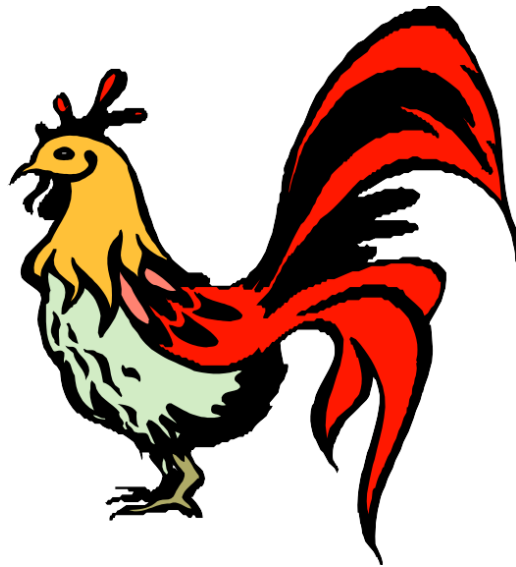


CERTIFIED POULTRY TECHNICIAN

USER GUIDE

Revised 6/3/21-new submission form



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

Certified Poultry Technician Course User Guide

AGENDA

- ◆ Welcome
- ◆ Introductions
- ◆ Review of Course Objectives
- ◆ Review of Continuing Education Requirements
- ◆ Review of User Guide and Reference Materials
- ◆ Break
- ◆ Power Point Presentation
- ◆ Demonstration of the Pullorum Rapid Whole Blood Agglutination Plate Test
- ◆ Written Exam
- ◆ Live Bird Market (LBM) Presentation for those interested in LBM sampling
- ◆ Skills Check-off for classroom topics (requires instructor signature)
- ◆ Evaluation of the Course (optional)

KEY POINTS

***After completion of this class, students must schedule the field skill test within 6 months with the regional PDA veterinarian to demonstrate the techniques for sample collection, handling, and submission (refer to the CPT User Guide):**

- ◆ Blood samples
- ◆ Tracheal, oropharyngeal, and cloacal swabs
- ◆ Rapid pullorum test (if applicable)

***Your skill checklist must be signed by the classroom instructor and the field instructor, and must then be sent to the Department along with your license fee within 30 days to obtain a license.**

***Licenses expire on December 31 of every other year and must be renewed.**

***Pennsylvania Certified Poultry Technicians are not authorized to collect samples from poultry outside of Pennsylvania without a reciprocal agreement.**

***CPTs collecting samples from PA poultry for entry into the NY/NJ live bird market system must complete the LBMS training, and must request LBMS status before being added to the list of approved LBMS technicians.**

Course Objectives

The Pennsylvania Department of Agriculture Certified Poultry Technician Course is designed to provide trained technicians for collection of samples from poultry for regulatory testing purposes. This testing may be required for various reasons, including testing to meet poultry health program requirements, interstate movement, or for show 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 dangerous transmissible diseases and through proper sample collection and submission.

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 knowledge and skills to:

- ◆ Recognize signs of avian disease.
- ◆ Report suspected dangerous transmissible diseases 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, including testing requirements.
- ◆ Be familiar with the Department's requirements for testing for exhibition.
- ◆ Be competent with blood and swab sample collection, handling, and submission.
- ◆ If applicable, be competent performing and interpreting the Pullorum Rapid Whole Blood Agglutination Plate Test.
- ◆ Understand proper bird identification and record-keeping requirements (official leg bands).
- ◆ 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, handling, and submission; and record-keeping.

Please note: If you are not on the Department's 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.

CERTIFIED POULTRY TECHNICIAN USER GUIDE TABLE OF CONTENTS

Agenda

CPT Application for License

CPT Skills Checklist

CPT Course Evaluation

Section I: Contact Information

- Department of Agriculture and PADLS Contacts
- Regional Map
- Guidelines for Reporting Suspected Dangerous Transmissible Disease

Section II: Collection, Handling, and Submission of Samples

- Guidelines for Collection, Handling, and Submission of Blood and Swab Samples from Poultry (PADLS)
- Fact sheet for Poultry Blood Collection
- Guidelines for Collection of Environmental Swab Samples for Salmonella Programs

Section III: PADLS Avian Sample Submission Form

- Pennsylvania Animal Diagnostic Laboratory System – Avian Sample Submission Form

Section IV: Instructions for Conducting Pullorum Rapid Whole Blood Agglutination Plate Test

- Instructions for Conducting Pullorum Rapid Whole Blood Agglutination Plate Test (recommended only if doing a lot of pullorum testing on breeder flocks)

Section V: Essential Equipment

- Equipment List

Section VI: Biosecurity

- Biosecurity Guidelines for Collecting Samples
- Biosecurity Programs/Plans on Poultry Farms – guidelines for biosecurity planning on farm

Section VII: Premises Registration Form

- PA Premises Data Information Sheet

Section VIII: PA AI Monitored Flock Program for Live Bird Market Production Flocks

- PA AI Monitored Flock Program Standards

Section IX: PDA Quarantine Orders

- PDA AI Interstate, International Quarantine Order (import requirements) (revised 2019)
- PDA General Quarantine Order; Certified Poultry Technicians (2019)
- PDA General Quarantine Order; Poultry Exhibitions (2019)

Section X: Summary of Poultry Programs and Testing Requirements

- Summary of Poultry Programs and Testing Requirements

Section XI: Dangerous Transmissible Diseases of Poultry

- PA Dangerous Transmissible Diseases of Poultry

Section XII: Avian Disease Fact Sheets

- Avian Influenza (AI) – Dangerous Transmissible Disease
- Coryza
- Newcastle Disease (ND) – Dangerous Transmissible Disease
- Mycoplasma synoviae (MS) – Dangerous Transmissible Disease
- Mycoplasma gallisepticum (MG) – Dangerous Transmissible Disease
- Salmonella pullorum – Dangerous Transmissible Disease
- Fowl Typhoid (Salmonella gallinarum) – Dangerous Transmissible Disease
- Duck Viral Enteritis (DVE) – Dangerous Transmissible Disease

- Avian Chlamydiosis (psittacosis) – Dangerous Transmissible Disease
- Infectious Laryngotracheitis (ILT)
- Salmonella enteritidis (SE)
- Salmonella in Backyard Flocks

Section XIII: Official PDA Leg Band Size Charts

- Leg Band Size Charts
- CPT Leg Band Record of Distribution

Section XIV: PA Exhibit Bird Rapid Pullorum Plate Test Form and Owner-Endorsed Poultry Health Certificate

- PDA Flock Testing Report for Rapid Whole Blood Agglutination Plate Test Form (unofficial form for shows)
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Section XV: CPT Course Presentation

- Presentation Handout

Section XVI: Live Bird Market Information

- LBM Guidelines for Completing NY/NJ PIC
- PIC-Monitored Flock
- PIC-Tested Flock

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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? (CHOOSE ONE)

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.



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 complete them).

DATE: Classroom training: _____ Field Skill test: _____

NAME: _____
Last Middle Initial First

ADDRESS: _____
Street or Box Number

City State Zip

TELEPHONE NUMBER: _____ EMAIL: _____

SKILLS COMPLETED SATISFACTORILY:

Classroom:

- ____ Understanding of proper sample handling and submission
- ____ Understanding of proper bird identification and records retention (leg bands)
- ____ Understanding of Biosecurity
- ____ Understanding of LBM requirements and Poultry Inspection Certificates
- ____ Understanding of the rapid whole blood agglutination plate test (pullorum)

In field:

- ____ Blood sample collection
- ____ Tracheal/oropharyngeal swab collection
- ____ Cloacal swab collection
- ____ Rapid whole blood agglutination plate test (pullorum) if applicable

PRINTED NAME AND SIGNATURE OF CLASSROOM INSTRUCTOR:

(PRINTED NAME) (SIGNATURE-DO NOT PRINT) DATE

PRINTED NAME AND SIGNATURE OF FIELD INSTRUCTOR:

(PRINTED NAME) (SIGNATURE-DO NOT PRINT) DATE

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CERTIFIED POULTRY TECHNICIAN

COURSE EVALUATION

The course evaluation will be utilized to determine if changes are necessary to provide a better program for Certified Poultry Technicians. Please take the time to fill out this evaluation.

Date of Course: _____

Instructor: _____

1. Course Objectives: The course objectives are relevant to my goals as a Certified Poultry Technician:

_____ Yes

_____ No

If no; please explain:

2. Course Content: The course provided me with the information which fulfilled the course objectives.

_____ Yes

_____ No

If no; please explain:

3. Reference Materials: The reference materials provided are helpful and relevant to my work as a Certified Poultry Technician.

_____ Yes

_____ No

If no; please explain:

4. Presentation of Material: The course material was presented in a manner which was easy to follow and understand.

_____ Yes

_____ No

If no; please explain:

5. (Field skills) Hands-on Experience: The course provided me with the hands- on experience I need to act as a Certified Poultry Technician.

_____Yes

_____No

If no; please explain:

6. Other Comments:

Your Name (Optional): _____

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

SECTION I: CONTACT INFORMATION

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**PA DEPARTMENT OF AGRICULTURE
BUREAU OF ANIMAL HEALTH & DIAGNOSTIC SERVICES (MAIN LINE 717-772-2852) and PADLS
CONTACT LIST**

NAME	DIRECTOR'S OFFICE	ROOM	TELEPHONE	FAX	E-MAIL
Dr. Kevin Brightbill	Director	412	717-705-1626	717-787-1868	kebrightbi@pa.gov
Dr. Alex Hamberg	Assistant Director	412	717-783-2200	717-787-1868	ahamberg@pa.gov
ANIMAL AND POULTRY HEALTH DIVISION					
Dr. Nan Hanshaw	Division Chief	412	717-783-6677	717-787-1868	nhanshaw@pa.gov
Stacy Etzweiler (Rakocy)	NPIP, Pullorum Equivalent Program, Pullorum Tests, Poultry Exhibits, CPT Licensing, Poultry Leg Bands, Monitored Flock	412	717-783-6897	717-787-1868	srakocy@pa.gov
REGULATIONS AND COMPLIANCE DIVISION					
Dr. Jeffrey Bissett	Division Chief	410	717-783-6851	717-787-1868	jbissett@pa.gov
BAHDS REGIONAL OFFICES			TELEPHONE	FAX	E-MAIL
REGION 1	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
Cassandra Cooper	Domestic Animal Health Inspector		814-332-6890	814-333-1431	cascooper@pa.gov
REGION 2	542 County Farm Road, Suite 102, Montoursville, PA 17754-9685				
Dr. Amy J. Nesselrodt	Veterinary Medical Field Officer		570-433-2640	570-433-4770	anelrod@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
REGION 3	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

**PA DEPARTMENT OF AGRICULTURE
BUREAU OF ANIMAL HEALTH & DIAGNOSTIC SERVICES (MAIN LINE 717-772-2852) and PADLS
CONTACT LIST**

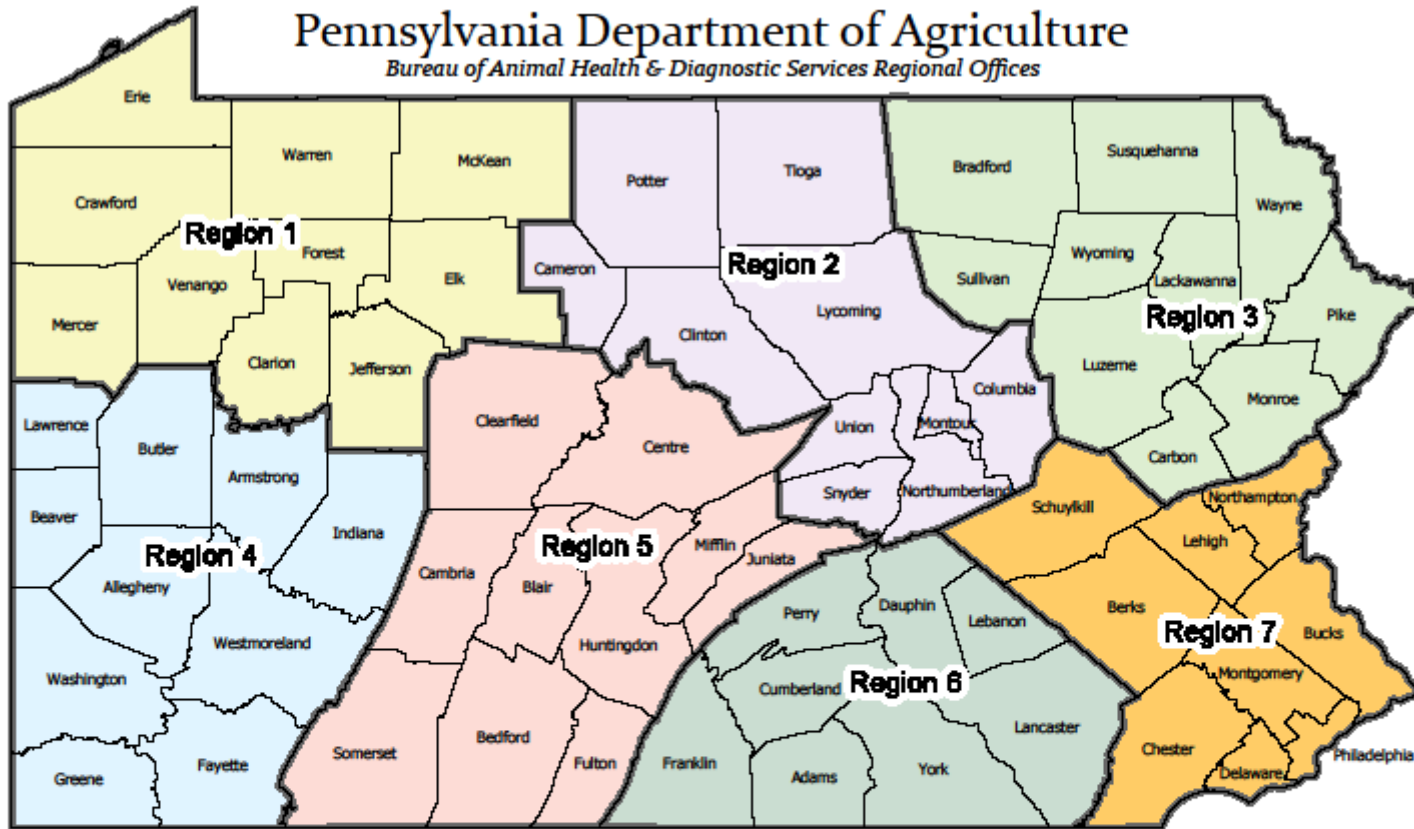
REGION 4		226 Donohoe Road, Suite 101, Greensburg, PA 15601			
Dr. Erin Moore	Veterinary Medical Field Officer	724-832-1073	724-832-1013	erimoore@pa.gov	
James Govan	Domestic Animal Health Inspector	724-832-1073	724-832-1013	igovan@pa.gov	
David Myers	Domestic Animal Health Inspector	724-832-1073	724-832-1013	damyers@pa.gov	
REGION 5		DEP District Office 3001 Fairway Dr. Altoona, PA 16602			
Dr. Elizabeth Santini	Veterinary Medical Field Officer	717-705-5500		esantini@pa.gov	
Dawn M. Dilling	Domestic Animal Health Inspector	717-705-5500		ddilling@pa.gov	
Jennifer Johnson	Domestic Animal Health Inspector	717-705-5500		jenjohnson@pa.gov	
REGION 6		2301 North Cameron Street, Room 411, Harrisburg, PA 17110			
Dr. Sally Adams	Veterinary Medical Field Officer	717-346-3223	717-787-1868	saladams@pa.gov	
Sarah McAlanis	Domestic Animal Health Inspector	717-346-3223	717-787-1868	smcalanis@pa.gov	
Bradley Espenshade	Domestic Animal Health Inspector	717-346-3223	717-787-1868	bespenshad@pa.gov	
Amberlee Dressler	Domestic Animal Health Inspector	717-346-3223	717-787-1868	ambdressle@pa.gov	
Christine Miller	Domestic Animal Health Inspector	717-346-3223	717-787-1868	chemille@pa.gov	
Suzette Thompson	Domestic Animal Health Inspector	717-346-3223	717-787-1868	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	
Dr. Nancy Diehl	Domestic Animal Health Inspector	610-489-1003	610-489-6119	ndiehl@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	

**PA DEPARTMENT OF AGRICULTURE
BUREAU OF ANIMAL HEALTH & DIAGNOSTIC SERVICES (MAIN LINE 717-772-2852) and PADLS
CONTACT LIST**

PA ANIMAL DIAGNOSTIC LABORATORY SYSTEM (PADLS)		TELEPHONE	FAX	
PA VETERINARY LABORATORY (PVL)	2305 North Cameron Street, Harrisburg, PA 17110	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 Orchard Road University Park, PA 16802	814-863-0837	814-865-3907	

Pennsylvania Department of Agriculture

Bureau of Animal Health & Diagnostic Services Regional Offices



<p>PA Department of Agriculture BAHDS 2301 North Cameron St Harrisburg, PA 17110 (717) 772-2852 www.agriculture.pa.gov</p>	<p>Region 1 Dr. Heather Palm 13410 Dunham Rd Meadville, PA 16335 (814) 332-6890</p>	<p>Region 2 Dr. Amy Nesselrodt 542 County Farm Rd, Suite # 102 Montoursville, PA 17754 (570) 433-2640</p>	<p>Region 3 Dr. Tony LaBarbera Route 92 South, P.O. Box C Tunkhannock, PA 18657 (570) 836-2181</p>	<p>Region 4 Dr. Erin Moore 226 Donohoe Rd Greensburg, PA 15601 (724) 832-1073</p>
	<p>Region 5 Dr. Elizabeth Santini (DEP District Office) 3001 Fairway Dr Altoona, PA 16602 (717) 705-5500</p>	<p>Region 6 Dr. Sally Adams 2301 North Cameron St, Room 403 Harrisburg, PA 17110 (717) 346-3223</p>	<p>Region 7 Dr. Aliza Simeone 1015 Bridge St, Suite # 100 Collegeville, PA 19426 (610) 489-1003</p>	

GUIDELINES FOR REPORTING SUSPECTED DANGEROUS TRANSMISSIBLE DISEASE

- Report any signs suggestive of Avian Influenza (AI) or other dangerous transmissible diseases in a flock immediately to the Pennsylvania Department of Agriculture at: 717- 772-2852.
- Signs suggestive of AI or other DTDs may 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 if the flock is infected with HPAI, and in the case of layers, decreased egg production, which usually follows the increased mortality by several days.
 - These are general guidelines only.

