perihepatitis. Turkeys develop severe mucopurulent sinusitis and varying degrees of tracheitis and airsacculitis. Microscopically, involved mucous membranes are thickened, hyperplastic, necrotic, and infiltrated with inflammatory cells. The mucosal lamina propria contains focal areas of lymphoid hypoplasia and germinal center formations.

Diagnosis

History, clinical signs, and typical gross lesions may be suggestive of *M gallisepticum*. Serology by agglutination and ELISA methods are commonly used for surveillance. Hemagglutination-inhibition is used as a confirmatory test, because nonspecific false agglutination reactions may occur, especially after injection of inactivated oil-emulsion vaccines or infection with *M synoviae*. *M gallisepticum* should be confirmed by isolation from swab samples of infraorbital sinuses, nasal turbinates, choanal cleft, trachea, air sacs, lungs, or conjunctiva. Primary isolation is made in mycoplasma medium containing 10%–15% serum. Colonies on agar medium are used for species identification by immunofluorescence with species-specific antibodies. PCR can also be used for detection of *M gallisepticum* DNA using swabs taken directly from infected sites (choana, sinuses, trachea, air sacs) or after growth in culture.

Mycoplasma isolates must be identified by species, because birds may also be infected with nonpathogenic mycoplasmas. *E coli* infection, Newcastle disease, avian influenza, and other respiratory diseases (eg, infectious bronchitis in chickens) should be considered in the differential diagnosis and can act as inciting or contributing pathogens.

Treatment, Control, and Prevention

Most strains of *M gallisepticum* are sensitive to a number of broad-spectrum antibiotics, including tylosin, tetracyclines, and others but not to penicillins or those that act on the cell wall. Tylosin or tetracyclines have been commonly used to reduce egg transmission or as prophylactic treatment to prevent respiratory disease in broilers and turkeys. Antibiotics may alleviate the clinical signs and lesions but do not eliminate infection. Regulations on the use of antibiotics in food animals are rapidly evolving and should be consulted before use.

Prevention is based largely on obtaining chicks or poults from *M gallisepticum*-free breeder flocks. Eradication of *M gallisepticum* from chicken and turkey commercial breeding stock is well advanced in the USA because of control programs coordinated by the National Poultry Improvement Plan. The most effective control program is to establish *M gallisepticum*-free breeder flocks, managed and maintained under good biosecurity to prevent introductions, and monitored regularly with serology to continually confirm infection-free status. In valuable breeding stock, treatment of eggs with antibiotics or heat has been used to eliminate egg transmission to progeny. Medication is not a good long-term control method but has been of value in treating individual infected flocks.

Laying chickens free of *M gallisepticum* are desirable, but infection in commercial multiple-age egg farms where depopulation is not feasible is a problem. Inactivated, oil-emulsion bacterins are available and help prevent egg production losses but not infection. Three live vaccines (F-strain, ts-11, and 6/85) have been licensed in the USA for use during the growing phase to provide some protection during lay and may be used in some areas with permission of the state veterinarian. F-strain is of low virulence in chickens but is fully virulent for turkeys. Vaccinated chickens remain carriers of F-strain, and immunity lasts through the laying season. Vaccine strains ts-11 and 6/85 are less virulent, offer the advantage of improved safety for nontarget birds, and are widely used in commercial layers. A commercial recombinant fowlpox–*M gallisepticum* vaccine has been marketed.

The Merck Manual:

Last full review/revision September 2013 by David H. Ley, DVM, PhD

Salmonella enteritidis Facts

Egg-associated salmonellosis is an important public health problem in the United States and several European countries. A bacterium, *Salmonella enteritidis*, can be inside perfectly normal-appearing eggs, and if the eggs are eaten raw or undercooked, the bacterium can cause illness. During the 1980s, illness related to contaminated eggs occurred most frequently in the northeastern United States, but now illness caused by *S. enteritidis* is increasing in other parts of the country as well. Consumers should be aware of the disease and learn how to minimize the chances of becoming ill.

A person infected with the *Salmonella enteritidis* bacterium usually has fever, abdominal cramps, and diarrhea beginning 12 to 72 hours after consuming a contaminated food or beverage. The illness usually lasts 4 to 7 days, and most persons recover without antibiotic treatment. However, the diarrhea can be severe, and the person may be ill enough to require hospitalization.

The elderly, infants, and those with impaired immune systems may have a more severe illness. In these patients, the infection may spread from the intestines to the blood stream, and then to other body sites and can cause death unless the person is treated promptly with antibiotics.

How eggs become contaminated

Unlike eggborne salmonellosis of past decades, the current epidemic is due to intact and disinfected grade A eggs. *Salmonella enteritidis* silently infects the ovaries of healthy appearing hens and contaminates the eggs before the shells are formed.

Most types of *Salmonella* live in the intestinal tracts of animals and birds and are transmitted to humans by contaminated foods of animal origin. Stringent procedures for cleaning and inspecting eggs were implemented in the 1970s and have made salmonellosis caused by external fecal contamination of egg shells extremely rare. However, unlike eggborne salmonellosis of past decades, the current epidemic is due to intact and disinfected grade A eggs. The reason for this is that *Salmonella enteritidis* silently infects the ovaries of healthy appearing hens and contaminates the eggs before the shells are formed.

Although most infected hens have been found in the northeastern United States, the infection also occurs in hens in other areas of the country. Only a small number of hens seem to be infected at any given time, and an infected hen can lay many normal eggs while only occasionally laying an egg contaminated with the *Salmonella* bacterium.

Who can be infected?

The elderly, infants, and persons with impaired immune systems are at increased risk for serious illness.

Healthy adults and children are at risk for egg-associated salmonellosis, but the elderly, infants, and persons with impaired immune systems are at increased risk for serious illness. In these persons, a relatively small number of *Salmonella* bacteria can cause severe illness. Most of the deaths caused by

Salmonella enteritidis have occurred among the elderly in nursing homes. Egg-containing dishes prepared for any of these high-risk persons in hospitals, in nursing homes, in restaurants, or at home should be thoroughly cooked and served promptly.

What is the risk?

In affected parts of the United States, we estimate that one in 50 average consumers could be exposed to a contaminated egg each year. If that egg is thoroughly cooked, the *Salmonella* organisms will be destroyed and will not make the person sick. Many dishes made in restaurants or commercial or institutional kitchens, however, are made from pooled eggs. If 500 eggs are pooled, one batch in 20 will be contaminated and everyone who eats eggs from that batch is at risk. A healthy person's risk for infection by *Salmonella enteritidis* is low, even in the northeastern United States, if individually prepared eggs are properly cooked, or foods are made from pasteurized eggs.

What you can do to reduce risk

Eggs, like meat, poultry, milk, and other foods, are safe when handled properly. Shell eggs are safest when stored in the refrigerator, individually and thoroughly cooked, and promptly consumed. The larger the number of *Salmonella* present in the egg, the more likely it is to cause illness. Keeping eggs adequately refrigerated prevents any *Salmonella* present in the eggs from growing to higher numbers, so eggs should be held refrigerated until they are needed. Cooking reduces the number of bacteria present in an egg; however, an egg with a runny yolk still poses a greater risk than a completely cooked egg. Undercooked egg whites and yolks have been associated with outbreaks of *Salmonella enteritidis* infections. Both should be consumed promptly and not be held in the temperature range of 40 to 140 for more than 2 hours.

Reducing the risk of *Salmonella enteritidis* infection

- Keep eggs refrigerated.
- Discard cracked or dirty eggs.
- Wash hands and cooking utensils with soap and water after contact with raw eggs.
- Eat eggs promptly after cooking. Do not keep eggs warm for more than 2 hours.
- Refrigerate unused or leftover egg- containing foods.
- Avoid eating raw eggs (as in homemade ice cream or eggnog). Commercially manufactured ice cream and eggnog are made with pasteurized eggs and have not been linked with *Salmonella enteritidis* infections.
- Avoid restaurant dishes made with raw or undercooked, unpasteurized eggs. Restaurants should use pasteurized eggs in any recipe (such as Hollandaise sauce or caesar salad dressing) that calls for pooling of raw eggs.

What else is being done?

Government agencies and the egg industry have taken steps to reduce *Salmonella enteritidis* outbreaks. These steps include the difficult task of identifying and removing infected flocks from the egg supply and increasing quality assurance and sanitation measures.

The Centers for Disease Control has advised state health departments, hospitals, and nursing homes of specific measures to reduce *Salmonella enteritidis* infection. Some states now require refrigeration of eggs from the producer to the consumer. The U.S. Department of Agriculture is testing the breeder flocks that produce egg-laying chickens to ensure that they are free of *Salmonella enteritidis*. Eggs from known infected commercial flocks will be pasteurized instead of being sold as grade A shell eggs. The U.S. Food and Drug Administration has issued guidelines for handling eggs in retail food establishments and will be monitoring infection in laying hens.

Research by these agencies and the egg industry is addressing the many unanswered questions about *Salmonella enteritidis*, the infections in hens, and contaminated eggs. Informed consumers, food-service establishments, and public and private organizations are working together to reduce, and eventually eliminate, disease caused by this infectious organism.

Date: October 13, 2005

Content source: National Center for Infectious Diseases, www.cdc.gov

Salmonella pullorum - 'Bacillary White Diarrhea' Facts

Introduction

Disease caused by one of the two poultry-adapted strains of *Salmonella* bacteria, *Salmonella pullorum*, this usually only causes mortality in birds up to 3 weeks of age. Occasionally it can cause losses in adult birds, usually brown-shell egg layers. It affects chickens most commonly, but also infects turkeys, game birds, guinea fowls, sparrows, parrots, ring doves, ostriches and peafowl. It still occurs worldwide in non-commercial poultry but is now rare in most commercial systems. Morbidity is 10–80%; mortality is increased in stressed or immunocompromised flocks and may be up to 100%. The route of infection is oral or via the navel/yolk. Transmission may be transovarian or horizontal mainly in young birds and may sometimes be associated with cannibalism. The bacterium is fairly resistant to normal climate, surviving months but is susceptible to normal disinfectants.

Signs

- Inappetance.
- Depression.
- Ruffled feathers.
- Closed eyes.
- Loud chirping.
- White diarrhea.
- Vent pasting.
- Gasping.
- Lameness.

Post-mortem lesions

- Grey nodules in lungs, liver, gizzard wall and heart.
- Intestinal or cecal inflammation.
- Splenomegaly.
- Cecal cores.
- Urate crystals in ureters.

Diagnosis

Isolation and identification. In clinical cases direct plating on Brilliant Green, McConkey and non-selective agar is advisable. Enrichment procedures usually rely on selenite broth followed by plating on selective media. Differentiate from Typhoid, Paratyphoid, paracolon, other enterobacteria, chilling and omphalitis

Treatment

Amoxycillin, potentiated sulphonamide, tetracyclines, fluoroquinolones.

Prevention

Eradication from breeder flocks. As with other salmonellae, recovered birds are resistant to the effects of infection but may remain carriers. Vaccines are not normally used as they interfere with serological testing and elimination of carriers. Source; thepoultrysite.com

**SECTION XIII: PENNSYLVANIA REPORTABLE DISEASES
OF POULTRY**

Pennsylvania Reportable Diseases of Poultry

- Avian chlamydiosis, psittacosis, ornithosis
- Avian infectious bronchitis
- Avian influenza
- Avian tuberculosis
- Duck viral enteritis
- Duck viral hepatitis
- Fowl cholera (*P. multocida*)
- Fowl pox
- Fowl typhoid (*S. gallinarum*)
- Infectious bursal disease (Gumboro)
- Infectious laryngotracheitis
- Marek's disease
- Mycoplasmosis (MG, MS, MM)
- Newcastle disease
- Pullorum disease (*S. pullorum*)
- Turkey rhinotracheitis

SECTION XIV: LEG BAND SIZE CHARTS (Approximate Sizes)

Crimp Style Leg Band Size Chart

BAND SIZE CHART

Charts Are Guides Only

PIGEONS

- 4** Starlings, Tipplers, Rollers, Fantails, Chinese Owls.
- 5** Racing Homers, Clean Leg Tumblers, Jacobins, Dragoons, Damascenes.
- 6** Show Racers, English Carriers, Kings, Feather Leg Toys, Mondaines.
- 7** Giant Runts, Pomeranian Pouters, English Trumpeters, Swallows.

DUCKS

- 5** Wild Ducks (1 day-6 weeks), Wild Geese (1 day-6 weeks), Blue Winged Teal, Woodduck, Mandarin.
- 6** Wild Ducks (6 weeks-adult), Wild Geese (4-10 weeks), Wood ducks, Gadwall, Pintail.
- 7** Mallard, Call, East Indies, Wigeons, Baldpate, Pintail.
- 8** Geese(6-12 weeks), Wild Ducks.
- 9** Runner, Campbell, Magpie.
- 12** Adult Small Wild Geese, Egyptian, Pekin, Cayuga, Swedish, Muscovy, Buff, Roman, Pomeranian, Alesbury.
- 14** Canada, Swans, Muscovy Males, Seastopal, Pilgrim, China.
- 16** Swans, Giant Canada, Embden, African, Toulouse.

POULTRY

- 4** Baby Chicks.
- 5** Small Bantam Hens
- 6** Growing Chicks

BANTAMS

- 7** Bantam Ancona, Andalusian, Australorps, Belgian, Campine, Cornish Females, Dutch Bearded Frizzle, Clean Legged Game, Hamburg, Houdan, Japanese, Jungle Fowl, Lakenvelder, Leghorn, Maylay, Minorca, New Hampshire, Orpington, Plymouth Rock, Polish, Rhode Island, Rosecomb, Sebright, Sultan, Sumatra, Sussex, Wyandotte.
- 9** Booted, Brahma, Cochin Females, Cornish Males, Frizzle, Feather Legged, MilleFleur, Langshan, Silkie.
- 11** Brahma

STANDARDS

- 9** Females of the following: Ancona, Araucana, Andalusian, Campine, Frizzle Clean Legged, Game, Hamburg, Houdan, Lakenvelder, Leghorn, Minorca, Polish, Sultan, Sumatra.
- 11** Males of the following: Araucana, Andalusian, Frizzle Clean Legged, Game, Houdan, Lakenvelder, Leghorn, Maylay, Minorca, Polish, Rock, Sultan, Sumatra.
- 12** Australorps, Booted, Brahma, Cochin, Cornish, Frizzle-Feather Legged, Jungle Fowl, Langsham, New Hampshire, Orpogton, Plymouth Rock, Rhode Island, Sussex, Wyandotte.

13 Asiatic (Gey Band and Tag Co)

14 Turkey Hens

16 Tom Turkeys

GAME

2 Quail (1 day-2 weeks), Button Quail

2.5 Quail (2-4 weeks)

3 Doves, Mexican Quail, Calif. Valley Quail.

4 Doves, Pheasants (day old), Bobwhite Quail (adult)

5 Pheasant Females (Golden, Amherst, Yellow), Hun. Partridge.

6 Ruffled Grouse Female, Chukar, Prairie Chickens, Pheasant Males (Golden, Amherst, Yellow).

7 Sage Grouse. Elliot Pheasant, Ringneck Pheasant Females, Peacock Pheasants Chukar.

8 Sage Grouse, Ringneck Pheasant Males.

9 Ringneck Pheasant Males, Earred Pheasants.

11 Peahens

12 Peacocks, Wild Turkeys.

14 Wild Turkeys

CAGE BIRDS

2 Canaries, Finch.

2.5 Yorkshire & Large Canaries, Parakeets, Lovebirds.

3 Cockatiels

National Band & Tag Company
721 York St., PO Box 72430
Newport KY 41072-0430 USA
859-261-2035

Butt-End Style Leg Band Size Chart (Approximate)



| Band Size # | Inside Diameter | Recommendation |
|-------------|-----------------|---|
| 4 | 1/8" | Canaries, day old Quail |
| 5 | 5/32" | Parakeet, 1-4 week old Quail, Doves, Cockatiels, Guinea keets |
| 8 | 1/4" | Baby Chicken, Coturnix Quail, small Pigeon, adult Bobwhite Quail |
| 10 | 5/16" | Pheasant hen, Tumblers, medium Pigeon, Homers |
| 12 | 3/8" | Pheasant males, month old Chickens, large Pigeons, Chukar Partridge, Wood Duck |
| 14 | 7/16" | Ringneck Pheasants, Mallards, Wild Ducks, Bantams, Feather Leg and Runt Pigeons |
| 18 | 9/16" | Wild Ducks, Pheasants, Leghorn hens, Ancona, Silkie, Gamebirds |
| 20 | 5/8" | Wild Turkey, Minorcas, Cross breeds, adult Guineas |
| 22 | 11/16" | Plymouth Rock hens, Wyandottes, Rhode Island Red hens, Leghorn males, medium Ducks: Runners, Swedish, Harlequin |
| 24 | 3/4" | Wild Geese, Plymouth Rock Males, Turkey hens, Geese, Orpingtons, larger ducks: Pekins, Rouens, Muscovy |
| 28 | 7/8" | Canada Geese, Turkeys, Honkers |

Each band size requires an appropriately sized applicator. Regular plier-type tools may also be used if effective in applying bands.



National Band & Tag Company
 721 York St., PO Box 72430
 Newport KY 41072-0430 USA
 859-261-2035

**SECTION XV: PA EXHIBIT BIRD RAPID PULLORUM PLATE
TEST FORM and OWNER-ENDORSED POULTRY HEALTH
CERTIFICATE**

**PENNSYLVANIA DEPARTMENT OF AGRICULTURE
 FLOCK TESTING REPORT FOR RAPID WHOLE BLOOD AGGLUTINATION PLATE TEST
 (BIRD-SIDE TEST)**

Name of flock owner: _____

Address of flock owner: _____

Location of flock (Premises owner/address): _____

Premise ID # of flock location: _____

Breed/strain/trade name of birds: _____

Number of birds in flock: _____

Age of birds: _____

Blood testing for Pullorum-typhoid (blood samples from all reactors on the rapid plate test, or the reactors, must be sent to a PADLS laboratory for further testing):

| Number of males tested | Number of females tested | Number of reactors | Number of samples sent to laboratory | Laboratory results |
|-------------------------------|---------------------------------|---------------------------|---|---------------------------|
| | | | | |

Name of Certified Poultry Technician (please print): _____

Signature of Certified Poultry Technician: _____

Date: _____

A copy of this completed form must be sent to the PA Department of Agriculture as soon as possible after testing has been completed. Keep a copy of this form and any laboratory results for your records. Remember that all exhibition birds tested for Pullorum using this test must be officially identified with a PDA leg band.

PA Department of Agriculture
 BAHDS - POULTRY
 2301 N Cameron St
 Harrisburg PA 17220
 717-783-6897

PDA rev 11/2/16

OFFICIAL OWNER ENDORSED POULTRY HEALTH CERTIFICATE FOR ALL EXHIBITION POULTRY, WATERFOWL, UPLAND GAME BIRDS, RATITES, AND PIGEONS (As of June 1, 2017)

A completed owner-endorsed poultry health certificate must accompany all poultry, waterfowl, upland game birds, ratites, and pigeons to an exhibition. The certificate must be presented to exhibition management prior to cooping of the birds. This certificate *must* be endorsed with the bird owner's signature.

The following information is required:

1. Exhibition Information:

- a. Name of exhibition: _____
- b. Address of exhibition: _____
Street, Route, or Box Number
- _____
- City State Zip

2. Owner Information:

- a. Owner name: _____
- b. Owner address: _____
Street, Route, or Box Number
- _____
- City State Zip
- c. Owner telephone number: (____) _____ - _____
- d. Owner email address: _____

3. Verification of Testing for PENNSYLVANIA Birds:

A. The birds must originate from a flock in which a minimum of 30 birds, 3 weeks of age or older, were tested negative for avian influenza within the 30 days prior to opening date of the exhibition and the birds must be accompanied by the negative test report (copy acceptable). Samples must be collected from a random, representative sample of the entire flock. If there are fewer than 30 birds in the flock, test all birds. For domestic ducks and geese, cloacal swab samples must be collected for testing, and the swabs may be tested using virus isolation or PCR (one bird type per tube) techniques.