**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 boxes for tubes, whirlpak bags, virus transport media, and submission forms are available from PADLS labs.
- ❖ Samples can be tested at any PADLS laboratory. Call the laboratory in advance to let them know when the samples will arrive if you are submitting a large number of samples or have specific testing requirements.
- ❖ 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 YOUR PDA REGIONAL OFFICE. 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.**
 - RECORDS OF LEG BAND DISPOSITION MUST BE MAINTAINED FOR A MINIMUM OF TWO YEARS AND MUST BE MADE AVAILABLE TO THE DEPARTMENT UPON REQUEST.
 - IF TESTING FLOCKS 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

(OR YOU CAN USE PLIERS TO APPLY THE BANDS)

- ❖ 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 without a reciprocal state agreement in place.
- ❖ 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 additional information concerning Collection of Poultry Blood Samples*.

Please note that only the clear serum, obtained after the blood sample has clotted and has been separated at the laboratory, is used for testing. The CPT must submit enough blood from each bird to provide enough serum for all testing.

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. (If it is a hot day, keep samples cool on frozen cold packs immediately after collection).
- **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. Include the band number on the submission form.**
- Place the box lid on tightly.
- Label the box (not the lid) with the owner name, and premise ID or flock address.
- Place the box into a plastic bag. Seal the bag.
- Disinfect the outside of the plastic bag.
- **Keep the samples cool on frozen cold 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.
- 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. If you have sampled more than one bird type, place only one bird type per bag, and write the bird type on the corresponding bag (chickens in one bag, turkeys or game birds in another). Seal the bag.
- Label the whirlpak bag with the owner name, and premise ID or flock address.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.

- Keep the samples cool on frozen cold packs in a cooler during transport – do not use ice. Do not allow the blood samples to freeze.
- **The USDA 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:

- If you are using large tubes 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 or flock address.
- Place the box into a plastic bag. Seal the bag.
- Disinfect the outside of the plastic bag.
- If you are using plastic snap cap tubes, the tubes with samples should be closed tightly and 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 or flock address, as well as bird type if submitting samples from more than one bird type.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- Keep the samples cool (see next bulleted item). Submit samples as soon as possible (preferably within 24-48 hours).
- **Keep the samples cool on frozen cold 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:

- If you are using large tubes, 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 or flock address. Place the box into a plastic bag. Seal the bag.
- Disinfect the outside of the plastic bag.
- If you are using plastic snap cap tubes, the tubes with samples should be closed tightly and 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 or flock address, as well as bird type if submitting samples from more than one bird type.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- Submit samples as soon as possible (preferably within 24- 48 hours).
- Keep the samples cool on frozen cold packs in an approved, sealed Styrofoam container (placed inside of a sealed cardboard box) 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.
- DO NOT use Priority Mail.

Sample Collection – Swabs for AI testing

Tracheal/oropharyngeal swabs (gallinaceous birds such as chickens, turkeys, and game birds):

- Swab testing may be used instead of blood testing to test gallinaceous birds for avian influenza. Swabs may not be used for pullorum testing of any type of bird.
- Keep 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 entire 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.
- Secure tube tops.
- Place tubes into a labeled whirlpak bag. If you have sampled more than one bird type, place only one bird type per bag, and write the bird type on the corresponding bag (chickens in one bag, turkeys or game birds in another). Seal the bag.
- Label the bag with owner name, and premise ID or flock address.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- **Keep the samples cool on frozen cold 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 (preferably within 24-48 hours) to ensure sample integrity.
- If shipping samples, send early in the week, preferably before Wednesday morning.
- Please note: Viral transport medium (VTM) may replace BHI at the discretion of the 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 cold 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 cold packs as you collect samples.

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

- Swabs may not be used for pullorum testing of any type of bird.
- Keep Brain Heart Infusion (BHI) broth tubes refrigerated at all times.
- Collect cloacal swabs for virus detection testing from birds representative of the entire flock.
- Insert the dry 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 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. If you have sampled more than one bird type (such as ducks and geese), place only one bird type per bag, and write the bird type on the corresponding bag. Seal the bag.
- Label the bag with owner name, and premise ID or flock address.
- **Complete the submission form** and place it in the bag pocket.
- Disinfect the outside of the whirlpak bag.
- **Keep the samples cool on frozen cold 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 (preferably within 24-48 hours) to ensure sample integrity.
- If shipping samples, send early in the week, preferably before Wednesday morning.
- Please note: Viral transport medium (VTM) may replace BHI at the discretion of the 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 cold 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 cold 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 or flock address. If you have sampled more than one bird type (such as ducks and geese), place only one bird type per bag, and write the bird type on the corresponding bag (ducks in one bag, geese in another). 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 cold 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 or flock address. If you have sampled more than one bird type (such as ducks and geese), place only one bird type per bag, and write the bird type on the corresponding bag (ducks in one bag, geese in another). 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 cold packs in an approved, sealed Styrofoam container (placed inside of a sealed cardboard box) 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.
- **DO NOT** use Priority Mail.

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 general PADLS 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.



Extension FactSheet

VME-23-05

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

Poultry Blood Collection

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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.

PA CPT: If you can't collect the amount of blood required for testing, consider swabbing for AI testing.

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.

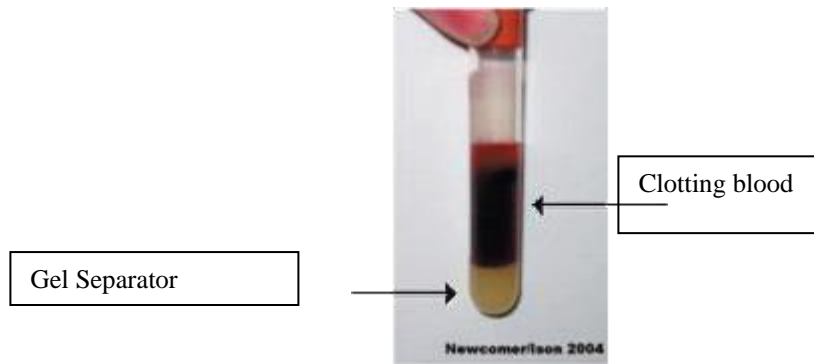


Withdrawal of blood from the medial metatarsal vein.

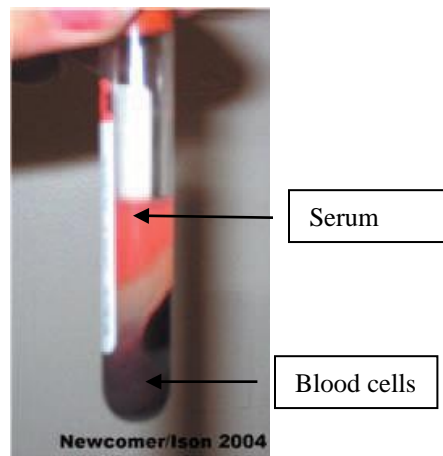
What Should Be Done After the Blood Is Collected?

For Pennsylvania CPTs, refer to the PA Guidelines for collection, handling, and submission of samples.

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

Environmental Swabbing for Salmonella Programs

Refer to NPIP Program Standard B: NPIP Procedures for collection, isolation, and identification of Salmonella from environmental samples, cloacal swabs, chick box papers, and meconium samples. These standards apply to egg- and meat-type chickens, waterfowl, exhibition poultry, and game birds.

Information concerning the pen arrangement and number of birds per pen should be obtained from the owner so that the required number of samples per pen and per flock can be determined. A means of identifying each sample by pen of origin should be provided. The vehicle transporting the personnel taking the samples should be left as far as practical from the poultry pens. Sanitary precautions, including personal cleanliness, should be observed during the sampling procedure. The hands should be carefully washed with a sanitizing soap prior to the sampling. Outer clothing, including gloves, should be changed between visits to different premises so that clean clothing is worn upon entering each premises. A minimum size of three inches by three inches should be used for the sterile gauze pads.

The used and clean apparel should be kept separate. Boots or footwear should be cleaned and disinfected between visits to different premises. Disposable caps should be provided and discarded after use on each premises. After collection, the samples should be protected from drying, light, and excessive temperatures and delivered to the laboratory within one day. If delivery is delayed, samples should be refrigerated.

(1) Poultry House Environmental Samples. Fecal material, litter, dust, or floor litter surface or nest box drag swab samples to be submitted for bacteriological examination shall be collected in accordance with the procedures described below:

- (i) **Fecal material, litter or dust.** With a clean gloved hand or sterile collection device, collect fecal material, litter, or dust from several locations representing all areas of the pen or house into a sterile bag or container. A suggested number of samples is five samples from pens or houses with less than 500 birds; ten samples from pens or houses of 500 to 2,500 birds; and 15 samples from pens or houses with more than 2,500 birds.
- (ii) **Drag swabs (DS).** DS, which consist of gauze pads or commercially available sponges, enable the sampling of large areas of the pen or house.
 - (A) Preparation. DS may be purchased commercially or be user prepared. One suggested method of making the DS assemblies is as follows: A sterile gauze pad is folded in half and a two-foot long (60cm) piece of twine is securely attached to the folded pad using a paper clip, staple, or similar device. A second sterile gauze pad is similarly fastened to a five-foot (150 cm) long piece of twine. The shorter piece of twine is then tied to the longer piece producing a DS sample set of two swabs arranged in a Y-shaped configuration. Alternatively, two separate DS samplers may be prepared. The twine is wrapped around the swabs, and the swabs *moistened* with double-strength skim milk (DSSM) (evaporated milk). The moistened swabs are placed in an instrument package. The sterilized swabs contained in the instrument package may be frozen (to prevent drying) until use.

(B) Procedure. At the farm the thawed DS assemblies are unraveled and the ends of the twine held in gloved hands. The swabs are dragged across the environmental surfaces of the house for 15 minutes or the length of the house (down and back). One set of swabs (two individual pads) is dragged across the center of the house floor and another set of swabs (two individual pads) is dragged across the inside perimeter of the house floor. The four pads are individually placed in labeled, sterile bags. If necessary to prevent drying out, additional DSSM may be added to the bags. The bags should be protected from excessive heat and submitted as soon as possible to the authorized laboratory for testing. If the samples cannot be submitted to the laboratory the same day, they should be stored 2° - 4 °C or placed in a cooler with frozen cold packs for no more than five days before culturing.

(iii) **Shoe cover swabs.**

Absorbable fabric shoe covers involve the exposure of the bottom surface of shoe covers to the surface of floor litter and slat areas. Wearing clean gloves, place the shoe covers over footwear that is only worn inside the poultry house. This can be footwear dedicated to the facility or disposable overshoes. Each pair of shoe covers should be worn while walking at a normal pace over a distance of 1,000 feet (305 meters). For flocks with fewer than 500 breeders, at least one pair of shoe covers should be worn to sample the floor of the bird area. For flocks with 500 or more breeders, at least two pairs of shoe covers should be worn to sample the floor of the bird area. After sampling, place each shoe cover in a sterile container with 30 ml of double strength skim milk, unless pre-moistened swabs are used. Seal the sterile containers and promptly refrigerate them at 2° to 4 °C or place in a cooler with frozen cold packs. Do not freeze. Samples should be stored at refrigerator temperatures of 2° to 4 °C no more than five days before culturing.

(iv) **Nest box or egg belt swabs as alternative sampling source.**

(A) Two sterile pre-moistened (ex. DSSM) gauze pads or sponges are swabbed along the inside of approximately 10 percent of the nest boxes. Each swab or sponge is placed into a separate sterile bag and submitted to the authorized laboratory.

(B) Two sterile pre-moistened (ex. DSSM) gauze pads or sponges are used to swab the egg belts. At least 30 feet of belt material is swabbed with each swab. Each swab is placed into a separate sterile bag and submitted to the authorized laboratory.

(2) Cloacal Swabs. Cloacal swabs for bacteriological examination shall be taken from each bird in the flock or from a minimum of 500 birds in accordance with the procedure described this section. A sterile cotton-tipped applicator or swab is inserted into the cloaca and rectum of the bird in such a manner to ensure the collection of fecal material. The applicator may be broken off into a sterile tube. The cloacal swabs may be combined in multiples of five or in combinations specified by the authorized laboratory. *Note- if collecting cloacal swabs for salmonella testing, do not use tubes with BHI broth as is required for AI testing.*

(3) Hatchery Samples. Hatchery-related samples, such as chick box papers, meconium, and fluff, may be examined for the presence of Salmonella to indicate the transfer of Salmonella from parent to offspring.

(i) **Chick box papers (swabs).** Chick box paper samples may be collected by an authorized agent according to paragraph (a)(3)(i)(A) of this section (see below) or may be submitted directly to an authorized laboratory for testing according to paragraph (a)(3)(ii)(B) of this section (see below). It is important to remove the paper from the chick box before the box is placed in the brooding house.

(A) Instructions for sampling chick box papers. One chick box paper is collected for every 10 boxes of chicks placed in a house. With sanitized and gloved hands lay out the papers on a clean, disinfected surface. Saturate a sterile gauze pad or sponge with DSSM and swab the surface of five chick box papers. The pad should be rubbed over approximately 75 percent of each paper with sufficient pressure to remove any dried meconium. Addition of more DSSM may facilitate sampling. The process is repeated with a second swab and the other five chick box papers. Both swabs may be added to a single sterile, labeled plastic bag and submitted to the authorized laboratory. Promptly refrigerate the Whirl-Pak bags containing the samples and transport them, on frozen cold packs or otherwise refrigerated, to a laboratory to be cultured within five days of collection.

(ii) **Chick box papers.** The Plan participant may send chick box papers directly to a laboratory, where samples may be collected as described in paragraph (a)(3)(i)(A) of this section (see above). To send chick box papers directly to a laboratory:

(A) Collect one chick box paper for each 10 boxes of chicks placed in a house and place the chick papers immediately into large plastic bags and label and seal the bags.

(B) Place the plastic bags containing the chick box papers in a clean box and transport them within 48 hours to a laboratory. The plastic bags do not require refrigeration.

(iii) **Chick meconium.** After collection, the container of meconium is mixed to obtain a uniform consistency. In the laboratory a 25-gram sample will be removed for bacteriological examination.

(iv) **Fluff.** Fluff samples may be collected from the floor of the hatchery or from the tray following hatching. The fluff sample may be collected by either swabbing the floor or tray with a pre-moistened gauze pad or sponge or by placing fluff material directly into a sterile bag.