B. Pullorum-Typhoid Clean Testing and Verification (*pigeons and waterfowl excluded*). All samples must be collected by a Certified Poultry Technician or an Accredited Veterinarian:

All poultry, upland game birds, and ratites (*pigeons and waterfowl excluded*) must originate from a flock in good standing in the NPIP Pullorum-Typhoid Clean Program or from a flock in good standing in the PA Pullorum Equivalent Program and the birds must be accompanied by the most recent negative test report (copy acceptable). The NPIP number must be noted on the report for NPIP Pullorum-Typhoid Clean flocks. If bird-side testing was done, the 9-2 or state equivalent form must accompany the birds (copy acceptable);

OR

Individual birds (*pigeons and waterfowl excluded*) for exhibition must have had a negative pullorum-typhoid test within the 90 days prior to the opening date of the exhibition. The birds must be accompanied by the negative test report (copy acceptable). The following age restrictions apply to comply with NPIP standards:

- Chickens shall be tested at 4 months of age or older.
- Turkeys shall be tested at 12 weeks of age or older.
- Game birds shall be tested at 4 months of age or older, or upon sexual maturity, whichever comes first.
- Ratites shall be tested at 12 months of age or older.
- All birds not meeting these age restrictions are exempt from pullorum testing requirements.

4. Verification of Testing for OUT-OF-STATE Birds:

- A. Avian Influenza Clean Testing and Verification: All samples must be collected by a Certified Poultry Technician or an Accredited Veterinarian. Poultry, waterfowl, upland game birds, and ratites (*pigeons excluded*) shall only be allowed into the Commonwealth and the exhibition after meeting one of the following requirements:
The birds originate from a flock in good standing in the NPIP Avian Influenza Clean program and the shipment is accompanied by a USDA form 9-3 or equivalent Department-approved form;

OR

The birds originate from a flock that participates in an equivalent avian influenza monitoring program and the shipment is accompanied by a document from the state, nation, or province of origin indicating participation;

OR

The birds originate from a flock in which a minimum of 30 birds, 3 weeks of age or older, were tested negative for avian influenza within the 30 days prior to opening date of the exhibition and the birds must be accompanied by the negative test report (copy acceptable). Samples must be collected from a random, representative sample of the entire flock. If there are fewer than 30 birds in the flock, test all birds. For domestic ducks and geese, cloacal swab samples must be collected for testing, and the swabs may be tested using virus isolation or PCR (one bird type per tube) techniques.

- B. Pullorum-Typhoid Clean Testing and Verification (*pigeons and waterfowl excluded*). All samples must be collected by a Certified Poultry Technician or an Accredited Veterinarian:

All poultry, upland game birds, and ratites (*pigeons and waterfowl excluded*) must come from NPIP Pullorum-Typhoid Clean flocks and the birds must be accompanied by a USDA form 9-3 or equivalent Department-approved form;

OR

Individual birds (*pigeons and waterfowl excluded*) for exhibition must have had a negative pullorum-typhoid test within the 90 days prior to the opening date of the exhibition. The birds must be accompanied by the negative test report (copy acceptable). If bird-side testing was done, the 9-2 form must accompany the birds (copy acceptable). The following age restrictions apply to comply with NPIP standards:

Chickens shall be tested at 4 months of age or older.

- Turkeys shall be tested at 12 weeks of age or older.
- Game birds shall be tested at 4 months of age or older, or upon sexual maturity, whichever comes first.
- Ratites shall be tested at 12 months of age or older.
- All birds not meeting these age restrictions must come from a flock in which all of the birds in the flock have been test negative within the 90 days prior to the exhibition.

5. **Bird identification:** All poultry, waterfowl, upland game birds, and pigeons entering an exhibition must bear an individual OFFICIAL PDA LEG BAND. Ratites must be identified with a neck band or an electronic implant device (the exhibitor must supply a reader).

6. **Verification of flock health status:**

All poultry, waterfowl, upland game birds, ratites, and pigeons for exhibit or display are part of a flock which is free from evidence of contagious diseases.

7. **Verification of pigeons:**

Description of pigeons (number, age, color, gender): _____

8. **Owner Endorsement:**

I certify that the above information represents a true and accurate statement regarding my bird(s) and their home flock(s). I further attest and affirm that a "veterinarian consultation relationship" – as that phrase is defined in the Animal Exhibition Sanitation Law found at 3 Pa.C.S.A. § 2501 *et seq.* and any amendments thereto – exists with regard to any poultry, waterfowl, upland game birds, ratites and pigeons I will be exhibiting.

Owner Signature: _____ **Date:** _____

To report illness or mortality in your flock, call the Pennsylvania Department of Agriculture at 717-772-2852.

Additional health certificates are available from the nearest Department of Agriculture regional office or at www.agriculture.state.pa.us.

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SECTION XVI: CPT COURSE POWER POINT PRESENTATION HANDOUT

Pennsylvania Department of Agriculture Certified Poultry Technician Course

Bureau of Animal
Health and Diagnostic
Services



1

Certified Poultry Technician Course Goals

- ✓ Recognize signs of avian disease
- ✓ Report suspected disease to PDA
- ✓ Understand how to reduce the risk of disease spread
- ✓ Use good biosecurity practices
- ✓ Understand basic PPE and personal safety
- ✓ Be familiar with PDA avian health programs
- ✓ Properly collect and submit samples for testing
- ✓ Be familiar with the whole blood agglutination plate test for pullorum
- ✓ Understand LBMS procedures-remember, if doing LBMS sampling, *call Hbg for certification training &* to be put on LBMS CPT list

2

Signs of Illness in Birds/Flocks

- Depression
(ruffled feathers, reluctance to move)
- Decreased water and feed consumption
- Weight loss
- Diarrhea, pasty vent
- Coughing, gurgling, discharge from eyes, nostrils
- Mortality



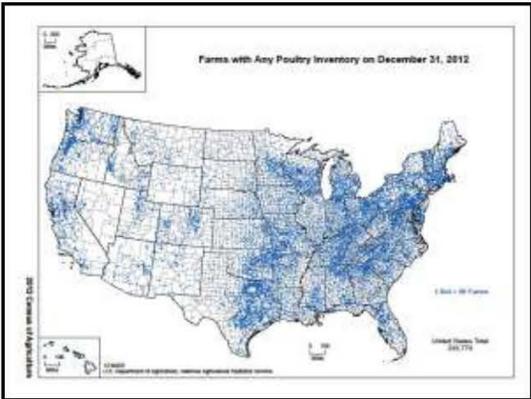
Reportable Avian Diseases

| |
|--|
| AVIAN INFLUENZA # |
| CHLAMYDIOSIS |
| DUO-VIRAL ENTERITIS |
| DUO-VIRAL HEPATITIS |
| FOWL CHOLERA # (MILTICIDIA) |
| FOWL TYPHOID (S. GALLINARUM) |
| INFECTIOUS BRONCHITIS |
| INFECTIOUS BURSAL DISEASE |
| INFECTIOUS LARYNGITRACHEITIS |
| MARSH'S DISEASE |
| RYOORLAGIA |
| RYOORLAGIA (HPV) |
| NEWCASTLE DISEASE (NDV) # |
| PULLORUM DISEASE # |
| SALMONELLA ENTERITIDIS (SEP) (OR PEGM) |
| TUBERCULOSIS |
| TURKEY SINUSITRACHEITIS |
| WEST NILE VIRUS |



4

Highly Pathogenic Avian Influenza (HPAI)

AI Classification- surface proteins

- H (hemagglutinin) type (H1 - H18)
- N (neuraminidase) type (N1 - N11)
- Low pathogenicity vs high pathogenicity
- A low path virus can mutate and become high path



Avian Influenza (Bird Flu)

| | |
|---|---|
| <ul style="list-style-type: none"> • Low pathogenic AI (LPAI) <ul style="list-style-type: none"> - Mild to moderate disease - Severity of disease related to environmental conditions and concurrent infections | <ul style="list-style-type: none"> • Highly pathogenic AI (HPAI) <ul style="list-style-type: none"> - Severe disease - High mortality |
|---|---|

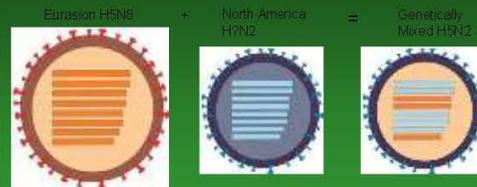
8

Reservoirs of AI viruses

- Wild migratory birds, waterfowl, shorebirds- ("natural" hosts)
- NE urban live bird markets - poultry ("accidental" hosts)
- Contact = risk factor

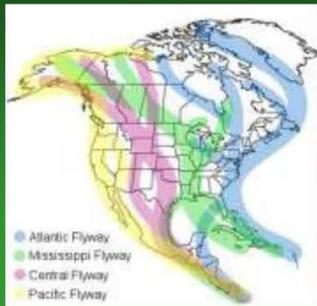


HPAI H5N2



*Late 2014 - Asian sourced H5N8 virus spreads to Pacific flyway via migratory birds & mixes with current North American LPAI virus strain

Wild Bird Migration Flyways



HPAI 2015

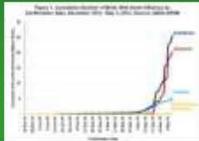
- HPAI virus was found in 21 states
- 211 commercial flocks, 21 backyard flocks affected
- \$176 million in indemnity payments
- ~\$1 billion in total control costs
- 4 states declared emergencies



HPAI 2015

- About 50 million birds were lost
- ~10% of US average layer inventory
- ~7% of US annual turkey inventory
- ~6% of US pullet inventory
- < 0.01% of US broiler inventory

Very high mortality in layers and turkeys



US 2015 HPAI Incident

What we learned:

- ✓ Virus is not consistently being spread via migratory waterfowl, sea/shore birds
- ✓ New theories include: poor biosecurity, wind, weather, feathers, rodents, eggs, insects
- ✓ CDC reports risk to humans as LOW
- ✓ Poultry products are *still safe to consume* if prepared properly
- ✓ Communication is key!

Indiana Incident-2016

- H7N8
- Commercial turkey flock- HPAI identified in January
- Surveillance identified 8 epi-linked or nearby flocks infected - LPAI
- Depopulation of infected flocks plus 2 dangerous contact flocks completed
- 414,000 birds lost
- Surveillance of wild birds, surrounding commercial and backyard flocks- negative
- Last quarantine lifted in May

16

H5 in Alaskan mallard

- In August, 2016, USDA reported the finding of H5N2 (similar to the strain from 2014/2015 poultry incident) in a wild mallard duck in Fairbanks.
- USDA also reported an H7 AI strain in a wild duck in Cumberland County, PA in August.