Guidelines for Environmental Swab Handling for Salmonella Testing

(Guidelines taken from PA Egg Quality Assurance Program operations annex and using swabbing kits provided by PADLS laboratories)

Equipment

1. Standard biosecurity equipment
2. Small cooler with three frozen cold packs
3. Large garbage bag to serve as a tablecloth
4. Scissors
5. Can opener
6. Waterproof permanent marker
7. DSSM (double strength skim milk)
8. Optional: Manure drag pole (recommendation of constructing one from a 3/8" by 42" solid aluminum rod with a 1/4" hole drilled 1/2" from one end, or from a 1/2" by 36" conduit with a 1/4" hole drilled 1/2" from one end - the solid aluminum rods are easier to clean and disinfect).
9. PEQAP drag swab kit from Penn State Animal Diagnostic Laboratory or New Bolton Center; kit contains:
 - a) Whirl-Pak bags (18-ounce size)
 - b) Sterile gauze pads

Manure Swabbing:

1. Prior to swabbing, label the sample bags with flock name and collection date.
2. Suit up with protective clothing and disinfect boots and swabbing equipment before entering the house in accordance with standard biosecurity practices.
3. Bring all materials to the bottom floor of the house. Use the bottom utility area if the house has one. Bring a bucket filled with a disinfecting solution.
4. Spread out the large garbage bag and arrange the sampling materials on top of the bag. Label the bags.
5. Place on a pair of disposable exam gloves.
6. Open the alcohol swab and wipe the top of the can of DSSM and the can opener. Wipe excess alcohol from the can and can opener with a clean paper towel before opening the can to minimize contamination of the milk with alcohol.
7. Disinfect the scissors with the disinfecting solution in your bucket. Wipe excess disinfectant off the scissors with a clean paper towel.
8. Use disinfected scissors to cut open the autoclave pack of swabs near the top of the pack.
9. Shake the can of DSSM and moisten the swabs in the pack by pouring a small amount of DSSM into the pack and massaging the outside of the pack. Lay the pack on the garbage bag.

Be sure to clean and sanitize gloved hands after touching non-sterile items and before taking samples with sterile swabs. Wipe excess disinfectant from gloved hands with a clean paper towel.

10. Tear the top off Whirl-Pak bags.
11. Tie two swabs to the strings per NPIP protocol.
12. Sample the manure per NPIP protocol.
13. Place the 2 swabs into separate Whirl-Pak bags *without touching the swabs* (one swab per bag). Cut attaching strings with the scissors and disinfect the scissors in between each sample; wipe excess disinfectant from the scissors with a clean paper towel or pull the strings off per NPIP guidelines.

Note- Adding too much DSSM can affect test results.
14. After the manure is dragged, place the Whirl-Pak bags (with samples) into the gallon- size bag, seal tightly, and place in the cooler with the frozen cold packs.
15. Put all discarded material into the garbage bag and dispose of properly.
16. Place the cooler outside the house; clean and disinfect it; then load it into your vehicle.
17. Follow standard biosecurity procedures when leaving.
18. Transport samples to a processing facility within 24 hours, if possible. In rare cases, when samples cannot be shipped to the laboratory within 48 hours, freeze the samples for future shipment at the earliest time. Delayed processing may alter test results and may result in additional testing requirements.

Egg Belts and Nest boxes:

Hand-swab the egg belts and nest boxes per NPIP protocol and handle as per manure swabbing guidelines.

SECTION III: PADLS AVIAN SAMPLE SUBMISSION FORM

(Available on the PADLS website)



Pennsylvania Animal Diagnostic Laboratory System
Avian Sample Submission Form

University of Pennsylvania
New Bolton Center
382 West Street Road
Kennett Square, PA 19348
(610) 925-6725

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

Billing and Reporting Preferences

Report to by:
Bill to: Fax: Email: US Mail:
Sample Collector
Owner/Company
Premise Owner

Accession #

Sample Collector
Certified Poultry Tech ID Number
Name
Address
City, State, Zip
Phone Fax
Email
Signature

Owner/Company
Owner
Company
Address
City, State, Zip
Phone Fax
Email
See back of form if submitting multiple premises

MF# Premises NPIP#
Premises Identification Number
Flock ID/Name/House #/Floor #/Pen # or Q #
Address
City, State, Zip
Phone Fax
Email

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) Subpart E
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
SE Monitored
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
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 SE Culture Only
Other SE PCR Only RapidChek SE Test Only

AI Virus Detection
Virus Isolation
RRT-PCR
Lab Use Only
Grant(s)

Please use the avian necropsy submission form if for diagnostic necropsy/analysis on birds or tissues

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

Pullorum Rapid Whole Blood Agglutination Plate Test

Refer to NPIP Program Standard A

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.

Description: The serum plate agglutination (SPA) test is used to detect specific antibodies that will bind to an antigen and cause visible “clumping” or agglutination. The antigen is prepared from cultures of *Salmonella pullorum* and a dye is added to improve visibility of the reactions. A prescribed amount of antigen is placed on a solid support, such as a glass plate or mirror, keeping each drop of antigen separate. An equal amount of test serum is placed next to the antigen and these are then mixed together. After a short incubation, the mixture is examined for evidence of agglutination, which appears as discrete clumps of the stained particles with a clearer background. If no antibodies are detected, the mixture will remain opaque. This is a screening test only and additional testing must be performed on all reactors.

Who can perform this test in PA?

- Performance of this test is recommended only for CPTs performing a large amount of breeder flock testing since the antigen has an expiration date and the test is subjective.
- CPTs must demonstrate proficiency before being approved to perform the test (certified after 5/1/18).

Equipment necessary for testing:

- Required Test Components: Pullorum Plate Antigen; positive and negative control sera; test samples (never frozen); a glass plate or mirror marked in squares of ~1-1.5in (~25-40mm); bleeding needle, blood loop (standardized), method of disinfecting, rinsing, and drying loop and needle, and a device to hold birds individually while waiting for the test results.
- Official leg bands, available from your PDA regional office.
- 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).

Test Procedure:

1. The antigen must be used according to the directions of the antigen manufacturer. Allow all components (solid plate, antigen, control sera, and test sera) to warm to room temperature before use. Ensure the antigen has not passed the expiration date.
2. Shake the antigen well for 15 to 20 seconds.
3. It is advisable to test known positive and negative control sera before testing bird samples. Use separate pipettes for administering all controls and samples.
4. To conduct the testing of samples:
 - a. A drop of antigen is placed on the testing plate.
 - b. A loopful of blood is taken up from the wing vein after the vein has been lanced. When submerged in the blood and then carefully withdrawn, the loop becomes properly filled. On looking down edgewise at the filled loop, one observes that the blood appears to bulge.
 - c. The loopful of blood is stirred into the drop of antigen, and the mixture spread to a diameter of about 1 inch.
 - d. The test plate is rocked from side to side a few times to mix the antigen and blood thoroughly, and to facilitate agglutination. Be sure to keep each mixture within a single square.
5. Incubate at room temperature for 2 minutes.
6. The plate may be rotated by hand during incubation. Gently rotate the plate for a few seconds. Let stand. After 1 minute, the plate may be rotated again and allowed to stand.
7. The reaction is read at the end of the 2-minute incubation period. A positive reaction shows formation of discrete clumps of stained material, normally starting at the edge of the mixture. Negative reactions show little to no change in the opaque serum-antigen mixture.
8. The loop is rinsed in clean water and dried by touching it to a piece of clean blotting paper to avoid contamination of the next sample.
9. Send a completed NPIP 9-2 form or PDA equivalent form (for non-NPIP flocks) 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.
- Reactions which occur after 2 minutes should not be considered positive.
- Negative reactions show little to no change in the opaque serum antigen mixture.
- Biological reactions may vary between clear-cut positive and negative.

Precautions:

- Avoid exposing hands, eyes or clothing to the antigen. It is recommended that the test be conducted out of direct sunlight, where there is a minimum amount of dust. For product or technical information, please call Charles River Customer Service at 1-860-889-1389.
- FOR VETERINARY USE ONLY – CONTAINS FORMALDEHYDE AS A PRESERVATIVE.

Packaging: Antigen is packaged in a glass vial with a separate dropper tip. The dropper is calibrated to deliver 0.04ml of antigen per drop (one test). The antigen should be stored in the dark at 2 to 7°C (35-45°F). **DO NOT FREEZE.**

Follow all label directions for storage and handling.

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.
- **Do not use antigen which is past the expiration date.**
- Excessive evaporation, high temperatures, or incorrectly interpreting late powder or marginal flocculation 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:

1. NPIP Program Standard A (2019)
2. Charles River Laboratories, Inc.
251 Ballardvale Street
Wilmington, MA 01887 U.S.A.
860-889-1389
(other vendors may be available)

***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 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.**

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
 - If not using a fresh needle for each bird (recommended), saline and jar for cleaning needles between birds
 - Official PDA leg bands and pliers - Official leg bands must be obtained from your PDA regional office.

- *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.**

- *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 a day, for each visit wear clean outerwear, including boots, and wash your vehicle between premises, especially if you drove through poultry or manure areas.
- NEVER visit a commercial poultry flock the same day you have been in contact with another flock unless these commercial flocks are under the same management and the management allows it.

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 hat which can be cleaned and disinfected.
- Put on disposable gloves (optional) or sanitize hands.
- Face shields, eyewear, 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.
- If you have parked near the poultry or manure areas, or there is known disease in the flock, scrub vehicle tires with a brush to remove organic material and spray the tires with disinfectant before leaving the premises, and wash your vehicle 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.

Biosecurity Programs and Plans for Poultry Farms

In the aftermath of the HPAI outbreak in 2014/2015, investigators with USDA reported that although wild birds may have introduced AI initially, infection was spread from flock to flock predominately by people and equipment. USDA now requires that poultry farms affected by AI must have a biosecurity plan in place, and be following that plan, to be eligible for the maximum amount of indemnity and compensation. Commercial flocks meeting the minimum size requirement enrolled in the National Poultry Improvement Plan (NPIP) should have an effective biosecurity program and plan in place. All NPIP participants in PA, regardless of flock size, must address biosecurity to have a successful NPIP inspection. An effective plan will be required for issuance of a permit for any flock to move product if a flock is located in a quarantined area. The National Poultry Improvement Plan (Program Standard E) outlines the major elements for an acceptable biosecurity plan (see below):

1. **Biosecurity Coordinator:**

The Biosecurity Coordinator is responsible for the development, implementation, maintenance and ongoing effectiveness of the biosecurity program. Depending on the type and size of poultry operation, the Biosecurity Coordinator's responsibility could be at the farm, production site, production complex, or company level. The Biosecurity Coordinator should be knowledgeable in the principles of biosecurity.

The Biosecurity Coordinator, along with the personnel and caretakers on the farms and production sites are responsible for the implementation of the biosecurity program. The Biosecurity Coordinator should review the biosecurity program at least once during each calendar year and make revisions as necessary. The Biosecurity Coordinator should be identified and recorded on the plan. This means a name, signature, date and time that the coordinator on the farm was made responsible for the farm plan.

2. **Training:**

The biosecurity program should include training materials that cover both farm site- specific procedures as well as premises-wide and/or company-wide procedures as appropriate. All poultry owners and caretakers that regularly enter the perimeter buffer area (PBA) must complete this training. The training should be done at least once per calendar year and documented in a training log. New poultry caretakers should be trained at hire. Training logs should be retained for 3 years (or as per 9CFR (NPIP Provisions)).

3. **Lines of Separation on buildings with required sanitation (LOS):**

The Line of Separation (LOS) is a functional line separating the poultry house(s) and the poultry inside from exposure to potential disease sources. Generally, it is defined by the walls of the poultry building with practical deviations to account for entry points, structural aspects, or outside access areas. The site-specific biosecurity plan should describe or illustrate the boundaries of the LOS and clearly outline the procedures to be followed when caretakers, visitors, or suppliers cross it. A LOS at the entrances can be marked by having a line at the doors where certain sanitation steps would

be required-this could include something as simple as putting on personal protective equipment (PPE) or washing and disinfecting boots before entering. Dedicated footwear for poultry areas is recommended.

For poultry enclosed in outdoor pens, similar principles for the LOS can be applied for defining and controlling the LOS for each pen. In this circumstance, the walls of the outdoor pens would provide a template for defining the LOS to be used when entering or exiting the pens.

For poultry with non-enclosed outdoor access, the LOS is still recommended. In an emergency disease state where the transmissible disease risk is heightened, it may be required to enclose all poultry and enforce a LOS.

4. Perimeter Buffer Area (PBA):

The perimeter buffer area is a functional zone surrounding the poultry houses or poultry raising area that separates them from areas unrelated to poultry production on that site and/or adjoining properties. It is comprised of the poultry houses and poultry raising areas as well as nearby structures and high traffic areas involved in the daily function of the poultry farm. This would usually include but not be limited to such things as feed bins, manure sheds, composting areas, egg rooms, generators, pump rooms, etc. The site-specific biosecurity plan should describe or illustrate the boundaries of the PBA and clearly outline the procedures that caretakers, visitors, or suppliers must follow when entering and leaving the PBA. This would be setback distances from poultry buildings to help reduce fomite transmission by people or equipment. The PBA may also be called hot/cold zones.

5. Personnel:

The biosecurity program and/or the site-specific biosecurity plan should include provisions specifically addressing procedures and biosecurity PPE for site- dedicated personnel. The plan should likewise address the procedures and biosecurity PPE for non-farm personnel. The plan should also specify procedures which all personnel having had recent contact with other poultry or avian species should follow before re-entering the PBA.

6. Wild Birds, Rodents, Insects, and other animals:

Poultry operations should have control measures to prevent contact with and protect poultry from wild birds, their feces and their feathers as appropriate to the production system. These procedures should be reviewed further during periods of heightened risks of disease transmission. Control programs for rodents and insects should be in place and documented. Pets and livestock should not be allowed in the poultry areas.

7. Equipment and Vehicles:

The biosecurity plan should include provisions for procedures for cleaning, disinfection, or restriction of sharing of equipment where applicable. Vehicle access and traffic patterns should be defined in the site-specific biosecurity plan.

8. Mortality Disposal:

Mortality should be collected daily, stored and disposed of in a manner that does not attract wild birds, rodents, insects, and other animals and minimizes the potential for cross-contamination from other facilities or between premises. It is recommended that dead bird disposal be on-site, if possible. Mortality disposal should be described in the site-specific biosecurity plan.

9. Manure and Litter Management:

Manure and spent litter should be removed, stored and disposed of in a manner to prevent exposure of susceptible poultry to disease agents. On-site litter and manure storage should limit attraction of wild birds, rodents, insects, and other animals.

10. Replacement Poultry:

Replacement poultry should be sourced from health-monitored flocks which are in compliance with NPIP guidelines. They should be transported in equipment and vehicles that are regularly cleaned, disinfected and inspected. Biosecurity protocols should be in place for equipment and personnel involved in the transport of replacement poultry.

11. Water Supplies:

It is recommended that drinking water or water used for evaporative cooling be sourced from a contained supply such as a well or municipal system. If drinking water comes from a surface water source, water treatment must be used to reduce the level of disease agents. If surfaces have been cleaned or flushed with surface water, subsequent disinfection should be employed to prevent disease transmission. If water treatment is not possible, a risk analysis should be performed to determine actions needed to mitigate risks.

12. Feed and Replacement Litter:

Feed, feed ingredients, bedding, and litter should be delivered, stored and maintained in a manner that limits exposure to and contamination by wild birds, rodents, insects, and other animals. Feed spills within the PBA (outside of the LOS) should be cleaned up and disposed of in a timely fashion.

13. Reporting of Elevated Morbidity and Mortality

Elevation in morbidity and/or mortality above expected levels, as defined by the biosecurity plan, should be reported as required in the site-specific biosecurity plan and appropriate actions should be taken to rule out reportable disease agents (dangerous transmissible diseases).

If you need assistance when creating your plan, please contact your regional PDA veterinarian.

Biosecurity Plan Line of Separation and Perimeter Buffer Area Example

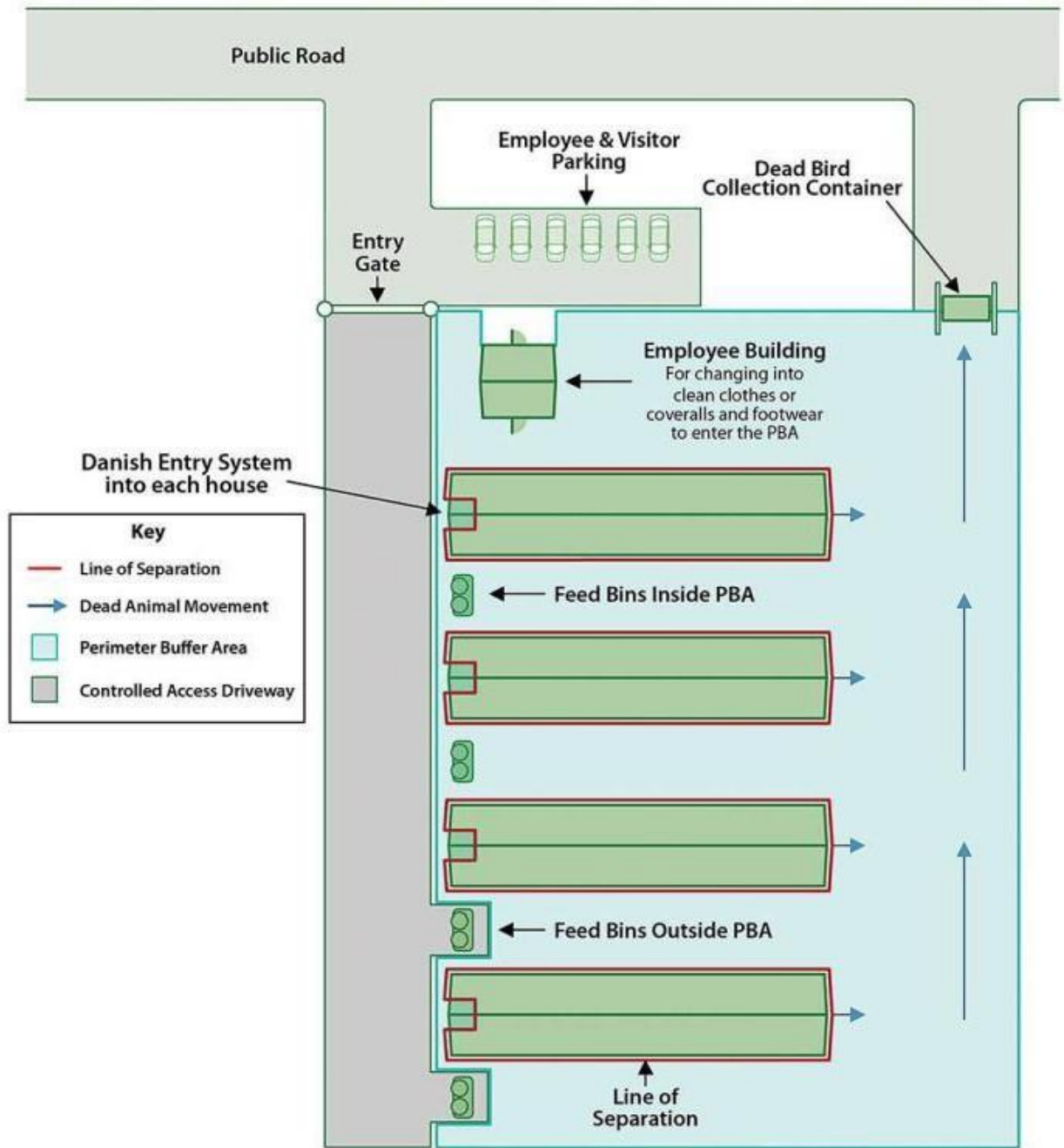


Figure courtesy of the Center for Food Security and Public Health, Iowa State University

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:

Email:

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**

Return Form to: Bureau of Animal Health & Diagnostic Services
2301 N. Cameron St. | Harrisburg, PA 17110-9408 | Ste. 412 | 717.772.2852 | www.agriculture.pa.gov

**SECTION VIII: PA AI MONITORED
FLOCK PROGRAM FOR LIVE BIRD
MARKET PRODUCTION FLOCKS**

Pennsylvania Department of Agriculture

Avian Influenza Monitored Flock Program

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 as needed; 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 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, AND
 - c. The previous monitored flock number will be made inactive and may not be used on submission forms or other paperwork until it has been re-activated after three months of negative 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.
9. ***Any monitored flock with a non-negative test for AI (confirmed at NVSL) must start over with three negative qualifying tests (new- 2017).*** *(Regarding serum testing: If NVSL reports a non-negative AGID, but negative HI, the flock is considered to be negative and does not have to restart).*

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 may be useful and should be placed at outside entries to the poultry house and egg room. Change the disinfectant in the foot baths daily. Foot baths do not replace clean, designated footwear for wearing in poultry areas.
- 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 (refer to the National Poultry Improvement Plan Program Standard E).
- 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 QUARANTINE ORDERS

NOTICES

DEPARTMENT OF AGRICULTURE

Interstate/International Quarantine Order; Avian Influenza

Recitals.

[49 Pa.B. 3630]

[Saturday, July 13, 2019]

- 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(a)(6).
- 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 subtypes H5 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. All poultry and hatching eggs of poultry entering PA must come from a flock meeting the testing requirements outlined in this order and the testing requirements for Pullorum-typhoid and other Dangerous Transmissible Diseases as required under PDA's regulations at Title 7 of the *Pennsylvania Code* (accessible through the following web site address: www.pacode.com) and under the Domestic Animal Law (3 Pa.C.S. §§ 2301—2389), at 3 Pa.C.S. § 2321(d) including all applicable Orders of Quarantine (accessible through the following website address: www.agriculture.pa.gov).
- A flock shall consist of birds which have been together without untested additions for 21 days.
- I. 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.
- J. Any person accepting poultry or hatching eggs in violation of the testing and records provisions of this Order is in violation of this Order.
- K. 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, March 16, 2009, July 1, 2012, and a revised January 5, 2013 Interstate/International Quarantine Order to supplant and rescind its initial Order.

L. PDA has again determined the need to refine the conditions of quarantine. Specifically, PDA seeks to further clarify the requirements for testing and documentation applicable to importation of poultry and hatching eggs of poultry into Pennsylvania.

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 and other avian species 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 (domesticated fowl such as pheasants, partridge, quail, grouse, and guineas, but not 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 and hatching eggs of poultry shall only be allowed into the Commonwealth under one of the following circumstances:

a. The poultry and hatching eggs of 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/H7 Avian Influenza Clean" program and the shipment is accompanied by a USDA form 9-3 form (Report of Sales of Hatching Eggs, Chicks, or Poults) or equivalent form. If poultry or hatching eggs are shipped in containers through the United States Postal Service (USPS), Federal Express, United Parcel Service (UPS), or by any other courier, the 9-3 (or equivalent) form must be affixed to the outside of the container and must be clearly visible and legible; or

b. The poultry and hatching eggs of 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 by a National Animal Health Laboratory Network (NAHLN) laboratory. For gallinaceous birds such as chickens, turkeys, ostriches, emus, rheas, cassowaries, and game birds, serology is permitted OR virus isolation or real-time reverse-transcriptase polymerase chain reaction (RRT-PCR) testing of oropharyngeal or tracheal swab samples shall be performed. RRT-PCR testing of cloacal swab samples is accepted for testing of domestic waterfowl species such as ducks and geese, as specified by the National Veterinary Services Laboratory. For non-domesticated waterfowl, virus isolation testing of cloacal swab samples shall be performed. The date of sample collection must be within the thirty (30) days prior to the date of entry into Pennsylvania. If there are fewer than thirty (30) birds in the flock, all birds of age must be tested as described above for that bird type. Samples must be collected by a USDA Category II Accredited Veterinarian, a Certified Poultry Technician, or a State or Federal official or their designees. No untested poultry shall have been added to the flock after sample collection and before entry into Pennsylvania.

c. All poultry and hatching eggs of poultry being imported into Pennsylvania which are not being moved on a NPIP 9-3 (or equivalent) form must be accompanied by an Owner Endorsed Avian Interstate/International Health Statement, or a Certificate of Veterinary Inspection (CVI) issued by a USDA Category II Accredited Veterinarian. The testing laboratory name, test accession number(s), and a statement indicating negative test results must be included on the statement or CVI. If poultry or hatching

eggs are shipped in containers through the United States Postal Service (USPS), Federal Express, United Parcel Service (UPS), or by any other courier, a copy of the Owner Endorsed Avian Interstate/International Health Statement or CVI must be affixed to the outside of the container and must be clearly visible and legible. A copy of the Owner Endorsed Avian Interstate/International Health Statement or CVI and the laboratory test report including negative test results must also be sent to PDA within the seven (7) days after the date of shipment.

d. If a flock is serologically positive, poultry and hatching eggs 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. This test must be performed by an approved NAHLN laboratory. A minimum of one hundred and fifty (150) birds from the flock must be tested. If there are fewer than 150 birds in the flock, all birds of age must be tested by the approved test described for that bird type. For gallinaceous birds such as chickens, turkeys, ostriches, emus, rheas, cassowaries, and game birds, virus isolation or RRT-PCR testing of oropharyngeal or tracheal specimens shall be performed. RRT-PCR testing of cloacal swab samples is accepted for testing of domestic waterfowl species, such as ducks and geese, as specified by the National Veterinary Services Laboratory. For non-domesticated waterfowl, virus isolation testing of cloacal swabs shall be performed. The date of sample collection must be within the thirty (30) days prior to the date of entry into Pennsylvania. Samples must be collected by a USDA Category II Accredited Veterinarian, a Certified Poultry Technician, or a State or Federal official or their designees. No untested poultry shall have been added to the flock after sample collection and before entry into Pennsylvania.

3. Poultry three (3) weeks of age and older and hatching eggs of poultry, imported into the Commonwealth, shall meet all other import requirements required under PDA's regulations at Title 7 of the *Pennsylvania Code* (accessible through the following web site address: www.pacode.com) and under the Domestic Animal Law (3 Pa.C.S. §§ 2301—2389, at 3 Pa.C.S. § 2321(d)) including all applicable Orders of Quarantine (accessible through the following website address: www.agriculture.pa.gov).

4. Chickens, turkeys, ostriches, emus, rheas, cassowaries, game birds, other gallinaceous birds, domestic waterfowl and other water birds (swimming or wading birds) three (3) weeks of age and older which are destined to be pet birds (non- agricultural purposes) or destined to be part of a zoological or menagerie collection and their hatching eggs, and non-domesticated birds destined for domestication, confinement, or intended for release shall only be allowed into the Commonwealth under one of the following circumstances:

a. The birds and hatching eggs originate from a flock in which a minimum of thirty (30) birds (or the entire flock if it consists of fewer than 30 birds), three (3) weeks of age or older, were tested negative for avian influenza by virus detection testing. Alternatively, these birds may be tested individually for import (no flock of origin test requirement). Samples must be collected by a USDA Category II Accredited Veterinarian, a Certified Poultry Technician, or a State or Federal official or their designees. The test shall be performed by an approved NAHLN laboratory.

b. RRT-PCR testing or virus isolation testing for avian influenza is accepted for testing of chickens, turkeys, ostriches, emus, rheas, cassowaries, game birds, other gallinaceous birds, and domestic waterfowl species such as ducks and geese as specified by the National Veterinary Services Laboratory. For non-domesticated water birds (swimming or wading birds), virus isolation testing of cloacal swabs shall be performed. The date of sample collection must be within the thirty (30) days prior to the date of entry into Pennsylvania. Hatching eggs may originate from individually tested birds or from a flock tested as required by this Order.

c. These birds and hatching eggs must be accompanied by an Owner Endorsed Avian Interstate/International Health Statement, or a Certificate of Veterinary Inspection (CVI) issued by a USDA Category II Accredited Veterinarian. The testing laboratory name, test accession number(s), and a statement indicating negative test results must be included on the statement or CVI. A copy of the Owner Endorsed Avian Interstate/International Health Statement or CVI and the laboratory test report including negative test results must also be sent to PDA within the seven (7) days after the date of shipment. If any birds or hatching eggs are shipped in containers through the USPS, Federal Express, United Parcel Service, or by any other courier, the Owner Endorsed Avian Interstate/International Health Statement or CVI must be affixed to the outside of the container and must be clearly visible and legible.

5. Chickens, turkeys, ostriches, emus, rheas, cassowaries, game birds, other gallinaceous birds, domestic waterfowl and non-domesticated water birds (swimming or wading birds) three (3) weeks of age and older which are destined to be pet birds (non-agricultural purposes) or destined to be part of a zoological or menagerie collection and their hatching eggs; and all non-domesticated birds three (3) weeks of age and older and hatching eggs destined for domestication, confinement, or intended for release shall meet all other import requirements required under PDA's regulations at Title 7 of the *Pennsylvania Code* (accessible through the following web site address: www.pacode.com) and under the Domestic Animal Law (3 Pa.C.S. §§ 2301—2389), at 3 Pa.C.S. § 2321(d)) including all applicable Orders of Quarantine (accessible through the following website address: www.agriculture.pa.gov).

6. All other imported avian species, including pet psittacine and passerine birds and hatching eggs, must be accompanied by an Owner Endorsed Avian Interstate/International Health Statement, or a Certificate of Veterinary Inspection (CVI) issued by a USDA Category II Accredited Veterinarian. A copy of the Owner Endorsed Avian Interstate/International Health Statement or CVI must also be sent to PDA within the seven (7) days after the date of shipment. If birds or hatching eggs are shipped in containers through the USPS, Federal Express, United Parcel Service, or by any other courier, the Owner Endorsed Avian Interstate/International Health Statement or CVI must be affixed to the outside of the container and must be clearly visible and legible. Avian influenza testing is not required for these types of birds or hatching eggs.

7. 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.

8. This Order is effective upon publication in the *Pennsylvania Bulletin*, and supplants the referenced Interstate/International Quarantine Order of January 5, 2013.

RUSSELL C. REDDING,
Secretary

[Pa.B. Doc. No. 19-1056. Filed for public inspection July 12, 2019, 9:00 a.m.]

NOTICES

DEPARTMENT OF AGRICULTURE

General Quarantine Order; Certified Poultry Technicians

[49 Pa.B. 3088]

[Saturday, June 15, 2019]

Recitals.

A. Avian influenza, Chlamydiosis (psittacosis), Chronic respiratory disease of poultry caused by *Mycoplasma synoviae* or *Mycoplasma gallisepticum*, Duck viral enteritis, Newcastle Disease, *Salmonella pullorum*, and *Salmonella gallinarum* are designated "dangerous transmissible diseases" 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).

B. The Pennsylvania Department of Agriculture (Department), under the edicts established by section 2327 of the Domestic Animal Law (3 Pa.C.S.A. § 2327) (related to disease surveillance and detection) has the authority and duty to carry out disease surveillance and detection and more specifically to regularly monitor the domestic animal population of this Commonwealth to determine the prevalence and incidence of transmissible diseases or contamination by hazardous substances.

C. The Department, under the provisions set forth at section 2329 of the Domestic Animal Law (3 Pa.C.S.A. § 2329) (related to quarantine) has the authority to establish three different types of quarantine orders—Interstate and International, General and Special. The Department may establish a Quarantine Order, "Whenever a dangerous transmissible disease. . . exists anywhere within or outside of this Commonwealth, or whenever it is deemed advisable to test or treat any domestic animal upon the reasonable suspicion that it has contracted or been exposed to a dangerous transmissible disease. . . or whenever the testing or treatment of a domestic animal indicates that the domestic animal has been exposed to a dangerous transmissible disease. . . so as to render future accurate testing for recent exposure of that domestic animal to that dangerous transmissible disease. . . impractical or impossible, the department shall have the power to establish and enforce quarantines of any such infected, exposed, contaminated, suspected or susceptible domestic animal." (3 Pa.C.S.A. § 2329(a))

D. The Department may establish and enforce a general quarantine order within the Commonwealth for any reason set forth paragraph C above, ". . . to prevent a dangerous transmissible disease. . . from being carried into, within, from or out of the area or locality that is subject to the quarantine. . . "

E. Section 2321(related to dangerous transmissible diseases) of the Domestic Animal Law sets forth, at subsection (a), dangerous transmissible diseases (3 Pa.C.S.A. § 2321(a)). Section 2321(d) (related to designation of additional dangerous transmissible diseases through temporary order) allows the Department to designate additional transmissible diseases determined to, ". . . present a danger to public health, to domestic animal health, to the safety or quality of the food supply or to the economic well-being of the domestic animal industries. . . " as dangerous transmissible diseases through the issuance of a temporary order (3 Pa.C.S.A. § 2321(d)).

F. The dangerous transmissible diseases listed at section 2321(a) of the Domestic Animal Law and those designated by the Department through a temporary order are known to exist within or outside of this Commonwealth and have been determined to pose a danger to public health, domestic animal health, the safety or quality of the food supply or to the economic well-being of the domestic animal industries.

G. The Act of April 6, 1956, P.L. (1955) 1429, at section 1, (Pullorum Act) provides that "The Secretary of Agriculture, when he determines that there is a need for trained technicians to aid in drawing blood from poultry to be used in pullorum testing programs, may license as many trained technicians as he deems necessary to aid the programs."

H. The Department developed and has administered such licensing and training programs.

I. As dangerous transmissible diseases other than pullorum have been identified, and additional regulatory poultry health programs have been implemented by the Department, other states and the United States Department of Agriculture (USDA), it has become necessary for the Department to train poultry technicians with regard to sampling and testing techniques necessary to detect and surveil for those additional diseases.

J. Avian influenza and other dangerous transmissible diseases of poultry are of concern to the entire Pennsylvania poultry industry and may severely limit the market for Pennsylvania poultry products or cause production losses or death in poultry flocks within and outside of the Commonwealth if not detected and controlled.