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Signs of HPAI

- ✓ Extremely infectious and fatal
- ✓ Spreads rapidly (3 -4 days)
- ✓ Birds are quiet and lethargic
- ✓ Swollen head, wattles, combs
- ✓ Leg hemorrhages
- ✓ Neurologic signs
- ✓ Respiratory signs are not typical with HPAI
- ✓ Signs are usually absent in wild waterfowl
- ✓ Sudden increase in death losses – *may have no other signs*



Individual Flock Plans

- Have plans in place now for:
 1. PREVENTION/BIOSECURITY
 2. Flock plan for:
 - Depopulation
 - Disposal of birds, eggs, litter, feed, etc
 - C&D
- *Remember...USDA may require a biosecurity plan be in place *and* be followed for all poultry flocks (is required now for all commercial flocks) for indemnity

18

What to do with sick birds

- When disease is suspected, a necropsy is suggested
- If you suspect a reportable disease, call PDA for help (24/7: 717-772-2852)
- Handle bird(s) with gloves, double bag, keep cold (not frozen)
- Transport to PADLS lab ASAP if lab and PDA agree we don't have to sample on site first due to risk of disease transmission

If HPAI is Identified

- (Reported high mortality may lead to quarantine based on suspicion until testing is completed)
- Birds submitted for testing or sampled on site
- Control area established around infected flock
- Plans for depopulation and disposal of remaining birds in infected flock begin



infected zone
+ buffer zone
= control area



After HPAI is identified

- Flock plans, indemnity, investigations
- *Notifications and surveillance of surrounding farms begins*
- *Premises registration with current contact info* is vital for us to contact you, and for your flock to be included in the surveillance for control area release
- A (federal) premise ID number is required by USDA for interstate movement permits if flock is located within a control area
- PA locator number: PA000000
- Federal number for interstate mvmt: 000ABCDE

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FINDING THE SOURCE

- Find source through...
 - Epidemiological investigation
 - Trace back - for possible sources
 - Include inspection of premises to include wild bird contact, rodents, human vectors, shared equipment, bird additions, wind direction, etc

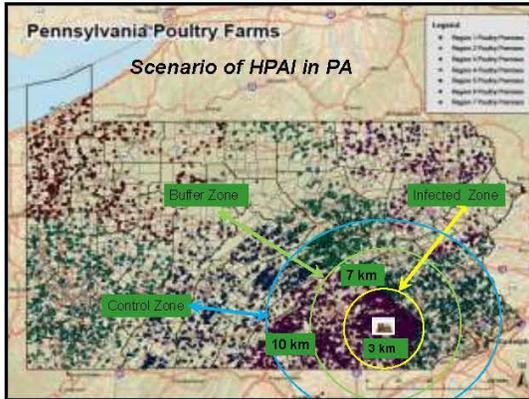
LOOKING FOR ADDITIONAL CASES

- Look for more by:
 - Circle testing (surveillance) of surrounding flocks
 - Voluntary, but...
 - Required for movement of birds and products
 - GIS mapping utilized
- Continued surveillance programs
- Epidemiological Investigation
 - Trace forward - for potential spread

Surveillance of flocks

- For USDA to allow release of our control area:
 - All commercial flocks in the control area must be tested
 - A percentage of non-commercial flocks in the control area must be tested
 - Small number of birds/flock actually tested

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USDA Indemnity for Condemned Flocks (DUNS & SAM)

- “Claimants (owners & contract growers) for HPAI indemnity claims must have a Data Universal Numbering System (DUNS) number and be currently registered in the System for Award Management (SAM) database to receive an indemnity payment from USDA APHIS”.

(Strongly recommended even for non-commercial flocks)

26

Any questions about AI?

HPAI information resource:
www.aphis.usda.gov

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Exotic Newcastle Disease (END)

- California: 2002-2003:
 - 3.16 million birds lost
 - \$161 million
 - 7,000 responders to eradicate
 - Backyard to commercial poultry
- Respiratory signs
- Neurologic signs (circling, twisting head)
- Depression
- Diarrhea
- Swelling of tissue around eyes and neck
- Increased mortality



28



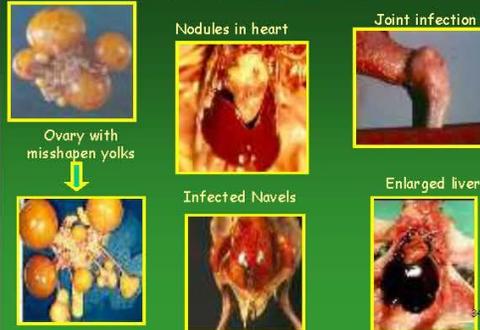
- Pullorum Disease (Fowl Typhoid)**
- Form of *Salmonella*
 - Almost completely eradicated from US
 - Infects chickens, turkeys, game birds and others
 - Transmission is transovarial or horizontal
 - Basis for National Poultry Improvement Plan (NPIP)
- 32

Clinical Signs and Lesions of Pullorum Disease

- Poor hatching rate, high early chick mortality
- Diarrhea, pasty vents, navel and yolk sac infections
- Localized granulomas in several tissues in birds that survive initial infection (heart, lung, joints, liver)
- Pedunculated, oily yellow or green misshapen yolks when ovary infected.
- Bronze colored enlarged liver

33

Pullorum Lesions



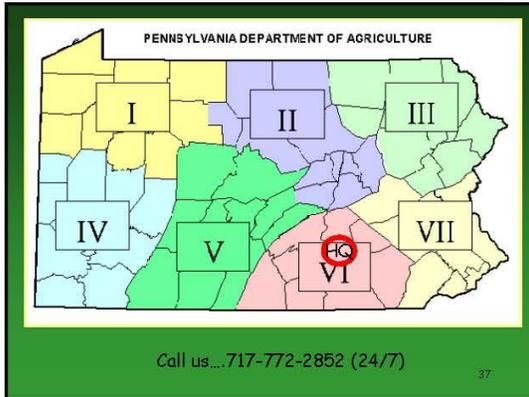
Salmonella enteritidis

- Food borne illness causing fever, abdominal cramps and diarrhea in humans
- Most types live in intestinal tract of healthy birds
- Transmitted to humans via contaminated food
- Infects all types of poultry
- Can be spread by rodents

36

If you suspect a reportable disease.....

36



PADLS is here to help

- The poultry labs offer reasonably priced necropsy services for backyard & commercial birds
- Can help discover the cause of disease or death and help make recommendations for dealing with the problem
- New Bolton Center (Kennett Square, Chester Co)
- Pennsylvania Veterinary Lab (Harrisburg)
- Penn State Animal Diagnostic Lab (State College, Centre Co.)

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YOU AS A CPT...

40

Personal Safety

- *Safety first* - protect yourself
- NO needle sticks
- Don't put needle caps in your mouth
- Use proper disposal containers
- If birds appear ill, consider zoonotic disease
- Wash your hands

41

PREVENTING DISEASE SPREAD

BIOSECURITY

42

Biosecurity is not just for AI

- We worry a lot about the effects of AI
- Biosecurity protects your birds from many other diseases
 - Mycoplasma
 - Pullorum
 - Newcastle Disease
 - Infectious Laryngotracheitis
 - Parasites

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BIOSECURITY

- ✓ Avoid contact with wild waterfowl, poultry auctions/swap meets, and live bird markets
- ✓ Avoid sharing equipment and use of non-disinfectable equipment (wooden crates)
- ✓ Restrict visitors/unauthorized personnel
- ✓ Disinfect footwear and vehicles properly
- ✓ Communicate biosecurity protocols to other farm personnel and family members

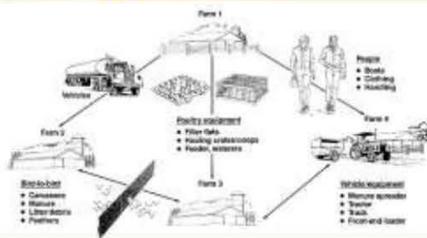
BIOSECURITY

- ✓ Purchase products, birds from credible sources
- ✓ Isolate new birds for 2 weeks or more
- ✓ Register your premises with PDA to stay informed
- ✓ Change clothes and footwear when visiting other common poultry areas
- ✓ Dispose of dead birds promptly and properly
- ✓ Eliminate rodents and insects
- ✓ Create a visitor's log
- ✓ Post biosecurity signs
- ✓ Develop *and follow* a biosecurity plan on your premises- indemnity may depend on it

Biosecurity - Use Signs



How Poultry Disease Spreads



When you visit, don't bring back souvenirs!

- Don't go to poultry auctions, swap meets, live bird markets, poultry shows, other flocks, commercial poultry houses and then go near your own birds
- Try to stay away from your own birds for at least 24 hours after visiting other poultry
- If that is not possible, wash your hands with soap and water and change your clothing and footwear

If you work as a CPT...

- If you have birds of your own and you act as a CPT for other flocks:
 - Make sure your birds are healthy
 - Follow strict biosecurity practices when visiting other backyard flocks and when returning to your own flock
 - Don't have others bring their birds to your place for sampling
 - If you do a lot of work for other flock owners, consider NOT having birds of your own

49

Show Birds

- When you bring birds to a show, they may pick up diseases that do not become apparent for awhile
- Keep birds that have been at shows separate from the rest of the flock for at least 2 weeks so if they develop illness, they have not spread it to other birds



50

New Additions to Your Flock

- ✓ Add only healthy birds
- ✓ Use a reputable supplier
- ✓ Quarantine new birds before adding to your flock

51

Sometimes it is NOT nice to share

- Do not share poultry equipment, tools, lawn/garden equipment used around poultry
- Poultry disease is often carried on equipment, people, clothing, vehicles, etc.

52

Restrict Human Visitors

- Do not allow free access to your poultry areas
- If you must have visitors who have their own poultry, make sure they have disinfected or disposable footwear, clean clothing, and washed and/or gloved hands at a minimum
- Have them sign the visitor's log

53

Restrict Bird Visitors

- Wild birds can bring your birds diseases
- Many cases of AI in PA are in pastured poultry in contact with wild waterfowl
- Do not encourage wild bird visitation
- When possible, house poultry securely away from wild birds

54

Travel Precautions

- If you travel to other countries where they have poultry diseases that we do not have here (and don't want here)...
 - Avoid contact with any birds in those countries
 - Do NOT go anywhere near any birds in this country when you return for at least 48 hours and carefully wash all of the clothing and supplies you brought with you
 - NEVER bring back animals, animal products, or organic materials from foreign countries without specifically discussing it with USDA/APHIS

55

Be Sure To Always Obey Signage



Biosecurity signs



Farm Quarantines 56

Act 125

- Effective as of November, 2010
- Agricultural property owners can designate an "agricultural biosecurity area".
- A landowner may post a sign to designate measures required to avoid trespassing charges (PPE, etc)

57

Things you can use to prevent disease spread.

- ✓ Boots
- ✓ Coveralls/clean clothing
- ✓ Hairnet
- ✓ Gloves
- ✓ Masks
- ✓ Soap and water
- ✓ Foot baths

58

Always wear boots that are disposable or can be disinfected



59

Proper Cleaning Technique



- Remove excess dirt
- Use a disinfectant to clean boots and non-disposable equipment

60

Disinfecting and Disposal of Equipment

61

Non-Disposable Equipment

Rubber Boots
Cloth Coveralls
Light Box and Plate for Pullorum Test
Nets
Crates



62

Types of Disinfectants

- Hypochlorites (Clorox®, et al = 5.25% sodium hypochloride)
 - 2 to 4 ounces (60-120 ml) per gallon of water
 - Damages rubber and clothing but inexpensive
- Iodophors (Betadine®, et al = 1% iodine solutions)
 - 2 to 4 ounces (60-120 ml) per gallon of water
- Phenolics (Lysol®, One-Stroke®)
 - follow label directions
 - may not be as effective and can be expensive

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Types of Disinfectants

- Chlorhexidine (Nalvasan® = .5% chlorhexidine gluconate)
 - 1 to 3 ounces (30-90 ml) per gallon of water
 - may not be as effective and requires longer contact time
- Others
 - Virkon-S®: better for viruses, expensive
 - Quaternary ammoniums (Roccal®): better for bacteria

64

Disposable Equipment

Gloves / Hairnets / Masks
Disposable Coveralls and Plastic Boots

* These items can be placed in a garbage bag and left at the farm for disposal.



66

Sampling Supplies

- Needles
- Syringes
- Wasted Sample Tubes
- Swabs

- **Minimize amount of supplies taken onto farm
- **Make needles & syringes unusable before disposal
- ***Dispose of these items properly



Vehicle



- Park in a low traffic location
- Try not to drive through manure
- Disinfect tires and wheel wells if needed

67

GENERAL RULE

ONE FARM VISIT
PER DAY

68

Official Leg Bands

- All birds tested for pullorum must be identified with official PDA leg bands
 - Exception is a commercial flock tested with the rapid pullorum plate test (only reactors are banded and samples from reactors are sent to the lab)
 - Show birds tested with the rapid test must be officially identified
- All birds entering a show must be identified with official PDA leg bands

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Official PDA Leg Bands (available at no cost from PDA)

Regular crimp-style leg bands



Butt-End leg bands



Applicators specific to band size

70

Regular crimp-style leg bands



71

Seal it and crimp it so it stays on



72

Butt-End Bands

- These aluminum bands are currently used for wild bird banding and are reported to be easy to apply, and to stay on for the life of the bird.



Use the applicator to open the band...



Butt-end Bands: Place c-shaped open band around lower leg, use the appropriate applicator to close...



Alternative Applicators for Butt-end Bands



Leg Band Applicators

(applicators are not provided by PDA)

National Band & Tag Company
721 York St., PO Box 72430
Newport KY 41072-0430 USA
859-261-2035
USA FAX: 800-261-8247
nationalband.com
(Approximately \$35)

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Sample Collection and Testing

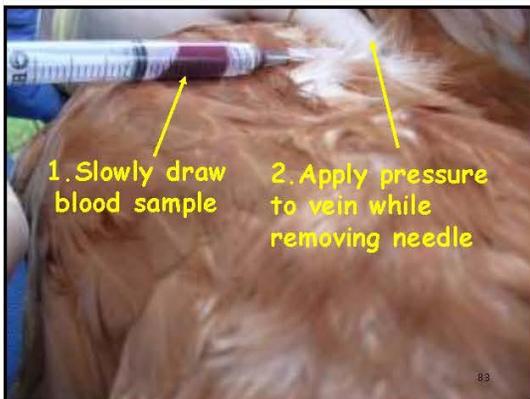
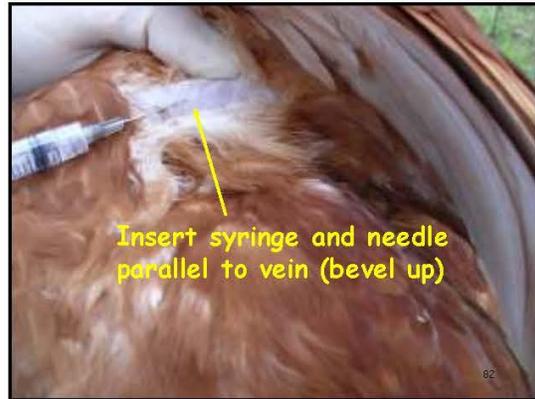
78

Blood Collection

79



80



Syringes and Needles

- Expense of each CPT
- The bigger the number describing the gauge of needle, the smaller the diameter of the needle
- Smaller game birds: 26g or 25g X 3/8 in. (tuberculin syringe)
- Bigger game birds and chickens: 22g - 20g X 1 in. (3cc syringe)
- Waterfowl and turkeys: 22 - 20g X 1 in (3 cc syringe)

Other supplies

- Contact info in packet
- Blood tubes, boxes and submission paperwork are from the Pennsylvania Veterinary Lab
- Official leg bands are from BAHDS in Harrisburg
- Banding pliers are available at a cost from the band manufacturer
- Media for swabs and the swabs can be obtained from the labs or, in some cases, from your regional PDA veterinarian

85

Blood samples

- One test (ex-AI only) - can use snap-cap tubes, place in labeled whirlpack bag
- More than one test (ex-AI & pullorum)- use blood tubes provided by lab, place labeled tubes in labeled box (do not place labeled tubes in a whirlpack bag)

86

Blood tube box for shipping (seal with caps)



87

Blood tube box for hand delivery

(can cover with packing tape before sampling)



Include numbering system on box 88

Blood Sample Handling and Packaging

- ✓ Label box properly with owner name, premise ID and date on side of box—not on lid (or on both). Tilt blood tube box 30 degrees in its lid while collecting samples.
- ✓ Label tubes to correspond to individual official leg bands.
- ✓ Dispense 2 ml blood into small tubes placed in boxes or red top blood tubes
- Cover tubes with tape if delivering to lab; if shipping, use tubes with tight caps
- Place completed submission form inside the box on top of the tubes
- Seal box, place into plastic bag, seal bag
- Disinfect plastic bag
- Keep at room temp for several hours, then chill and submit ASAP

89

Sample Handling and Packaging - Snap Cap Tubes

- **For one test only** – usually used for AI Monitored flock testing
- Put 2.0 mls of blood into tube
- Leave a small space at top so lid does not pop open during transport
- Seal tube
- Tubes into whirlpak bag, seal bag
- Label bag properly with owner name, premise ID
- Submission form into bag pocket
- Disinfect bag
- Keep at room temp for several hours, then chill

90

Sample Handling and Packaging - Snap Cap Tubes



91

Do's and Don'ts of Blood Submissions

Do:

- ✓ Place blood in a clean, dust free tube
- ✓ Submit samples to lab ASAP
- ✓ Submit min. 2.5 mls when multiple tests requested
- ✓ **Submit 2.0 mls minimum**
- ✓ Send samples refrigerated using overnight courier (if you can't drive them to the lab)
- ✓ Contact lab directly when special test arrangements needed
- ✓ Be aware of lab holiday closings and weekend submissions

92

Do's and Don'ts of Blood Submissions

Do not:

- ✓ Do not submit contaminated or hemolyzed blood
- ✓ Do not send blood w/out a stopper or sealed tube
- ✓ Do not send incomplete paperwork or samples without paperwork
- ✓ Do not label box lid!

***PADLS accepts the right to determine suitability of a sample*

93

Tracheal & Oropharyngeal Swab Collection and Handling

94

Tracheal Swabs

- To collect a tracheal swab sample, hold the bird's mouth open and watch the opening and closing of the larynx (opening to the trachea).
- Carefully introduce the swab down the trachea and gently rub the swab up and down along the trachea sides.
- The swab can also be drug along the tissues of the choanal slit.

95



96

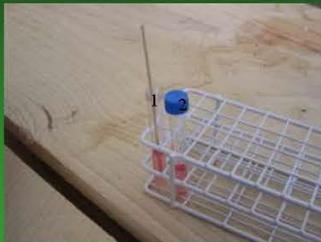


Oropharyngeal (OP) Swabs

To collect an OP swab sample, hold the bird's mouth open and introduce the swab into the bird's mouth. Gently rub the swab around the tracheal opening, making sure to drag the swab through the choanal slit as you pull the swab out of the bird's mouth.

98

Swab Handling



99

Cloacal Swab Collection and Handling

For AI testing of waterfowl

100

Waterfowl Testing



- Cloacal swabs required.
- Virus isolation or PCR for domestic ducks *and geese*.
- PCR is only approved for waterfowl fed a commercial diet.
- One bird type from one flock per tube (up to 5 swabs).
Do not mix ducks and geese swabs in one tube.