K. Avian influenza, in particular, has caused significant loss in the past to the Pennsylvania poultry industry and to the poultry industry in other states and as a whole.

L. Regulatory poultry health programs exist through the Pennsylvania Department of Agriculture and through the USDA National Poultry Improvement Plan (NPIP) to provide disease surveillance, promote healthy poultry and a healthy food supply, and to support interstate and international commerce.

M. Regulatory surveillance for movement of poultry not participating in official poultry health programs may be required for intrastate, interstate, and international commerce, and for entry into exhibitions or markets.

N. The following Order establishes testing and training requirements necessary for Certification and Licensing of Poultry Technicians.

O. Only persons certified and licensed in accordance with the provisions set forth in this Order may draw blood, collect swab and egg samples, and conduct approved on-site testing of poultry for dangerous transmissible diseases of poultry for regulatory testing purposes.

Order.

PDA enters a General 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 and standards with respect to training and testing of persons to become licensed as Certified Poultry Technicians and provides standards for the collection of samples for testing and rapid testing for regulatory purposes other than the detection of pullorum disease in poultry.

1. *General.* 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, which are bred for the primary purpose of producing eggs or meat, or as otherwise defined under subpart A of the current version of the National Poultry Improvement Plan (NPIP) and Auxiliary Provisions.

2. *Purpose.* This Order allows for qualified persons to become licensed as Certified Poultry Technicians to carry out certain sampling and testing procedures, in addition to testing and sampling for pullorum disease under the Pullorum Act, and thereby further fulfill the Department's duty to surveil for dangerous transmissible diseases in accordance with the Domestic Animal Law. This Order allows for a more proactive and preventative approach to current and future dangerous transmissible diseases and hazardous substances through surveillance, monitoring, and testing by the poultry industry. Such an approach furthers the legislative mandate of section 2327 of the Domestic Animal Law¹ (related to disease surveillance and detection) and provides greater protection to the poultry population and industry in this Commonwealth. This Order delineates education and testing criteria that will allow for and require the certification and licensure of private sector individuals to carry out domestic poultry sampling and rapid testing and thereby enhance monitoring, detection, and containment of dangerous transmissible diseases of poultry and contamination by hazardous substances.

3. *Scope of certification and licensure.* This Order allows persons licensed as Certified Poultry Technicians in the Commonwealth of Pennsylvania to perform the duties of a Certified Poultry Technician only within the Commonwealth of Pennsylvania, unless under a reciprocal agreement addressing license reciprocity between the Commonwealth of Pennsylvania and another state or Commonwealth. Final certification shall be obtained and the certificate issued prior to any person undertaking any testing, sampling or other activity requiring certification and licensure under this Order.

4. *Qualifications for certification and licensure.*

(a) Nothing in this Order may or shall supplant the provisions of the Veterinary Medical Practice Act² or its attendant regulations regarding the practice of veterinarian medicine. Persons licensed as Certified Poultry Technicians may only carry out those testing and diagnostic practices that would not rise to the level of veterinary medical practice as defined under the Veterinary Medicine Practice Act.

(b) Applicants for licensure as a Certified Poultry Technician shall furnish such information as the Department may reasonably require in order to ascertain competence and qualification, including at a minimum the following information and evidence thereof:

(i) That he or she is at least eighteen (18) years of age;

(ii) That he or she is a citizen of the United States;

(iii) That he or she has completed at least eight years of education in a public, parochial, or private school, or its equivalent as determined by the Pennsylvania Department of Education; and

(iv) An attestation related to whether he or she has ever been convicted of a violation of the Domestic Animal Law, a felony or a cruelty to animals charge under the Pennsylvania Crimes Code within the time periods established in subsection (c) below.

(c) An application for certification and licensure as a Certified Poultry Technician, including an application for renewal of license, shall be denied if the applicant has done any of the following:

(i) Has been convicted, within the previous three years, of any provision of the Domestic Animal Law (3 Pa.C.S.A. § 2301 et seq.), the Act of April 6, 1956, P.L. (1955) 1429 (Pullorum Act) or any regulation promulgated or order issued thereunder by the Department.

(ii) Within the previous ten years the applicant has been convicted of a felony.

(iii) Within the previous three years, the applicant has been convicted of any violation, other than a felony conviction which shall be treated as set forth in subparagraph (b)(ii) above, of 18 Pa.C.S.A § 5511 (related to cruelty to animals) or of substantially similar conduct pursuant to a cruelty law in another state or Commonwealth.

(d) Persons licensed by the Department as Certified Poultry Technicians under authority of the Act of April 6, 1956 (P.L. 1429, No. 466), may continue to carry out the duties and functions bestowed upon them under that statute until such time as that license has expired or been revoked in accordance with the provisions of that statute.

(e) Upon expiration of a Certified Poultry Technician license issued under the Act of April 6, 1956 (P.L. 1429, No. 466), the person shall obtain the certification and licensure required by this Order. Failure to do so shall mean the person may no longer perform the duties and functions of a Certified Poultry Technician.

5. *Application for certification and licensure.*

(a) A completed Certified Poultry Technician License Application shall be submitted to the Department for review before acceptance into the certification and training course.

(b) An applicant for Certified Poultry Technician certification and licensure shall complete the required and appropriate certification course and training, including passing a written examination, and subsequent field skills testing, administered or approved by the Department. Field skills testing must be successfully completed within six months after the classroom course and examination has been successfully completed.

(c) After successful completion of the field skills testing, submission of the form evidencing successful completion of the field skills testing to the Department shall be required within thirty (30) days after the date of the testing. Upon receipt of the completed field skills testing form, the Department will mail or email the license to the approved applicant. The applicant may then begin performing the duties of a Certified Poultry Technician.

6. *Renewal application for licensure.*

(a) Licensure shall expire on a biennial calendar year basis and shall be postmarked prior to January 1 of the year following the expiration of the license.

(b) Failure of a licensed Certified Poultry Technician to submit a license renewal

application postmarked prior to January 1 of the year in which renewal is due will result in the following:

- (i) The person will be unlicensed to practice as a Certified Poultry Technician.
- (ii) The person may not continue to act or hold themselves out as a licensed Certified Poultry Technician.
- (iii) Continuing to act or hold oneself out as a licensed Certified Poultry Technician shall be a violation of this Order and shall subject the person to the penalties provided for at sections 2383 (related to enforcement and penalties) and 2386 (related to civil remedy) of the Domestic Animal Law (3 Pa.C.S.A. §§ 2383 and 2386).
- (iv) The person shall be required to successfully complete the written examination at a Department office, and, at the Department's discretion, may be required to complete the entire certification course, examinations and training as established in Sections nine (9) and 10 of this Order prior to the Department issuing a license.

7. *Duties and Limitations.*

(a) Any person licensed as a Certified Poultry technician may engage in carrying out the duties and procedures within the scope of their certification and licensure as outlined under the provisions of this Order.

(b) A licensed Certified Poultry Technician may carry out the following:

- (i) The collection of blood, swab, and egg samples of sufficient quantity and quality for regulatory testing from poultry in accordance with applicable statutory and regulatory standards, and orders of the Department;
- (ii) Performance of rapid tests for regulatory testing as approved by the Department and in accordance with applicable statutory and regulatory standards, and orders of the Department;
- (iii) Handling, packaging, labeling, and timely submission of samples in accordance with applicable statutory and regulatory standards, and orders of the Department; Completion of sample submission forms and all other forms required by the Department or USDA;
- (iv) Application of official animal identification as approved by the Department.
- (v) Maintenance of records of animal identification, approved rapid testing, and any other records required by the Domestic Animal Law, this Order, and any order issued by the Department;
- (vi) Timely reporting of any suspected reportable diseases in accordance with applicable statutory and regulatory standards, and orders of the Department; and
- (vii) Sampling and testing to meet Commonwealth of Pennsylvania and federal avian program standards and Commonwealth exhibition standards.

(c) Being licensed as a Certified Poultry Technician shall not entitle the person to perform any function for which a veterinary license or certification as a veterinary technician is required.

(d) *Ongoing oversight.* The Department may observe any Certified Poultry Technician performing the duties of a Certified Poultry Technician to assure compliance with the provisions of the Domestic Animal Law and this Order, and to assure proper procedures and protocols are being instituted and followed, and may conduct sampling and testing of its own to verify and assure the accuracy of the sampling and testing being conducted by a Certified Poultry Technician.

8. *Certification Requirements.*

(a) *General.* The Department will develop the Poultry Technician certification course in accordance with the standards established in Sections nine (9) and 10 of this Order. The Department may administer the course or may approve certification courses offered by an approved vendor. All certification courses shall be conducted by either a Department veterinarian or a designee of the Department with the oversight of a Department veterinarian.

(b) *Access to Training.* The classroom portion of the certification course and examination will be offered at least once per calendar year, or more often as deemed necessary by the Department, and will be offered at various locations across the Commonwealth in a manner that will assure reasonable Commonwealth-wide coverage and access.

(c) *Criteria.* The following establish the criteria related to certification and maintaining certification under this Order:

- (i) A person seeking to act as a Certified Poultry Technician shall complete the necessary certification course work, field skill training, and evaluation, which shall include classroom instruction and testing and field skill instruction and testing. A person shall be required to obtain a minimum score of seventy percent (70%) on a classroom written examination and have all skills checked as satisfactory on field skills testing.
- (ii) A person acting as a Certified Poultry Technician shall maintain certification and licensure in accordance with the requirements set forth in this Order.
- (iii) A person certified and acting as a Certified Poultry Technician shall conduct such sampling, testing, and other related activities in accordance with the requirements of this Order and any order issued by the Department.
- (iv) A person certified as a Certified Poultry Technician shall maintain records of official animal identification, approved rapid testing, and any other records required by the Domestic Animal Law, this Order, and any order issued by the Department for a minimum of two years and shall make records available upon Department request.

9. *Certification course and training.*

(a) At a minimum, the successful completion of the certification course, training and examinations will demonstrate an applicant's understanding of and technical knowledge and proficiency relating to the duties as described in this Order. The examinations will address key topics and skills addressed during the classroom portion of the certification course and field skills training, as set forth in this Order.

(b) Field skills training will be offered to individual applicants at regional locations chosen by the Department to provide reasonable access, and will be administered by a Department veterinarian or designee with the oversight of a Department veterinarian.

(c) The certification course, training and testing requirements for a Certified Poultry Technician shall, at a minimum, address proper methods for the following:

- (i) The collection of blood, swab, and egg samples of sufficient quantity and quality for regulatory testing from poultry in accordance with applicable Pennsylvania and federal statutory and regulatory standards, Quarantine Orders of the Department and federal National Poultry Improvement Plan standards.
- (ii) Performance of rapid tests for regulatory testing as approved by the Department and in accordance with applicable Pennsylvania and federal statutory and regulatory standards, Quarantine Orders of the Department and federal National Poultry Improvement Program standards.
- (iii) Handling, packaging, labeling, and timely submission of samples and sample submission forms in accordance with Pennsylvania statutory and regulatory standards and Quarantine Order provisions.
- (iv) Comprehensive, timely and accurate completion of sample submission forms and all other forms required by the Department or USDA.
- (v) Requirements for official animal identification and application of such.
- (vi) Maintenance of records of official animal identification, approved rapid testing, and any other records required by the Domestic Animal Law, its attendant regulations, this Order, and any Quarantine Order issued by the Department.
- (vii) Timely reporting of any suspected reportable diseases in accordance with applicable Domestic Animal Law statutory and regulatory standards, Quarantine Orders of the Department and statutory, regulatory and program standards, such as National Poultry Improvement Program standards established by the USDA.
- (viii) Knowledge of and adherence to requirements for sampling and testing to meet Pennsylvania and federal statutory and regulatory standards, Quarantine Orders of the Department and federal National Poultry Improvement Program standards.
- (ix) Understanding of and adherence to Pennsylvania and federal statutory, and regulatory standards and federal program standards and indemnity requirements related to biosecurity measures and practices.

Certification Examination.

(a) *Results.* The Department will notify the applicant of the results of the written examination and field skills test.

(b) *Written examination.*

- (i) If the applicant passes the written examination, the applicant may schedule field skills

testing with the Department's regional veterinarian located in the region in which the applicant resides.

- (ii) If the applicant fails the written examination the applicant shall be allowed to take the next available written examination offered within one year from the date of the failed examination without repeating the classroom portion of the training.
- (iii) If the applicant fails the written examination for a second time the applicant shall be denied certification and the applicant shall be required to again complete all of the necessary certification course training, pass the written examination and field skills testing, and obtain final certification under the provisions of this Order.
- (iv) An applicant who has failed the written examination may request a copy of the results via by email or fax or by sending a written request, along with a self-addressed postage paid envelope, to the Department.

(c) *Field skills testing.*

- (i) If the applicant passes the field skills testing, the Department instructor who evaluated the applicant will notify the applicant of the results.
- (ii) In order to obtain certification, the applicant must remit a copy of the field skills testing form, signed by the instructor, to the Department's Harrisburg office. This submission shall be required within thirty (30) days after the date of the field skills testing.
- (iii) If the applicant fails the field skills testing, the applicant shall be allowed to schedule up to two additional field skills tests within the six months after successfully completing the written examination without repeating the classroom training or written examination.
- (iv) If an applicant fails the field skills testing for a third time, the applicant shall be denied certification and the applicant shall be required to again complete all of the necessary certification course training, pass the written examination and field skills testing, and obtain final certification and licensure under the provisions of this Order.

10. *Recordkeeping.*

(a) *General requirements.* The Department will make available forms on which records of official animal identification, approved rapid testing, and any other records required by the Domestic Animal Law, this Order, and any order issued by the Department shall be recorded. Such forms shall be reviewed during the classroom training and shall be available from the Department for the regulated community.

(b) *Duty to keep and submit records.* A Certified Poultry Technician shall be responsible for keeping records as required by the Department, such as records of official animal identification, records of approved rapid testing performed and results of tests on each animal, and any other records required by the Domestic Animal Law, this Order, and any order issued by the Department. The Certified Poultry Technician shall keep required records for a minimum of two years and shall make records available upon Department request. Such records shall be kept on forms provided by the Department. All required records shall be made available to the Department for inspection or copying or both upon request of the Department.

11. *Duty to report.* Consistent with the purpose of the Domestic Animal Law and the provisions established at section 2327 (related to disease surveillance and detection) (3 Pa.C.S.A. § 2327(b)), a Certified Poultry Technician shall, immediately upon receiving information thereof, report to the Department each case of any dangerous transmissible disease and each case of potential contamination by substances declared hazardous by the Department. Failure to report shall be considered a violation of this Order.

12. *Reciprocity.*

(a) *General:* A person who has a valid certificate or license from another state or Commonwealth may obtain licensure in this Commonwealth if:

(i) The state or Commonwealth in which that person is certified or licensed has a reciprocal agreement with the Department.

(ii) The training requirements in the state or Commonwealth from which the applicant is applying satisfy and are at least as stringent as the required certification and licensing training standards set forth in this Order. The applicant is currently certified or licensed and is in good standing in the state or Commonwealth with which the Department has a reciprocal agreement.

(iii) The applicant meets the qualification standards established in this Order.

(b) *Procedure.* A person desiring a license under sections five (5) and six (6) (relating to application for certification and licensure) shall submit to the Department a properly completed application as set forth in this Order, along with a copy of the person's out-of-State certificate or license and an affidavit or verification of good standing signed by the appropriate regulatory body in that state or Commonwealth.

(c) *Jurisdiction.* An out-of-state person applying for and receiving certification and licensure to act as a Certified Poultry Technician in the Commonwealth of Pennsylvania shall be subject to the Jurisdiction of the Department and this Order and shall be subject to all penalties and requirements established in the Domestic Animal Law and this Order.

(d) A Certified Poultry Technician certified in the Commonwealth of Pennsylvania wishing to perform the duties of a Certified Poultry Technician in another state or Commonwealth may only do so after meeting the application and certification requirements of a state or Commonwealth with which a reciprocity agreement exists.

Violations and Penalties.

(a) *Denial, suspension and revocation of license.* The Department may, after notice, including a statement of the reasons therefore, deny, suspend or revoke the license of a Certified Poultry Technician for any of the following:

(i) A violation of the Domestic Animal Law, this Order or any order issued by the Department.

(ii) Failure of a Certified Poultry Technician to meet the requirements of certification and licensure.

- (iii) Inconsistency and demonstration of a lack of knowledge in the skills and techniques necessary to carry out the duties of a Certified Poultry Technician.
- (iv) Deficiencies in sample collection, sample handling and submission, and testing techniques, procedures, requirements and criteria established by the Department.
- (v) Failure to renew certification and licensure in the established timeframe.
- (vi) Being unwilling or unable to carry out the duties of a Certified Poultry Technician.
- (vii) Falsifying information, including on applications, reports, records or correspondence with the Department.
- (viii) A violation of any requirement of certification and licensure, recordkeeping or other provision of this Order.
- (ix) Denial, suspension or revocation of certification or licensure in a state that has a reciprocal agreement with the Department.
- (x) The Department may impose a civil fine or revoke, suspend or deny, or both, the license of a Certified Poultry Technician for any conviction of the Crimes Code at section 5511 (18 Pa.C.S.A. § 5511) (related to cruelty to animals) or substantially similar conduct pursuant to a cruelty law of another state or Commonwealth and shall revoke the license of a Certified Poultry Technician where such person has been convicted of a felony under any statute in this Commonwealth or another state or Commonwealth.
- (xi) It shall be unlawful for any person to impede, hinder or interfere with the sampling or testing of a domestic animal or to refuse to confine a domestic animal so as to allow testing without undue burden on the official conducting the test or to fail to present the person's domestic animals for testing by the Department under authority of this Order after reasonable notice of the proposed testing has been given.
- (xii) It shall be unlawful for any person who has knowledge that a domestic animal is infected with a dangerous transmissible disease or has been exposed to a dangerous transmissible disease or has been contaminated by a hazardous substance to conceal or attempt to conceal such a domestic animal or knowledge of such a domestic animal from the department.
- (xiii) It shall be unlawful and a certification may be suspended, denied or revoked or civil fines and criminal penalties imposed, or any of the above, if a Certified Poultry Technician has violated any provision of the Domestic Animal Act or a final order of the Department, including failure to pay a civil penalty or comply with the provisions of the final order.

(b) *Appeal and request for a hearing.* An applicant or Certified Poultry Technician may request a hearing, in writing, within fifteen (15) days of receipt of notice of the proposed denial, suspension or revocation of their Certified Poultry Technician license or any proposed civil penalties to be assessed by the Department, as allowed under section 2383(b) of the Domestic Animal Law (3 Pa.C.S.A. § 2383(b)). The written request shall be sent to the Bureau of Animal Health and Diagnostic Services, Agriculture Building, 2301 North Cameron Street, Harrisburg, Pennsylvania 17110. The written request for a hearing must clearly set forth the basis of any appeal, and clearly identify the relevant issues or objections to be resolved. If you deny or

challenge any averment in the Department's proposed order of denial, revocation or suspension, the appeal notice must identify that averment by number and describe the general basis for your denial or challenge. The scope of any subsequent administrative hearings or proceedings would be limited to those issues and objections set forth in the written appeal notice. No suspension, denial or revocation of licensure or civil penalty issued shall become effective until the time to appeal the proposed action has expired and the proposed order has thus become final or, where a hearing is requested, a hearing in the matter has been completed and a final order of the Department has been issued.

(c) *Revocation or suspension.* The Department's decision to deny, revoke or suspend a Certified Poultry Technician's licensure will be based on the gravity of the offense. The Department will consider such factors as the willfulness of the violation, previous violations and whether the person in question has continued to act as a Certified Poultry Technician after licensure was denied, suspended or revoked.

- (i) *Suspended license.* A Certified Poultry Technician whose license has been suspended may not operate until that person has completed the required certification and licensure requirements or any final order issued by the Department, or both.
- (ii) *Denied or Revoked license.* A Certified Poultry Technician whose certification or licensure has been denied or revoked may not operate until the Department has issued a final license. To obtain final certification and licensure, the person whose certification and license has been denied or revoked shall satisfy the full certification and licensing requirements established by this Order and shall have complied with any final order of the Department, including payment of any civil penalties and compliance with any requirements of such final order.

13. *Criminal and civil penalties.* The Department may impose those criminal and civil penalties specifically established at section 2383 of the Domestic Animal Law (3 Pa.C.S.A. § 2383) for any violation of the provisions of this Order.

14. *Civil remedy.* In addition to any other action or remedy sought, the Department may seek any civil remedy, as specifically established at section 2386 of the Domestic Animal Law (3 Pa.C.S.A. § 2386), for any violation of the provisions of this Order.

15. This Order shall not be construed as limiting the Department's authority to establish additional requirements for initial or continued certification of Certified Poultry Technicians or to limit any authority the Department possesses under the Domestic Animal Law or any other Act or Law administered by the Department.

16. This Order is effective upon publication in the *Pennsylvania Bulletin*.

RUSSELL C. REDDING,
Secretary

[Pa.B. Doc. No. 19-894. Filed for public inspection June 14, 2019, 9:00 a.m.]

¹ 3 Pa.C.S.A. § 2327.

² Veterinary Medicine Practice Act (Act of December 27, 1974, P.L. 995, No. 326, as amended) (63 P.S. § 485.1 et seq.).

NOTICES

DEPARTMENT OF AGRICULTURE

General Quarantine Order; Poultry Exhibition Requirements

[49 Pa.B. 3093]

[Saturday, June 15, 2019]

Recitals.

- A. Avian influenza and Pullorum-typhoid are infectious diseases of poultry.
- B. Avian influenza and pullorum-typhoid are designated "dangerous transmissible diseases" 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. Avian influenza can be transmitted between poultry and by contaminated people, vehicles, equipment, and other fomites, as well as by aerosol.
- 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 subtypes H5 and H7 are of particular concern due to their potential for developing into a virulent (highly pathogenic) form of the disease.
- G. Avian influenza is periodically identified in poultry flocks in Pennsylvania and surrounding states.
- H. Salmonella Pullorum-typhoid is a bacterial disease which can produce significant mortality in young gallinaceous (chicken, turkey and game) birds. Birds that survive infection will be lifetime carriers and may be the source of infection of other poultry.
- I. Transmission of pullorum-typhoid is primarily vertically through the egg but may also be through direct or indirect contact with infected birds, and may be carried by fomites.
- J. Pennsylvania is designated as a pullorum-typhoid free state by the National Poultry Improvement Plan.
- K. Avian influenza and Pullorum-typhoid can be transmitted between poultry.
- L. The Pennsylvania Department of Agriculture (Department) requires official identification of poultry entering an exhibition to promote animal disease traceability in the event of a report of a dangerous transmissible disease (47 Pa.B. 1857).

- M. The Department, under the edicts established by section 2327 of the Domestic Animal Law (3 Pa.C.S.A. § 2327) (related to disease surveillance and detection) has the authority and duty to carry out disease surveillance and detection and more specifically to regularly monitor the domestic animal population of this Commonwealth to determine the prevalence and incidence of transmissible diseases or contamination by hazardous substances.
- N. The Department, under the provisions set forth at section 2329 of the Domestic Animal Law (3 Pa.C.S.A. § 2329) (related to quarantine) has the authority to establish three different types of quarantine orders—Interstate and International, General and Special. The Department may establish a Quarantine Order, "Whenever a dangerous transmissible disease. . .exists anywhere within or outside of this Commonwealth, or whenever it is deemed advisable to test or treat any domestic animal upon the reasonable suspicion that it has contracted or been exposed to a dangerous transmissible disease. . .or whenever the testing or treatment of a domestic animal indicates that the domestic animal has been exposed to a dangerous transmissible disease. . .so as to render future accurate testing for recent exposure of that domestic animal to that dangerous transmissible disease. . .impractical or impossible, the department shall have the power to establish and enforce quarantines of any such infected, exposed, contaminated, suspected or susceptible domestic animal." (3 Pa.C.S.A. § 2329(a)).
- O. An exhibition is defined as a show or display of animals.

Order.

PDA enters a General 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 and standards with respect to health requirements for poultry entering Commonwealth of Pennsylvania exhibitions:

1. *General.* For purposes of this Order, the term "poultry" includes all domesticated fowl, including chickens, turkeys, ostriches, emus, rheas, cassowaries, waterfowl, and game birds, but excludes doves, pigeons, and other species of birds.
2. *Purpose.* This Order allows for a proactive and preventative approach to prevention of the spread of dangerous transmissible diseases affecting poultry at Pennsylvania exhibitions.
3. Only veterinarians who are licensed or otherwise legally able to practice veterinary medicine and are USDA Category II Accredited in the state where sampling occurs, or persons certified and licensed as poultry technicians in accordance with the provisions set forth in the Department's General Quarantine Order; Certified Poultry Technicians, may draw blood, collect swab and egg samples, and conduct approved on-site testing of poultry for dangerous transmissible diseases of poultry for regulatory testing purposes, including entry into exhibitions.
4. Sample collectors and testers must maintain records of animal identification, approved rapid testing, and any other records required by the Domestic Animal Law, this Order, and any order issued by the Department for a minimum of two years and must make records available to the Department upon request.

5. Sample collectors and testers must report in a timely manner any suspected reportable diseases in accordance with applicable statutory and regulatory standards, and orders of the Department.
6. All poultry, including chickens, turkeys, waterfowl, and game birds entering an exhibition must bear an official PDA-issued leg band. Ratites must be identified with a neck band or an electronic implant device (the exhibitor must supply a reader). Pigeons, doves, and other avian species must bear a unique individual identification leg band but are not required to be identified with an official PDA leg band.
7. An Owner-endorsed Avian Health Certificate, or a Certificate of Veterinary Inspection (CVI) issued by a USDA Category II Accredited Veterinarian, must accompany all poultry, including chickens, turkeys, waterfowl, game birds, and ratites; pigeons, doves; and other avian species; and hatching eggs entering exhibitions. The Owner-endorsed Avian Health Certificate or CVI will be valid for thirty (30) days and must include the following:
 - a. Name and location of the exhibition; and
 - b. Name, address, and telephone number of the owner; and
 - c. A statement that the entries and the flock of origin are free of evidence of infectious and contagious diseases; and
 - d. Verification of testing as required in this Order; and
 - e. A description of the birds or hatching eggs; and
 - f. Owner signature and date of that signature.
8. Testing and verification requirements for poultry:
 - a. Avian influenza testing and verification:
 - i. National Animal Health Laboratory Network (NAHLN) protocols for sample collection, including the number of swabs/tube of viral transport media, and testing shall be followed. All samples must be tested at a NAHLN laboratory.
 - ii. All poultry, including chickens, turkeys, waterfowl, game birds, and ratites, and their hatching eggs must originate from a flock in which a random, representative sample of a minimum of 30 birds, three (3) weeks of age or older, were tested for avian influenza within the 30 days prior to entry into the exhibition.
 - iii. If there are fewer than 30 birds in the flock, all birds of age must be tested.
 - iv. Test results must be negative.
 - v. The birds or hatching eggs must be accompanied by the most recent test report (photocopies are acceptable).
 - vi. Gallinaceous birds may meet the testing requirements with blood testing or tracheal/oropharyngeal swab testing. If swab samples are collected, swabs from different

species—e.g. chickens and turkeys—may not be combined in a tube of viral transport media.

vii. Waterfowl must be tested with cloacal swab samples. Swabs from different species—e.g. ducks and geese—may not be combined in a tube of viral transport media.

viii. Untested birds shall not be comingled with or added to the tested flock after negative samples have been collected and before birds or hatching eggs enter the exhibition.

b. Pullorum-typhoid testing and verification:

i. National Animal Health Laboratory Network (NAHLN) protocols for sample collection and testing shall be followed.

ii. All poultry, including chickens, turkeys, game birds, and ratites (waterfowl excluded) and their hatching eggs;

(1) Must originate from a flock enrolled, tested, and in good standing on the NPIP Pullorum-typhoid Clean Program, with no break in the chain of ownership by NPIP participants, and the birds or hatching eggs must be accompanied by the most recent laboratory test report or 9-3 form (Report of Sales of Hatching Eggs, Chicks, or Poults) which includes the NPIP number; or NPIP 9-2 form (Flock Selecting and Testing Report) for the rapid whole blood agglutination plate test which includes the NPIP number (photocopies are acceptable); or

(2) Must originate from a flock enrolled, tested, and in good standing on the PA Pullorum Equivalent Program, with no break in the chain of ownership by program participants, and the birds or hatching eggs must be accompanied by the most recent laboratory test report which includes the program enrollment number, or state rapid test reporting form for the rapid whole blood agglutination plate test for pullorum-typhoid which includes the program enrollment number (photocopies are acceptable); or

(3) All individual birds (poultry), including chickens, turkeys, waterfowl, game birds, and ratites, or poultry providing hatching eggs (waterfowl excluded) (maximum of 300 from a flock) entering a Pennsylvania exhibition must have had a pullorum-typhoid test within the ninety (90) days prior to the opening date of the exhibition. The birds or hatching eggs must be accompanied by the most recent laboratory test report; or the Department's rapid test reporting form for the rapid whole blood agglutination plate test for pullorum-typhoid performed on non-NPIP birds (photocopies are acceptable).

(4) Test results must be negative.

(5) The following age restrictions apply for pullorum-typhoid testing:

A. Chickens shall be tested at four (4) months of age or older.

B. Turkeys shall be tested at 12 weeks of age or older.

C. Game birds shall be tested at four (4) months of age or older, or upon sexual maturity, whichever comes first.

D. Ratites shall be tested at 12 months of age or older.

E. Birds which are individually tested for pullorum for exhibition must have a negative pullorum test if of age at the time of entry into the exhibition.

9. Criminal and civil penalties. The Department may impose those criminal and civil penalties specifically established at section 2383 of the Domestic Animal Law (3 Pa.C.S.A. § 2383) for any violation of the provisions of this Order.
10. Civil remedy. In addition to any other action or remedy sought, the Department may seek any civil remedy, as specifically established at section 2386 of the Domestic Animal Law (3 Pa.C.S.A. § 2386), for any violation of the provisions of this Order.
11. This Order shall not be construed as limiting the Department's authority to establish additional requirements for poultry for exhibition or to limit any authority the Department possesses under the Domestic Animal Law or any other Act or Law administered by the Department.
12. This Order is effective upon publication in the *Pennsylvania Bulletin*.

RUSSELL C. REDDING,
Secretary

[Pa.B. Doc. No. 19-895. Filed for public inspection June 14, 2019, 9:00 a.m.]

SECTION X: SUMMARY OF POULTRY PROGRAMS AND TESTING REQUIREMENTS

SUMMARY OF POULTRY PROGRAMS AND TESTING REQUIREMENTS IN PENNSYLVANIA

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Programs and program requirements may change - please refer to the most current NPIP Provisions or the individual show manager for the current requirements.

Minimum flock size requirement (per premises) for biosecurity plans (those on NPIP AI programs should have a plan in place if expect full indemnity from USDA in an AI outbreak-however, they may remain on NPIP if they do not have a plan in place (It's not a PDA requirement except for a movement permit)):

- a. **Commercial table egg layers, commercial table egg layer pullets \geq 75,000 bird capacity on the premises.*
- b. **Broilers \geq 100,000 birds per year on the premises. (current capacity x approx 5.5)*
- c. **Turkeys \geq 30,000 birds per year on the premises. (current capacity x approx 2-3)*
- d. **Raised for Release Game birds and waterfowl \geq 25,000 birds per year on the premises. (under new 2020 subpart J, if they have breeders and raised for release birds on the same premises, the total number of those birds is used; if more than 25,000, recommend that they have a biosecurity plan)*
- e. *Waterfowl or game birds \geq 25,000 per year on the premises per year associated with an NPIP slaughter plant.*
- f. **All breeder flocks with 5,000 or more bird capacity (under new 2020 subpart J, if they have breeders and raised for release birds on the same premises, the total number of those birds is used; so if more than 25,000, recommend that they have a biosecurity plan)*

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 145 G	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
NPIP U.S AI Clean 145 B	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
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 21 days of disposal	Flock size; at least 75,000 birds total on premises
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 21 days of movement	Mandatory testing of pullets pre-placement for LPAI layer flock participants. Should enroll in program if ≥ 75,000 pullets total on premises. H5/H7
PA AI Monitored Flock Program	AI	Poultry	On farm	Gallinaceous birds - blood Waterfowl– cloacal swabs	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 with prior approval.	Must enroll with PDA. Meets NY/NJ LBMS req. If positive test, must restart; and test 150 birds for NY.

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 145 G	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 145 B	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/MS

Program	Disease	Type of Bird	Location	Type of Sample	# of Birds Tested	Frequency of Testing	Comment
NPIP U.S. MG Clean 145 G	MG/MS	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 145 B	MG/MS	Breeders; Multiplier Flock (from MG/MS 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/MS	Pullets	On Farm	Blood	75 birds, minimum of 50 birds per house	15-20 days prior to flock moving to layer house	From MG/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 145G, 145 B	SE	Breeders: Primary & Multiplier	On farm	Environmental swabs; Blood	Environmental swabs;	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	Table Egg Layers	On farm	Environmental swabs, eggs	Per PEQAP guidelines	Per PEQAP guidelines	
FDA Egg Safety Program	SE	Table Egg 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 145 H	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
NPIP U.S. AI Clean 145 C	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
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 with approval	Must enroll with PDA. Meets NY/NJ LBMS req. If positive test, must restart; and test 150 birds for NY.