101

Domestic waterfowl testing



For LBMS,
program testing,
or show

| | |
|---|---|
| <p>Duck swabs (up to 5/tube)</p> | <p>Goose swabs (up to 5/tube)</p> |
| <p>PCR testing (1-2 days) or VI</p> | <p>PCR testing (1-2 days) or VI</p> |

(PCR is for waterfowl fed a commercial diet)

102

Expose the vent



103

Insert the swab



Swab
vigorously to
get feces



Swab Handling



Do's and Don'ts of Swab Collection

Do:

- ✓ Use dry swabs
- ✓ Swab and rub mucosa vigorously
- ✓ Make sure enough medium is used to cover samples
- ✓ Store medium in refrigerator
- ✓ Place swabs from one bird type per tube

Do's and Don'ts of Swab Collection

Do not:

- ✓ Do not use the same swab for multiple samples or birds
- ✓ Do not use cloudy or discolored media
- ✓ Do not put more than allowed # of swabs per numbered tube

109

Number of Swabs/tube

- **Gallinaceous birds:**
 - (chickens, turkeys, quail, guineas, pheasants, etc)
 - Up to 11 samples/tube
 - If >5 swabs, swab bird, swirl swab in BHI, press to remove excess, discard swab
 - If < 5 swabs, leave swabs in tube, break off ends
- **Waterfowl:**
 - Up to 5 cloacal swabs/tube
 - Leave swabs in tube, break off ends to cap tube

110

Swab Sample Handling and Packaging

- ✓ Label tubes appropriately (with bird type)
- ✓ Seal tubes securely
- ✓ Place in cardboard box (can be provided) or whirlpak bag with submission form attached.
- ✓ Bag or box must be properly labeled with owner name and premises ID and date
- ✓ Put box in a bag, seal, and disinfect outside of bag
- ✓ Store at refrigerator temperature
- ✓ Submit to diagnostic lab ASAP

111

BHI

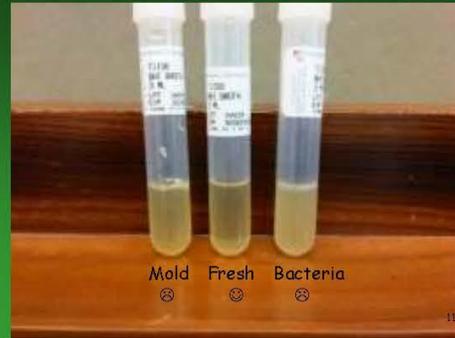
- Media distributed for swab samples
- BHI is clear and a light yellow color
- Expiration dates will be provided with the media when you receive it

112

BHI



BHI



Sample Submission to a Diagnostic Laboratory

- Samples can be delivered via (overnight) mail, courier, or drop off (*preferred method*)
- All samples must be properly packaged and labeled
- All samples must be accompanied by a completed submission form - or a test result may not be sent out

116

Do's and Don'ts of Sample Submission

- Do:
- ✓ Place paperwork in plastic bag
 - ✓ Secure lids on all boxes
 - ✓ Keep samples at refrigerator temperature
 - ✓ (after the initial room temp. period for blood samples)
 - ✓ Include ice pack with all submissions
 - ✓ Ship samples in styrofoam containers inside a cardboard box
 - ✓ Call lab prior to arrival
 - ✓ Apply official PDA leg bands to Pullorum tested birds and all birds going to a show

116

Do's and Don'ts of Sample Submission

Do not:

- ✓ Do not ship open-top tubes via mail/courier
- ✓ Do not ship or deliver samples just prior to holidays or weekends
- ✓ Do not ship or deliver samples without completed paperwork

117

Sample Submission Problems

- Common problems
 - Poor quality samples
 - Not enough serum!
 - Incomplete or illegible paperwork
 - Spilled/damaged samples in shipment
 - Pullorum tested birds not banded or band numbers not included on paperwork
- CPTs will be contacted by the diagnostic laboratory to discuss the problem. If repeated, re-training may be required.
- **WHEN IN DOUBT, CALL THE LAB AHEAD TO CONFIRM YOUR PROCEDURES**

118

Sample Submission Form (handout)

119

Reporting of NEGATIVE Test Results

- Test results are reported by the laboratory
 - Sent in writing to the flock owner
 - Mail
 - Fax or email (owner will receive results sooner)
 - Sent in writing to PA Department of Agriculture
 - Sent in writing to the CPT only if requested on the submission form (or if the CPT is also the flock owner)
 - Mail
 - Fax or email (CPT will receive results sooner)

120

Reporting of SUSPECT or POSITIVE Test Results

- Testing may yield inconclusive or clearly positive results that require further sampling by regulatory officials
 - Flock owner is notified by PDA personnel via phone
 - Results also sent in writing (mail or fax)
 - Follow-up testing is scheduled with flock owner
 - CPTs can be notified if requested on the submission form
- CPTs are not involved in confirmatory or follow-up testing for suspect or positive test results in most cases - CPTs may be contacted by the PA Department of Agriculture for information pertaining to disease investigations

121

Rapid Whole Blood Agglutination Plate Test for Pullorum



Plate with Light Source

122

Plate Test Supplies



123

Identifying Tested Birds



Remember to ID with official PDA leg bands:



All birds for shows (even birds tested with the pullorum rapid plate test) (enforced after 6/1/17)

Commercial birds which react on the rapid plate test (send reactor's blood to lab)

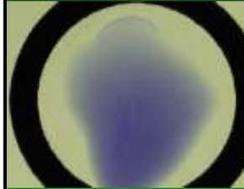
124

Pullorum Plate Test

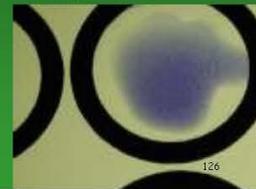
- Whole blood test that cannot be used with turkeys
- 1 drop of whole blood to one drop of antigen
- Use only 1 test per square
- Rock plate for 2 minutes and read result
- Absence of agglutination (clumping) indicates negative result
- Agglutination indicates positive result-expect to get some positives if doing test properly
- Official ID required (for all show birds, and for commercial birds if reactors)
- Complete form and send to PDA

125

Pullorum Plate Test



No agglutination
=negative



Agglutination= reactor

126

Plate Testing for Pullorum

- **Show birds:** Apply official ID before testing. If suspect or positive plate test result, immediately draw a blood sample and submit it to the lab for testing along with 9-2 or equivalent form and submission form.
- **Commercial flocks:** If suspect or positive plate test result, immediately apply official ID, draw a blood sample and submit it to the lab for testing along with 9-2 or equivalent form and submission form.
- The blood sample at the lab is treated as the first official sample for regulatory purposes.
- If you do not submit a blood sample immediately, the bird will be considered a reactor and the flock will be quarantined.
- Can submit bird instead of blood.
- Not for turkeys.



127

Are you an animal Dealer/Hauler?

- Buying and reselling poultry (keep < 6 months)
- Transporting poultry for a third party
- You must keep records of your transactions
- You must be licensed in PA



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New AI Import Requirements for LBM Birds (2015)

- All birds destined for PA LBMS and coming from a state with HPAI must be from a flock which tested negative within 72 hours prior to entry into PA
- Swabs- PCR testing
- Also required for flocks providing eggs to a PA breaker

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Additional Requirements for LBM Certified Poultry Technicians

- Ask your instructor for additional LBMS CPT certification training
- Contact Dr. Nan Hanshaw to get on the authorized list for NY/NJ
- Annual reviews of LBM requirements
 - Continuing education/quiz required for NJ LBMS CPTs

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Exhibition Poultry

Pennsylvania Requirements



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Fair Rules (PA Poultry)

- PDA official identification required-PDA LEG BANDS (enforced after 6/1/17)
- Owner endorsed health certificate (handout)
- AI testing of the flock within 30 days prior to entry
- Pullorum testing within 90 days prior to entry or flock enrolled in program
- PADLS user fees - check current user fee schedule each year
- Minimal charges to help cover costs at labs
- Swab testing more \$\$

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Owner-Endorsed Poultry Health Certificate

- Replaces a health certificate for entry into shows

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What is NPIP?

(National Poultry Improvement Plan)



- VOLUNTARY program for
 - *hatcheries/breeder flocks; or
 - *commercial layer flocks; meat bird & waterfowl processing plants; raised for release game birds (AI only)
- Federal standards, state administers
- Testing, annual inspection, biosecurity plan requirements
- Enrolled breeder flocks - pullorum clean. Test 300 or entire flock annually.

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For more Info on NPIP...

- Call PDA to set up a time to go over the requirements or go to the NPIP website and review the NPIP Provisions (CFR) and Program Standards @

poultryimprovement.org



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PA Pullorum Equivalent Program

- For exhibition birds only
- Must complete an enrollment form with PDA with a premises ID
- Must test 300 test-eligible birds or whole flock for pullorum annually
- Annual PDA inspection

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PA Pullorum Equivalent Program

- All flock additions must be from NPIP pullorum clean or approved equivalent sources
- Flock cannot be mingled with non-program birds unless the other birds are kept separate until after they test negative
- Status good for one year

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Individual Bird testing for Pullorum

- Still have the option of testing just those birds you wish to show for Pullorum
- Test result qualifies the bird to show for 90 days only
 - Use lab report for entry
 - Can end up under quarantine when you want to be at the show if you test too close to the show date
- May need to retest if you go to more than 1 show

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What do you test for Pullorum?

- Chickens greater than 4 months old
- Turkeys greater than 12 weeks old
- Game birds greater than 4 months old or at sexual maturity, whichever comes first
- Ratites at 12 months of age.
- Waterfowl 4 months and older (not for show)
- Not pigeons or doves

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Pullorum Response Protocol

- If there is even one suspect on lab testing, the whole flock is quarantined until it is proven "clean"



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Avian Influenza



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AI Testing for PA shows

- Test at least 30 birds (or whole flock if fewer than 30), at least 3 weeks old, within the 30 days prior to entry into the show
- **Flock** test- no individual bird testing option- do not test only the birds going to the show
- Cloacal swab & virus detection test required for waterfowl (PCR or virus isolation)



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Example

- 4H exhibitor has 15 mature chickens and 10 mature ducks and is not on any programs (just testing for show)
 - Draw blood samples from all chickens and submit to the lab for AI testing within 30 days of the show
 - Also request Pullorum testing from the lab within 3 months of the show for chickens which will be shown (or from all chickens)
 - Take cloacal swab samples from all ducks and submit to the lab for AI testing within 30 days of the show

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PA AI Monitored Flock Program

- Intended for Live Bird Market System (LBMS) flocks
- Test 30 birds, representative of the flock, every 21 - 30 days for 3 months to get status, then continue monthly
- To count as a flock, the birds must be together for at least 21 days with no untested additions
- Test birds 3 weeks of age and older (exceptions)
- PDA inspections

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CPT Infractions

- Submitting samples without licensure
- Repetitive poor sample quality
- Incorrect documentation
- Inaccurate or incomplete submission forms
- Improper ID of poultry
- Collecting samples outside of PA
- Fraud or misrepresentation

Your license can be revoked and you can be fined by Pennsylvania or other states

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Keep up with Changes

- *ALL CPTs are expected to review the most current CPT licensing materials available on the PDA website and to be familiar with the current requirements before collecting samples*
- *Being unaware of the CPT requirements is not a valid excuse for infractions*

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Annual Recertification of CPTs

- Annual re-application and license renewal by January 1 of the next year
- Annual continuing education required for *NJ LBMS CPTs* - open-book quiz must be sent in with annual license application
- Updated information for CPTs is on PDA website
- New regulation in the works for all CPTs

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The End



Any Questions?

Remember-call us with questions BEFORE you act!!!!