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 145 H	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 145 C	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/MS

Program	Disease	Type of Bird	Location	Type of Sample	# of Birds Tested	Frequency of Testing	Comment
NPIP U.S. MG Clean 145 H	MG/MS	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 145 C	MG/MS	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/MS	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/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 – Other Salmonella

Program	Disease	Type of Bird	Location	Type of Sample	# of Samples Tested	Frequency of Testing	Comment
NPIP U.S. Sanitation Monitored 145 C	Salmonella	Multiplier Breeders	On farm	Environment. swabs	Environmental swabs	Env. swabs at 4 months of age, then every 90 days	May vaccinate
NPIP U.S. SE Monitored 145 C	SE	Multiplier Breeders	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 145 H	SE	Primary Breeders	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
NPIP U.S. Salmonella Monitored 145 H	Salmonella	Primary Breeders	On farm, in hatchery	Environment. swabs	Environmental swabs	Env. swabs at 4 months of age, then every 30 days; Also chick samples at hatchery	

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 145 D	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 145 D	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; Plants must enroll with PDA/NPIP. H5/H7
PA AI Monitored Flock Program	AI	Poultry	On farm	Blood	30	Within every 21-30 days	Must enroll with PDA. Meets NY/NJ LBMS req. If positive test, must restart; and test 150 birds for NY.

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 145 D	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 145 D	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	≥ 12 weeks of age

Turkeys – MG/MS/MM

Program	Disease	Type of Bird	Location	Type of Sample	# of Birds Tested	Frequency of Testing	Comment
NPIP U.S. MG Clean 145 D	MG,MS, MM	Breeders	On Farm	Blood	Refer to current version of the NPIP Provisions		

Turkeys – Other Salmonella

Program	Disease	Type of Bird	Location	Type of Sample	# of Samples Tested	Frequency of Testing	Comment
NPIP U.S. Sanitation Monitored 145 D	Salmonella	Breeders; Multiplier flocks	On farm	Hatchery debris and dead poult from breeder flock; Environmental swabs from breeder flock; and Dead poult and/or hatchery debris from poults produced from hatching eggs from breeder flock	Environmental swabs; hatchery debris, dead poult	Refer to NPIP Provisions	May vaccinate

Section IV: Waterfowl and and Exhibition-type Poultry

NPIP Waterfowl and Exhibition-type Poultry – Avian Influenza

Program	Di-sease	Type of Bird	Location	Type of Sample	# of Birds Tested	Frequency of Testing	Comment
NPIP U.S. H5/H7 AI Clean (145 E) (Hobbyists/small scale production)	AI	Hobbyists: Breeders, Multiplier & Primary flocks; Waterfowl, Game birds, Exhibition Poultry	On farm	Game birds, Exhibition poultry: Blood, swabs; or eggs for approved types of birds. Waterfowl: Cloacal swabs	30	30 birds tested negative initially, then 30 birds every 180 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
NPIP U.S. H5/H7 AI Clean (145 I)	AI	Waterfowl Breeders, Primary, multiplier flocks; also raised for release flocks	On farm	Waterfowl: Cloacal swabs	30	30 birds tested negative initially, then 30 birds every 90 days or 30 birds during each 90 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)	Min. 3 wks of age Age exceptions: Silkies: 6-8 wks Guineas, chukars, quail: 5-6 wks Quail/chukars: may substitute eggs with approval. Must enroll with PDA. Meets NY/NJ LBMS req. If positive test, must restart; and test 150 birds for NY.
NPIP H5/H7 LPAI Monitoring Program – 146E	AI	Slaughter plants (Meat – type Waterfowl) and those flocks producing eggs for human consumption	On farm (within 21 days of slaughter/ disposal) or at slaughter	Cloacal swabs	11	Per shift or on farm within 21 days of processing/disposal	Plant processes ≥ 50,000 birds per year or egg production flock has ≥ 50,000 birds in a year.

NPIP Waterfowl and Exhibition-type 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 145 E (exhibition-type)	Pullorum/Typhoid	Hobbyists Breeders	On farm	Blood	300 birds or entire flock every 12 months. Small hobby flocks may be eligible to test % with PDA written agreement after first year.	Every 12 months and 4 weeks after molt	≥ 4 months of age or sexual maturity
NPIP U.S. Pullorum-Typhoid Clean 145 I (waterfowl flocks)	Pullorum/Typhoid	Commercial waterfowl Breeders	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 Waterfowl and Exhibition-type Poultry – MG/MS

Program	Disease	Type of Bird	Location	Type of Sample	# of Birds Tested	Frequency of Testing	Comment
NPIP U.S. MG Clean 145 E or 145 I	MG/MS	Primary Breeder flock	On Farm	Blood	Refer to current version of the NPIP Provisions		
NPIP U.S. MG Clean 145 E	MG/MS	Multiplier Breeder flock (Originated as MG/MS Clean baby poultry from primary flock)	On Farm	Blood initially, then blood or eggs	Refer to current version of the NPIP Provisions		

NPIP Waterfowl and Exhibition-type Poultry- Other Salmonella

Program	Disease	Type of Bird	Location	Type of Sample	# of Samples Tested	Frequency of Testing	Comment
NPIP U.S. Salmonella Monitored 145 I	Salmonella	Waterfowl Breeders	On farm, in hatchery	Environment. swabs	Environmental swabs-flock & hatchery	Env. Swabs on farm at 4 months of age, then every 30 days; Also chick samples at hatchery every 30 days.	Written corrective action plan with PDA required if positive.
NPIP U.S. Salmonella Monitored 145 E	Salmonella	Exhibition-type Breeders	In hatchery	Environment. swabs	Environmental swabs-hatchery	Environmental swabs at hatchery every 30 days	Minimum of 5 environmental samples, e.g., chick papers, hatching trays, and chick transfer devices. Written corrective action plan with PDA required if positive.

Exhibition Poultry (Not on NPIP)

Section V: Exhibition Poultry (All birds entering a show must be banded with official PDA leg bands)

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	Gallinaceous birds: Blood or swabs; Waterfowl: cloacal swabs are required	Pennsylvania Birds: 30 birds representative of the flock must be tested negative on an official test within the 30 days prior to entrance into the exhibition. Out of state imports: Refer to the current "Interstate, International Quarantine Order" for AI testing import requirements.	Within 30 days prior to exhibition.	Official PDA leg band if showing.
Pullorum testing for PA birds going to PA exhibition	Pullorum/ typhoid	Exhibition poultry, except waterfowl; (waterfowl exempt)	On farm	Blood	All poultry except waterfowl 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 prior.	Within 90 days prior to exhibition.	Official PDA leg band.
PA Pullorum Equivalent Program	Pullorum/ typhoid	Exhibition poultry, except waterfowl	On farm	Blood	300 or entire flock if less than 300 birds	Every 12 months	Official PDA leg band. Must enroll with PDA, annual inspection.

Upland Game Birds

Section VI: NPIP Upland Game Birds

Program	Disease	Type of Bird	Location	Type of Sample	# of Birds Tested	Frequency of Testing	Comment
NPIP U.S. H5/H7 AI Clean (145 J) (new 2020)	AI	Hatcheries, Breeders, Growers, Dealers, Raised for Release combined in Subpart J	On farm	Blood, swabs, or eggs (eggs allowed only after qualified by blood samples)	30	30 birds every 90 days or 30 birds during each 90 day period	≥ 4 months or sexual maturity; H5/H7
NPIP U.S. H5/H7 Pullorum Clean (145 J) (new 2020)	Pullorum/typhoid	Hatcheries, Breeders, Growers, Dealers, Raised for Release combined in Subpart J	On farm	Blood	300 birds or entire flock every 12 months.	Every 12 months and 4 weeks after molt	≥ 4 months or sexual maturity
NPIP H5/H7 LPAI Monitoring Program – 146E	AI	Slaughter plants (meat – type game birds) and those flocks producing eggs for human consumption	On farm (within 21 days of slaughter/ disposal) or at slaughter	Blood, swabs	11	Per shift or on farm within 21 days of processing/disposal	Plant processes ≥ 50,000 birds per year or egg production flock has ≥ 50,000 birds in a year

**SECTION XI: PENNSYLVANIA DANGEROUS
TRANSMISSIBLE DISEASES
OF POULTRY**

Pennsylvania Dangerous Transmissible Diseases of Poultry (Diseases which may result in regulatory action)

- Avian influenza
- Newcastle Disease
- Avian mycoplasmosis (MG, MS)
- Pullorum disease (*S. pullorum*)
- Fowl typhoid (*S. gallinarum*)
- Duck viral enteritis
- Avian chlamydiosis (psittacosis, ornithosis)

SECTION XII: AVIAN DISEASE FACT SHEETS

Avian Influenza

Avian influenza (AI) viruses infect domestic poultry as well as pet, zoo, and wild birds. In domestic poultry, AI viruses are typically of low pathogenicity (LP), causing subclinical infections, respiratory disease, or drops in egg production. However, a few AI viruses cause severe systemic infections with high mortality. This highly pathogenic (HP) form of the disease has historically been called fowl plague. In most wild birds, AI viral infections are subclinical except for the recent H5N1 HP AI viruses of Eurasian lineage.

Etiology:

AI viruses are type A orthomyxoviruses characterized by antigenically homologous nucleoprotein and matrix internal proteins, which are identified by serology in agar gel immunodiffusion (AGID) tests. AI viruses are further divided into 16 hemagglutinin (H1-16) and 9 neuraminidase (N1-9) subtypes based on hemagglutinin inhibition and neuraminidase inhibition tests, respectively. Most AI viruses (H1-16 subtypes) are of low pathogenicity, but some of the H5 and H7 AI viruses are highly pathogenic for chickens, turkeys, and related gallinaceous domestic poultry.

Epidemiology and Transmission:

LP AI viruses are distributed worldwide and are recovered frequently from clinically normal shorebirds and migrating waterfowl. Occasionally, LP viruses are recovered from imported pet birds and ratites. The viruses may be present in village or backyard flocks and other birds sold through live-poultry markets, but most commercially raised poultry in developed countries are free of AI viruses. The HP viruses arise from mutation of some H5 and H7 LP viruses and cause devastating epidemics. Stamping-out programs are used to quickly eliminate the HP viruses in developed countries, but some developing countries may use vaccines to control HP viruses.

The incubation period is highly variable and ranges from a few days in individual birds to 2 wk in the flock. Transmission between individual birds is by ingestion or inhalation. Naturally and experimentally, cats and dogs have been infected with one strain of H5N1 Eurasian HP AI virus. Experimental infections occurred after respiratory exposure, ingestion of infected chickens, or contact exposure, but cats were more susceptible than dogs. Potentially, domestic pets could serve as a transmission vector between farms, but the ability of other AI viruses, including other H5N1 strains, to infect pets is unknown. Other mammals that have been experimentally infected include pigs, ferrets, rats, rabbits, guinea pigs, mice, mink, and nonhuman primates. Transmission between farms is the result of breaches in biosecurity practices, principally by movement of infected poultry or contaminated feces and respiratory secretions on fomites such as equipment or clothing. Airborne dissemination between farms may be important over limited distances. Limited spread by wild birds of the Eurasian H5N1 HP AI virus has been suggested but is not typical of other HP AI viruses. Other HP AI and all LP AI have minimal potential to infect dogs and cats.

Clinical Findings and Lesions:

Clinical signs, severity of disease, and mortality rates vary depending on AI virus strain and host species.

Low Pathogenicity Avian Influenza Viruses:

LP AI viruses typically produce respiratory signs such as sneezing, coughing, ocular and nasal discharge, and swollen infraorbital sinuses in poultry. Sinusitis is common in domestic ducks, quail, and turkeys. Lesions in the respiratory tract typically include congestion and inflammation of the trachea and lungs. In layers and breeders, there may be decreased egg production or fertility, ova rupture (evident as yolk in the abdominal cavity) or involution, or mucosal edema and inflammatory exudates in the lumen of the oviduct. A few layer and breeder chickens may have acute renal failure and visceral urate deposition (visceral gout). The morbidity and mortality is usually low unless accompanied by secondary bacterial or viral infections or aggravated by environmental stressors. Sporadic infections by any subtype of LP AI viruses can occur, but H9N2 LP AI is common in poultry in Asia, the Middle East, and North Africa.

High Pathogenicity Avian Influenza Viruses:

Even in the absence of secondary pathogens, HP AI viruses cause severe, systemic disease with high mortality in chickens, turkeys, and other gallinaceous poultry; mortality can be as high as 100% in a few days. In peracute cases, clinical signs or gross lesions may be lacking before death. However, in acute cases, lesions may include cyanosis and edema of the head, comb, wattle, and snood (turkey); edema and red discoloration of the shanks and feet due to subcutaneous ecchymotic hemorrhages; petechial hemorrhages on visceral organs and in muscles; and blood-tinged oral and nasal discharges. In severely affected birds, greenish diarrhea is common. Birds that survive the peracute infection may develop CNS involvement evident as torticollis, opisthotonos, incoordination, paralysis, and drooping wings. The location and severity of microscopic lesions are highly variable and may consist of edema, hemorrhage, and necrosis in parenchymal cells of multiple visceral organs, skin, and CNS.

Diagnosis:

LP and HP AI viruses can be readily isolated from oropharyngeal and cloacal swabs, and HP AI viruses from many internal organs. AI viruses grow well in the allantoic sac of 9- to 11-day-old embryonating chicken eggs, and they agglutinate RBCs. The hemagglutination is not inhibited by Newcastle disease or other paramyxoviral antiserum. AI viruses are identified by demonstrating the presence of 1) influenza A matrix or nucleoprotein antigens using AGID or other suitable immunoassays, or 2) viral RNA using an influenza A-specific reverse transcriptase-PCR test.

LP AI must be differentiated from other respiratory diseases or causes of decreased egg production, including 1) acute to subacute viral diseases such as infectious bronchitis, infectious laryngotracheitis, low virulent Newcastle disease, and infections by other paramyxoviruses; 2) bacterial diseases such as mycoplasmosis, infectious coryza, ornithobacteriosis, turkey coryza, and the respiratory form of fowl cholera; and 3) fungal diseases such as aspergillosis. HP AI must be differentiated from other causes of high mortality such as virulent Newcastle disease, peracute septicemic fowl cholera, heat exhaustion, and severe water deprivation.

Prevention and Treatment:

Vaccines can prevent clinical signs and death. Furthermore, viral replication and shedding from the respiratory and GI tracts may be reduced in vaccinated birds. Specific protection is achieved through autogenous virus vaccines or from vaccines prepared from AI virus of the same hemagglutinin subtype. Antibodies to the homologous viral neuraminidase antigens may provide partial protection. Currently, only inactivated whole AI virus, recombinant fowlpox-AI-H5, and recombinant herpesvirus-turkey-AI-H5 (rHVT-AI-H5) vaccines are licensed in the USA. The use of any licensed AI vaccine requires approval of the State Veterinarian. In addition, use of H5 and H7 AI vaccines in the USA requires USDA approval. Treating LP-affected flocks with broad-spectrum antibiotics to control secondary pathogens and increasing house temperatures may reduce morbidity and mortality. Treatment with antiviral compounds is not approved or recommended. Suspected outbreaks should be reported to appropriate regulatory authorities.

Zoonotic Risk:

AI viruses exhibit host adaptation to birds. Human infections have occurred, usually as isolated, rare, individual cases. Most human cases have originated from infection with Eurasian H5N1 HP AI virus and, most recently, Chinese H7N9 LP AI virus. The total accumulated human cases of H5N1 HP AI virus in Asia and Africa from 2003–2013 is 648, of which 384 were fatal. The primary risk factor for human infection has been direct contact with live or dead infected poultry, but a few cases have resulted from consumption of uncooked poultry products, defeathering of infected wild swans, or close contact with human cases. Respiratory infection has been the most frequent presentation of human H5N1 cases. For H7N9 LP AI, total accumulated human cases in China for 2013 is 137, of which 45 were fatal. Most cases had exposure risk to live-poultry markets. Conjunctivitis was the most frequent symptom in human cases of H7N7 HP AI virus infection in the Netherlands during 2003, with 89 confirmed cases and 1 fatality. Other HP AI viruses and all LP AI viruses have produced very rare or no human infections.