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SECTION XVII: LIVE BIRD MARKET INFORMATION

LIVE BIRD MARKET SYSTEM (LBMS)
GUIDELINES FOR COMPLETING A NY/NJ POULTRY INSPECTION
CERTIFICATE (PIC)
AND OTHER
GUIDELINES FOR MOVING POULTRY INTO THE NY/NJ LBMS
Revised Sept 2016

Definitions:

- “Established Flock” or “Source Flock”* means the flock where the poultry were hatched and resided until their movement directly to a poultry market; or poultry of the same species held together on one premises for at least 21 consecutive days; or at the discretion of the State Veterinarian, any group of poultry on one premises that has been segregated from another group for at least 21 consecutive days. To qualify as a flock the group must have been together without any untested (avian influenza (AI)) additions or exposure to untested (AI) poultry for a minimum of 21 days prior to testing for AI. The flock must have been together for at least 21 days before they can be tested for AI. Additionally, the qualifying flock may not be exposed to untested (AI) poultry and no untested (AI) poultry may be added between the sample collection date and the date that the poultry leave the farm, unless those additions are from a flock which has been tested to equal or exceed the testing for AI done on the qualifying flock. The poultry must move directly to the market regardless of whether they were born and raised on the premises or they are an assembled flock. They cannot move to another premises before going to the market (exception-poultry may move to distributor for a few hours if necessary before being shipped by the distributor to a live bird market).

- “Monitored Flock”* means an established flock that meets the following criteria (Refer to the current version of the PA AI Monitored Flock Program Standards):
 - ✓ A sample size of at least 30 birds (three weeks of age and older) randomly selected and representative of the flock is tested every month (every 21 to 30 days) for AI in accordance with the PA AI Monitored Flock Program standards. If the flock contains less than 30 birds, all birds three weeks of age and older within the flock must be tested monthly (Samples from 30 birds, three weeks of age and older **from all pens and houses** on the premises shall be collected between 21 and 30 days after the previous collection).
 - ✓ **Flocks must be tested every month-not just the month that they are moving.**
 - ✓ It is recommended that all waterfowl be swabbed (cloacal swabs) and tested using virus detection testing (although blood testing is acceptable to meet program standards). It is preferred that other birds, such as chickens, have blood samples submitted for testing. (Tracheal/OP swabs will be accepted for other birds, but the testing fees for swabs are higher than for blood testing.) **Waterfowl destined for the NY LBMS must have cloacal swabs collected and submitted for virus detection testing.**
 - ✓ The first test needs to be conducted within 30 days of placement except for the following:

- Blood collection of silkies and other small breeds of chickens may be delayed until the birds are six to eight weeks of age;
 - Blood collection of guineas, chukars, and quail may be delayed until the birds are five to six weeks of age.
 - Eggs may be substituted for quail and chukars after they start laying *with permission of the receiving state.*
 - ✓ If multiple floors or houses, test a random sample of each house (to include birds from each floor) for a total of 30 samples per premises;
 - ✓ The birds tested have tested negative for avian influenza for three consecutive months;
 - ✓ No birds of lesser AI test status have been added to the flock; (When birds of lesser status are added to the flock, the flock loses its monitored status. After waiting 21 consecutive days, a flock that has lost its monitored status may re-qualify for monitored status if 30 birds have tested negative for AI monthly for three consecutive months);
 - ✓ The flock must receive a poultry inspection certificate indicating negative avian influenza status and flock health status prior to movement.
 - ✓ **If monitored flock testing is done outside of the 21-30 day window, that flock will be considered inactive on the monitored flock program, will have to start over with three negative monthly tests to qualify, and must move as a 10-day tested flock into the NY and NJ live bird markets.**
 - ✓ *Please note that you must count 21-30 days from the date of the last sample collection-do not use calendar dates. For example, a flock sampled on August 24 will be out of compliance if sampled again on September 24 since this is actually more than 30 days.*
- “*Tested Flock*” means an established flock (must have been together as a flock for at least 21 days) in which 30 birds have tested negative for avian influenza within the 10 days prior to the date of movement. The flock may not be exposed to untested (AI) poultry and no additional poultry may be added between the sample collection date and the date that the poultry leave the farm, unless those additions are from a flock which has been tested to equal or exceed the testing for AI done on the qualifying flock. The flock must receive a poultry inspection certificate indicating negative avian influenza status and flock health status prior to movement. If tested birds are added to the qualifying flock after the flock was tested for AI, the PIC is only valid for 10 days from the date of the most recent negative AI test of any of the poultry. For tested flock status for birds moving to the NJ LBMS: if established flocks are housed in multiple houses and/or multiple floors/house, 10 birds shall be sampled from the moving flock and 20 birds shall be randomly selected and tested for AI from the remaining houses/floors of the established flock for a total of 30 samples.

NY/NJ Live Bird Market Requirements:

- Poultry less than 7 days of age are exempt from the following requirements; however, birds must have originated and moved directly from a flock that meets the requirements.
- Poultry that qualify for movement shall be kept apart from other poultry of infected, exposed, or unknown AI status.
- Approved tests for AI include AGID testing of blood samples, and PCR or virus isolation testing of swab samples. Serology (AGID) testing of waterfowl is not accepted for entry into the NY LBMS (for tested *or* monitored flocks). Instead, waterfowl must have cloacal swab samples tested using virus detection testing for the NY LBMS.
- Poultry dealers/haulers must be licensed in Pennsylvania if they are picking up birds in Pennsylvania, or buying/selling birds in Pennsylvania.
 - For movement into the NY LBMS: Dealers/haulers must hold a valid Domestic Animal Health Permit in New York
 - For movement into the NJ LBMS: Dealers/haulers must be registered as a Poultry Distributor within the NJ LBMS.
- Sanitation: All persons entering any premises containing live poultry with any poultry truck, feed delivery and/or other service vehicle shall take every sanitary precaution possible to prevent the introduction or spread of AI into or within the State. These precautions shall include the disinfecting of all footwear before entering and after leaving any premises containing live poultry and the washing and disinfecting of the cabs, tires and bodies of all vehicles between each entry of a premises containing live poultry. In addition, all markets, auctions, sales outlets and distribution facilities containing live poultry shall be maintained in a clean and sanitary manner and all coops, crates, flats, containers or other equipment used to hold or handle live poultry in such establishments shall be cleaned and disinfected between uses. Cleaning and disinfection of poultry crates, vehicles, and other equipment used for holding and transporting poultry must be documented properly in a logbook. New Jersey log books will be accepted in New York. New York log books are acceptable only in New York. It is recommended that dealers delivering to the New York and New Jersey LBMS utilize the NJ logbook to document equipment cleaning and disinfection. If dealers are delivering only to the NY LBMS, the NY logbook may be used.
- Premise ID numbers: Federal premise ID numbers, if available, should be included on the laboratory submission form for all samples submitted for testing. The premise ID corresponds to the location of the birds when they were sampled.
- For NJ LBMS - Registration: Poultry distributors and production/supply flocks conducting business within the NJ LBMS must register with the NJ Dept. of Agriculture pursuant to N.J.A.C. 2:9-2.2 (registration requirements). Production/supplier flocks that

conduct business within the NJ LBMS, but are located in another state, are exempt from registering with the New Jersey Department of Agriculture (NJDA) if:

*Their premises has been assigned a National Premises Identification Number through the federal National Animal Identification System (or other approved federal premise identification system); and

*The premises identification number has been registered with the state in which the premises is located; and

*Proof of registration is provided to an authorized agent of the New Jersey Department of Agriculture (by completing a NJ LBMS "Registration Exemption Form").

- For NJ LBMS-Production flocks: All flocks must comply with the requirements set forth in N.J.A.C. 2:9-5.1-5.2.
- For NJ LBMS-Distributors: All distributors conducting business within the NJ LBMS must comply with the requirements set forth in N.J.A.C. 2:9-4.1-4.3, and must have a biosecurity plan on file with the NJ Dept of Ag. Contact Dr. Chrislyn Wood of USDA for assistance with a biosecurity plan.
- For NJ LBMS: For *tested flock* status, *established flocks* with multiple houses and/or multiple floors/house: ten (10) birds shall be sampled from the moving flock and twenty (20) birds shall be randomly selected and tested from the remaining houses/floors of the *established flock* for a total of thirty (30) samples.
- For NY LBMS-Crate washing: Transporters and distributors delivering birds to the NY LBMS will either possess and utilize a working mechanical crate washer which cleans and disinfects crates between uses OR will utilize a third party approved crate washing station with an approved individual crate tracking system. Those using a third party crate washer must have the crates cleaned and disinfected within 48 hours of use.

For NY/NJ LBMS:

- A poultry distributor must obtain either a completed poultry inspection certificate (PIC) or a certificate of veterinary inspection (CVI) from the production/supplier flock for all poultry intended for movement into a NY/NJ LBM.
- The PIC or CVI shall be accompanied by a copy of the finalized laboratory report indicating the poultry tested negative for avian influenza.
- The production/supplier flock poultry invoice, the PIC or CVI, and the laboratory report shall remain in the possession of the poultry distributor and a new poultry invoice produced by the poultry distributor shall accompany all poultry moved into the NY/NJ LBM.
- For **tested** flocks, a CPT may *not* collect samples from his/her own birds or from birds owned by a relative.

**HOW TO COMPLETE A
POULTRY INSPECTION CERTIFICATE
(PIC)**

TESTED FLOCK PIC (PIC version10/23/14)

Section A: Flock Information

1. State of Origin = is the state of origin for the birds.
2. Flock Premises ID = premises identification number
3. Flock Owner = the name of the flock owner of the birds in the state of origin
4. Address of Flock = the **actual location where the flock resides** prior to movement. Must include street address as well as city/town, state and zip code.
5. Phone Number of Flock Owner/Manager = the phone number of the flock owner or flock manager, including area code
6. Type of Poultry That Qualify For Movement (Quantity, Type, Weight, Color, Age, etc.) = You must include the number of birds eligible for movement on this test, the type of the birds you are testing, as well as color, age and weight (if needed to describe the birds fully). **Birds eligible for movement include the entire flock tested, not just those birds actually being moved in this shipment.**

NOT 'broilers', 'chickens', 'ducks'

Acceptable = 10 black and white 6-week old male Muscovy ducks, 4 lbs
500 white broilers, 14 weeks old, 5 lbs average
10,000 spent red fowl, 3 lbs average
5 brown 10-week old female French Guineas, 3 lbs

Section B: Testing Information

The above identified flock has been established for a minimum of twenty-one (21) days and no birds have been added to this flock or have had contact with this flock during this twenty-one (21) day period, then thirty (30) birds were randomly sampled and tested negative for Avian Influenza within ten (10) days prior to the date of movement and no poultry have been added to this flock or have had contact with this flock after testing and prior to movement. If the flock contains less than thirty (30) birds, all birds within the flock must be tested. For virus isolation testing of waterfowl (cloacal swabs): waterfowl may be moved within 10 days from the date of the negative test report, rather than 10 days from the date of sample collection for movement (see 8b below). Please note: This certificate shall be accompanied by a copy of the finalized laboratory report indicating the poultry tested negative for avian influenza.

7. Number of Samples Collected = total number of samples collected
- 8a. Sample Collection Date = the date the samples were collected
- 8b. Virus Isolation Test Report Date = the date that the negative virus isolation test was reported from the laboratory (if applicable, for waterfowl cloacal swabs only)
9. Lab Accession # = the accession number assigned by the laboratory to the samples (this number can be found on the test report)

This certificate is valid for 10 days from #8 above and expires on _____. This is the date that is 10 days from the date you collected the samples (date of sample collection counts as Day **ZERO**), except for cloacal swab samples for virus isolation testing from waterfowl (see 8b). *Please note that if PCR testing is conducted on duck swabs, the certificate is valid for 10 days from the date you collected the samples. You have 10 days to get the PIC and birds covered by the PIC to the **DISTRIBUTOR**.*

Section C: Official/Tester Certification

10. Tester Signature = Sign your name here (**CPT may only sign the certificate AFTER the negative test report has been received**) ****No electronic signatures accepted**.**
11. Printed Name = Print your name legibly here
12. Phone = Your phone number with area code
13. Date = the date you sign the certificate. You are verifying that you have inspected the health of the entire flock, collected samples from a random, representative portion of the flock, and have received the negative test report (**this date may not be the same as the sample collection date in number 8a**)
14. I am a (check one) = check the box that describes your status to be able to sample these birds

Section D: Flock owner/Manager Certification

15. Flock Owner/Manager Signature = the flock owner or manager signs here, verifying that the flock has been together for at least 21 days with no additions of lesser test status in that 21 day period or after testing and before shipment
16. Printed Name = the flock owner/manager prints name legibly
17. Date = the date the flock owner/manager signs the certificate

Photocopies of the Tested Flock PIC are accepted.

Only laboratory reports marked "FINAL" will be accepted for birds moving to the NY/NJ LBMS. Preliminary or interim reports are not acceptable.

MONITORED FLOCK PIC (PIC version 10/23/14)

Section A: Flock Information

1. State of Origin = is the state of origin for the birds.
2. Flock Premises ID = premises identification number (or monitored flock number (NY) or registration number (NJ))
3. Flock Owner = the name of the flock owner of the birds in the state of origin
4. Address of Flock = the **actual location where the flock resides** prior to movement. Must include street address as well as city/town, state, and zip code.
5. Phone Number of Flock Owner/Manager = the phone number of the flock owner or flock manager, including area code
6. Type of Poultry That Qualify For Movement (Quantity, Type, Weight, Color, Age, etc.) = You must include the number of birds eligible for movement on this test, the type of the birds you are testing, as well as color, age and weight (if needed to describe the birds fully). **Birds eligible for movement include the entire flock tested, not just those birds actually being moved in this shipment.**

NOT 'broilers', 'chickens', 'ducks'

Acceptable = 10 black and white 6-week old male Muscovy ducks, 4 lbs
500 white broilers, 14 weeks old, 5 lbs average
10,000 spent red fowl, 3 lbs average
5 brown 10-week old female French Guineas, 3 lbs

Section B: Testing Information

The above identified flock is participating in an Avian Influenza Monitored Flock Program, where thirty (30) birds have been randomly sampled and have tested negative for Avian Influenza monthly for a minimum of three (3) consecutive months. Monthly sampling thereafter of thirty (30) randomly selected birds must test negative for Avian Influenza to maintain Monitored Flock status. If the flock contains less than thirty (30) birds, all birds within the flock must be tested monthly. Please note: This certificate shall be accompanied by a copy of the finalized laboratory report indicating the poultry tested negative for avian influenza. (Date of sample collection is Day Zero).

7. Monitored Flock Number = number assigned for the PA Monitored Flock Program by the PA Department of Agriculture
8. Sample Collection Date = the date the samples were collected
9. Lab Accession # = the accession number assigned by the laboratory to the samples (this number can be found on the test report)

This certificate is valid for 30 days from #8 above and expires on _____. (COUNT 30 DAYS FROM DATE OF COLLECTION- DO NOT GO BY CALENDAR DATES)

Section C: Official/Tester Certification

10. Tester Signature = Sign your name here (**CPT may only sign the certificate AFTER the negative test report has been received**) ****No electronic signatures accepted**.**
11. Printed Name = Print your name legibly here
12. Phone = Your phone number with area code
13. Date = the date you sign the certificate. You are verifying that you have inspected the health of the entire flock, collected samples from a random, representative portion of the flock as per the PA Monitored Flock Program standards, and have received the negative test report
14. I am a (check one) = check the box that describes your status to be able to sample these birds

Section D: Flock owner/Manager Certification

15. Flock Owner/Manager Signature = the flock owner or manager signs here, verifying that the birds originate from a currently valid Avian Influenza Monitored Flock as described above and that they have not been exposed to other poultry of lesser or unknown Avian Influenza status
16. Printed Name = the flock owner/manager prints name legibly
17. Date = the date the flock owner/manager signs the certificate

Photocopies of the Monitored Flock PIC are accepted.

Only laboratory reports marked "FINAL" will be accepted for birds moving to the NY/NJ LBMS. Preliminary or interim reports are not acceptable.

These are just guidelines - please contact the NY or NJ Department of Agriculture if you have questions about their requirements.

POULTRY INSPECTION CERTIFICATE

For Poultry Entering the *New Jersey* or *New York* Live Bird Marketing System

AVIAN INFLUENZA FLOCK QUALIFICATION TYPE – MONITORED FLOCK

SECTION A: FLOCK INFORMATION

1. State Of Origin: _____ 2. Flock Premises ID: _____
3. Flock Owner: _____
4. Address Of Flock: _____

5. Phone Number Of Flock Owner/Manager: _____
6. Type of Poultry That Qualify For Movement (Quantity, Type, Weight, Color, Age, Etc.):

SECTION B: TESTING INFORMATION

The above identified flock is participating in an Avian Influenza Monitored Flock Program, where thirty (30) birds have been randomly sampled and have tested negative for Avian Influenza monthly for a minimum of three (3) consecutive months. Monthly sampling thereafter of thirty (30) randomly selected birds must test negative for Avian Influenza to maintain Monitored Flock status. If the flock contains less than thirty (30) birds, all birds within the flock must be tested monthly. Please note: This certificate shall be accompanied by a copy of the finalized laboratory report indicating the poultry tested negative for avian influenza.

7. Monitored Flock Number: MF _____ 8. Sample Collection Date: _____
9. Lab Accession #: _____

THIS CERTIFICATE IS VALID FOR 30 DAYS FROM #8 ABOVE AND EXPIRES ON _____

SECTION C: TESTER CERTIFICATION

I certify that I have sampled thirty (30) random birds from the above identified flock and I have inspected the flock as described to me above and no signs of clinical disease were observed and the birds tested negative for Avian Influenza.

10. Tester Signature: _____
11. Printed Name: _____
12. Phone: _____
13. Date: _____
14. I am a (check one): State Official Federal Official Accredited Veterinarian Authorized Tester (PA+MD ONLY)

SECTION D: FLOCK OWNER/MANAGER CERTIFICATION

I certify that the birds represented on this certificate originate from a currently valid Avian Influenza Monitored Flock as described above and that they have not been exposed to other poultry of lesser or unknown Avian Influenza status.

15. Flock Owner/Manager Signature: _____
16. Printed Name: _____
17. Date: _____

Revised October 23, 2014

NOTE: PHOTOCOPIES ARE ACCEPTABLE

POULTRY INSPECTION CERTIFICATE

For Poultry Entering the *New Jersey* or *New York* Live Bird Marketing System

AVIAN INFLUENZA FLOCK QUALIFICATION TYPE – **TESTED FLOCK**

SECTION A: FLOCK INFORMATION

1. State Of Origin: _____ 2. Flock Premises ID: _____
3. Flock Owner: _____
4. Address Of Flock: _____

5. Phone Number Of Flock Owner/Manager: _____
6. Type of Poultry That Qualify For Movement (Quantity, Type, Weight, Color, Age, Etc.):

SECTION B: TESTING INFORMATION

The above identified flock has been established for a minimum of twenty-one (21) days and no birds have been added to this flock or have had contact with this flock during this twenty-one (21) day period, then thirty (30) birds were randomly sampled and tested negative for Avian Influenza within ten (10) days prior to the date of movement and no poultry have been added to this flock or have had contact with this flock after testing and prior to movement. If the flock contains less than thirty (30) birds, all birds within the flock must be tested. For virus isolation testing of waterfowl (cloacal swabs): waterfowl may be moved within 10 days from the date of the negative test report, rather than 10 days from the date of sample collection for movement (see 8b below). Please note: This certificate shall be accompanied by a copy of the finalized laboratory report indicating the poultry tested negative for avian influenza.

7. Number of Samples Collected: _____ 8a. Sample Collection Date: _____
9. Lab Accession #: _____ 8b. Virus Isolation Test Report Date: _____ (if applicable)

THIS CERTIFICATE IS VALID FOR 10 DAYS FROM # 8 AND EXPIRES ON _____

SECTION C: OFFICIAL/TESTER CERTIFICATION

I certify that I have sampled thirty (30) random birds from the above identified flock and I have inspected the flock as described to me above and no signs of clinical disease were observed and the birds tested negative for Avian Influenza.

10. Tester Signature: _____
11. Printed Name: _____
12. Phone: _____
13. Date: _____
14. I am a (check one): State Official Federal Official Accredited Veterinarian Authorized Tester (PA+MD ONLY)

SECTION D: FLOCK OWNER/MANAGER CERTIFICATION

I certify that the above identified birds have been established for a minimum of twenty-one (21) days and no birds have been added to this flock or have had contact with this flock during this twenty-one (21) day period and no poultry have been added to this flock or have had contact with this flock after testing and prior to movement.

15. Flock Owner/Manager Signature: _____
16. Printed Name: _____
17. Date: _____

Revised October 23, 2014

NOTE: PHOTOCOPIES ARE ACCEPTABLE