Source; The Merck Manual (Dr. David Swayne)

Note: Currently, the OIE (World Health Organization) Terrestrial Animal Health Code (Terrestrial Code) defines “avian influenza” as an infection of poultry caused by any influenza A virus with high pathogenicity (HPAI), and by H5 and H7 subtypes with low pathogenicity (H5/H7 LPAI). In previous versions of the Terrestrial Code and Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual), HPAI and H5/H7 LPAI viruses were termed “notifiable avian influenza” viruses, but because of inconsistencies with usage of the term “notifiable” with other diseases in the Terrestrial Code, the terms “notifiable avian influenza”, “high pathogenicity notifiable avian influenza” and “low pathogenicity notifiable avian influenza” have been removed from the Terrestrial Code and the Terrestrial Manual. To avoid confusion with the scientific use of “avian influenza”, which began in 1955, in this Terrestrial Manual the terms HPAI, H5/H7 LPAI and influenza A will be used. The latter indicates any influenza virus from birds that is H1–H16.



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



Avian Coryza

Avian Coryza is an emerging poultry respiratory disease in some regions of the United States. Severe facial edema is probably the most notorious clinical sign which couples with a sharp decrease in egg production in laying hens.

ARTICLES | UPDATED: MARCH 12, 2019



Pictures courtesy of Dr. S. Davison. New Bolton Center, PA.

Infectious Coryza is an acute respiratory infection of chickens caused by the Gram-negative, non-motile bacteria *Avibacterium paragallinarum* (formerly called *Haemophilus paragallinarum*). *A. paragallinarum* is not a particularly resistant bacterium. It is destroyed by most disinfectants, desiccation, and direct exposure to sun light. There are 3 serotypes of *A. paragallinarum*: A, B

and C which is very important when immunizing the birds against this disease. Infectious Coryza does not present a zoonotic risk (the disease does not spread from birds to humans). In addition, human consumption of meat or eggs derived from birds contaminated with *Avibacterium paragallinarum* presents no risk for human health.

Clinical signs:

The most prominent clinical sign may be facial edema (swelling of the face) and conjunctivitis with nasal and ocular discharge. Wattles may also be inflamed, and the infraorbital sinuses may be distended with exudate. Sneezing and coughing are frequently present which contributes to spreading the organism. Feed intake is decreased and layers in active production will show a sharp decrease in egg production (from 10 to 40% reduction). The morbidity (proportion of affected birds) is high and is not uncommon to observe most of the birds showing disease symptoms. However, death loss is usually low unless the disease is complicated with other agents, such as *Mycoplasma gallisepticum* or *E. coli*.

Occurrence:

The disease can occur in birds of any age but is more common in mature birds especially when they are stressed. It is not uncommon for layers to become infected shortly after relocation into new cages or around peak production. The incubation period is short, about 24-48 h after experimental inoculation. Under field conditions incubation may take an additional 24 h. The uncomplicated disease usually runs its course in about 2 weeks.

Transmission:

Birds that have recovered from the disease can harbor the bacteria for a long time (or permanently) in the absence of any clinical sign (asymptomatic carriers). For this reason, the disease can be difficult (or impossible) to eliminate in those facilities lacking an all-in all-out practice. Traditionally, layers are kept in multiage complexes and infectious coryza can be a challenge when bringing young pullets that have never been exposed to the organism in the past. Exposure of naïve birds to birds that have been infected previously is perhaps the most common mechanism for disease transmission in regions where infectious coryza is prevalent. The organism can spread via inhalation from aerosols or be ingested from contaminated feed or water. Equipment moved from one house into another may also transport infective bacteria.

Diagnosis:

Isolation of the organism. This can be done plating the samples on blood agar plates cross streaked with a *Staphylococcus* culture following overnight culture at 37C in anaerobiosis. Hemagglutination Inhibition and PCR are also available.

Differential Diagnosis:

Coryza should be differentiated from other diseases like swollen head syndrome, fowlpox, and ornithobacteriosis.

Treatment:

A. paragallinarum is susceptible to several antibiotics which can be given in feed or water. Tetracyclines are commonly used for treatment.

Control:

If the disease is not endemic in a given area for infectious coryza, depopulation may be used to decrease the likelihood of passing the disease to future flocks. If this is not an option, avoid bringing replacement birds into the same premises while sick or recovered birds are present. After the affected flock is removed, clean and disinfect the premises and wait at least 3 weeks before repopulating.

If the disease becomes wide-spread in a region, there are commercial bacterins (a type of vaccine made with inactivated bacteria) available. This vaccine must match the serotype of *A. paragallinarum* isolated from previous local outbreaks. 2 doses of the vaccine should be given well before the onset of lay and several weeks before moving the birds into a high-risk location.

References:

Avian Diseases Manual 7 edition; Diseases of poultry 13 edition.

By Gino Lorenzoni, DVM, MS, PhD. Assistant professor, The Pennsylvania State University.

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Newcastle Disease

Newcastle disease (ND) is an infection of domestic poultry and other bird species with Newcastle disease virus (NDV). It is a worldwide problem that presents primarily as an acute respiratory disease, but depression, nervous manifestations, or diarrhea may be the predominant clinical form. Severity depends on the virulence of the infecting virus and host susceptibility. Occurrence of the disease is reportable and may result in trade restrictions.

Previously known as velogenic viscerotropic Newcastle disease, ND is one of the most infectious diseases of poultry in the world. The mortality in unvaccinated birds can reach 100 percent, and birds may die without any clinical signs of disease. Though recommended and widely used, vaccination does not fully protect against NDV and may obscure the disease, resulting in further spread.

Identifying Affected Birds

NDV affects the respiratory, digestive, and nervous systems. The incubation period ranges from 2 to 15 days. An infected bird may exhibit some or all of the following signs:

- Sneezing, gasping, nasal discharge, coughing;
- Greenish, watery diarrhea;
- Depression, muscular tremors, droopy wings, opisthotonus, circling, and complete paralysis;
- Partial to complete drop in egg production and thin-shelled eggs;
- Swelling of tissues around the eyes and in the neck;
- Sudden death; and
- Increased flock mortality.

Transmission

NDV is spread primarily through direct contact with droppings and nasal, ocular, or oral secretions of infected birds. The virus is present in high concentrations in body fluids and discharges and spreads rapidly through birds in confinement. The virus can be carried from one premises to another on contaminated shoes and clothing of service crews and visitors and their contaminated vehicles. The virus can survive for several weeks in a warm and humid environment on feathers and in manure and other materials and can survive indefinitely in frozen material. It is rapidly destroyed by dehydration and ultraviolet rays. Smuggled psittacines, especially Amazon parrots from Latin America, pose great risks for introducing the virus into the United States. These parrots are asymptomatic carriers and can carry the virus for up to 400 days.

Biosecurity Measures on the Farm

Veterinarians should work with poultry producers to strengthen biosecurity practices. Established and enforced biosecurity protocols will help prevent introduction of NDV and other infectious agents. Recommend biosecurity measures include:

- Establishing an “all-in, all-out” flock-management policy;
- Protecting against exposure to wild birds or water or ground contaminated by wild birds;
- Closing bird areas to nonessential personnel or vehicles;
- Providing employees with clean clothing and disinfection facilities and directions for their use;
- Thoroughly cleaning and disinfecting equipment and vehicles (including tires and undercarriage) when entering or leaving the farm;
- Banning the borrowing or lending of equipment or vehicles;
- Banning visiting other poultry farms, exhibitions, fairs, and sales or swap meets (if

- visits must occur, direct workers to change footwear and clothing on their return);
and
- Banning bringing birds in slaughter channels back to the farm.

Vaccination

Vaccines are available for chickens, turkeys, and pigeons and are used to induce an antibody response, so vaccinated birds must be exposed to a larger dose of NDV to be infected.

Fowlpox or turkey herpesvirus–vectored NDV vaccines are commercially available for chickens and have the advantage of being able to be administered in ovo at the hatchery. These vaccines must be reconstituted as directed by the manufacturer and, because they take 3–4 weeks to produce a protective level of immunity, biosecurity is even more important.

Zoonotic Risk:

All NDV strains can produce a transitory conjunctivitis in people, but the condition has been limited primarily to laboratory workers and vaccination teams exposed to large quantities of virus. Before poultry vaccination was widely practiced, conjunctivitis from NDV infection occurred in crews eviscerating poultry in processing plants. The disease has not been reported in people who rear poultry or consume poultry products.

Source; The Merck Manual and USDA

***Mycoplasma synoviae* (MS) 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 (see photo). Affected birds are usually immature and are lame or recumbent with swollen hocks, footpads or sternal 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.

M. synoviae isolates vary widely in virulence.

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.

Source; the Merck Manual



Photo source -Minnesota Veterinary Diagnostic Laboratory

***Mycoplasma gallisepticum* (MG) Facts**

Mycoplasma 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.

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.

Source; The Merck Manual

***Salmonella pullorum* - 'Bacillary White Diarrhea' Facts**

Etiology and Transmission:

Infections with *Salmonella Pullorum* usually cause very high mortality (potentially approaching 100%) in young chickens and turkeys within the first 2–3 wk of age. In adult chickens, mortality may be high but frequently there are no clinical signs. Pullorum disease was once common but has been eradicated from most commercial chicken stock in the USA, although it may be seen in other avian species (eg, guinea fowl, quail, pheasants, sparrows, parrots, canaries, and bullfinches) and in small backyard or hobby flocks. Infection in mammals is rare, although experimental or natural infections have been reported (chimpanzees, rabbits, guinea pigs, chinchillas, pigs, kittens, foxes, dogs, swine, mink, cows, and wild rats).

Transmission can be vertical (transovarian) but also occurs via direct or indirect contact with infected birds (respiratory or fecal) or contaminated feed, water, or litter. Infection transmitted via egg or hatchery contamination usually results in death during the first few days of life up to 2–3 wk of age. Transmission between farms is due to poor biosecurity.

Clinical Findings and Lesions:

The disease may be seen in all age groups, but birds <4 wk old are most commonly affected. Birds may die in the hatchery shortly after hatching. Affected birds huddle near a heat source, are anorectic, appear weak, and have whitish fecal pasting around the vent (diarrhea). Survivors are small in size and frequently become asymptomatic carriers with localized infection of the ovary. Some of the eggs laid by such hens hatch and produce infected progeny.

There may be no lesions due to an acute septicemia and death. Lesions in young birds usually include unabsorbed yolk sacs and classic gray nodules in the liver, spleen, lungs, heart, gizzard, and intestine. Firm, cheesy material in the ceca (cecal cores) and raised plaques in the mucosa of the lower intestine are sometimes seen. Occasionally, synovitis is prominent.

Adult carriers usually have no gross lesions but may have nodular pericarditis; fibrinous peritonitis; or hemorrhagic, atrophic, regressing ovarian follicles with caseous contents. In mature chickens, chronic infections produce lesions indistinguishable from those of fowl typhoid.

Diagnosis:

Lesions may be highly suggestive, but diagnosis should be confirmed by isolation, identification, and serotyping of *S pullorum*. Infections in mature birds can be identified by serologic tests, followed by necropsy evaluation complemented by microbiologic culture and typing for confirmation. Official testing recommendations for flocks in the USA are outlined in the National Poultry Improvement Plan.

Treatment and Control:

Treatment of infected flocks to alleviate the perpetuation of the carrier state is not recommended. Control is based on routine serologic testing of breeding stock to assure freedom from infection. In addition, management and biosecurity measures should be taken to reduce the introduction of *S pullorum* from feed, water, wild birds, rodents, insects, or people. Birds should be purchased from sources free of *S pullorum*. Source; the Merck Manual

Fowl Typhoid (*Salmonella gallinarum*)

Etiology and Transmission:

The causal agent is *Salmonella gallinarum*. The incidence of fowl typhoid is low in the USA, Canada, and some European countries but is much higher in other countries. Although *S. gallinarum* can be egg-transmitted and produces lesions in chicks and poults similar to those produced by *S. pullorum*, there is a much greater tendency to spread among growing or mature flocks through direct contact with infected birds. Mortality in young birds is similar to that seen in *S. pullorum* infection but may be higher in older birds.

Clinical Findings and Lesions:

The disease may be acute or chronic. Clinical signs and lesions in young birds are similar to those seen with *S. pullorum* infection. Older birds may be pale, dehydrated, and have diarrhea. Lesions in older birds may include a swollen, friable and often bile-stained liver, with or without necrotic foci; enlarged spleen and kidneys; anemia; and enteritis.

Diagnosis:

Diagnosis should be confirmed by isolation, identification, and serotyping of *S. gallinarum* (National Poultry Improvement Plan testing procedure).

Treatment and Control:

Treatment and control are as for pullorum disease. There are no federally licensed vaccines in the USA. The standard serologic tests for pullorum disease are equally effective in detecting fowl typhoid.

Source; The Merck Manual

Duck Viral Enteritis (DVE)

Duck viral enteritis (DVE) is an acute, highly contagious disease of ducks, geese, and swans of all ages, characterized by sudden death, high mortality (particularly among older ducks), and hemorrhages and necrosis in internal organs. It has been reported in domestic and wild waterfowl in Europe, Asia, North America, and Africa, resulting in limited to serious economic losses on domestic duck farms and sporadic, limited to massive die-offs in wild waterfowl. In the USA, considerable losses due to DVE have been reported in the concentrated duck-producing areas located in Long Island, New York.

Members of the family Anatidae (ducks, geese, and swans) are the natural hosts for the virus. There are differences in susceptibility to the virus, with Muscovy ducks being the most susceptible. However, naturally occurring infections have been reported in a variety of domestic ducks such as Pekin, Khaki Campbell, Indian runners, and mixed breeds. The age at infection ranges from 7 days to maturity. The infection has not been reported in other avian species, mammals, or people and does not pose a zoonotic risk.

Etiology and Pathogenesis:

The causative agent of DVE (species Anatid herpesvirus 1) is a member of the family Herpesviridae. The virus induces vascular damage, especially in smaller blood vessels. This results in the development of generalized hemorrhages and progressive degenerative changes of parenchymatous organs. An immunosuppressive state induced by DVE may also explain the presence of secondary infections by *Pasteurella multocida*, *Riemerella anatipestifer*, and *Escherichia coli*, which are frequently seen in natural outbreaks of DVE in ducklings.

Epidemiology and Transmission:

The virus is mainly transmitted by direct contact from infected to susceptible ducks or by indirect contact with a contaminated environment. Water seems to be a natural route of viral transmission. Outbreaks are frequent in duck flocks with access to bodies of water cohabited with free-living waterfowl. A carrier condition is suspected in wild birds. Recovered birds become latently infected carriers and may shed the virus periodically. DVE virus may undergo latency like other herpesviruses, and the trigeminal ganglion seems to be a latency site for the virus. Recovered birds may carry the virus in its latent form, and viral reactivation may be the cause of outbreaks in susceptible wild and domestic ducks.

Clinical Findings:

The incubation period is 3–7 days. Sudden high and persistent mortality is often the first sign of the disease. Mortality varies and can be 5%–100%, depending on virulence of the infecting viral strain. Adult ducks usually die in higher proportions than young ones, increasing the economic significance of the disease. Sick birds are unable to stand and show indication of weakness and depression. Photophobia, inappetence, extreme thirst, droopiness, ataxia, nasal discharge, soiled vents, and watery or bloody diarrhea may be seen. Adult ducks may die in good flesh. In contrast, ducklings frequently show dehydration and weight loss, as well as blue beaks and blood-stained vents. In laying flocks, egg production may drop sharply.

Source; The Merck Manual

Avian Chlamydiosis (psittacosis)

Avian chlamydiosis can be an inapparent subclinical infection or acute, subacute, or chronic disease of wild and domestic birds characterized by respiratory, digestive, or systemic infection. Infections occur worldwide and have been identified in at least 460 avian species, particularly caged birds (primarily psittacines), colonial nesting birds (eg, egrets, herons), ratites, raptors, and poultry. Among poultry, turkeys, ducks, and pigeons are most often affected. The disease is a significant cause of economic loss and human exposure in many parts of the world.

Etiology:

Chlamydia psittaci, renamed *Chlamydophila psittaci*, is an obligate intracellular bacterium. Transmission is by the fecal-oral route or by inhalation. Respiratory discharge or feces from infected birds contain elementary bodies that are resistant to drying and can remain infective for several months when protected by organic debris (eg, litter and feces). Airborne particles and dust spread the organism. The incubation period is typically 3–10 days but may be up to several months in older birds or after low exposure. Host and microbial factors, route and intensity of exposure, and treatment determine clinical course.

The prevalence of infection varies considerably between species and by geographic location. Infection is endemic in commercial turkey flocks; no clinical signs or mild respiratory signs and low mortality are the common presentations. Outbreaks are rare. Although chickens are relatively resistant to clinical disease, asymptomatic infection is frequent.

Clinical Findings and Lesions:

Severity of clinical signs and lesions depends on the virulence of the organism, infectious dose, stress factors, and susceptibility of the bird species; asymptomatic infections are common. Nasal and ocular discharge, conjunctivitis, sinusitis, green to yellow-green droppings, fever, inactivity, ruffled feathers, weakness, inappetence, and weight loss can be seen in clinically affected birds.

Diagnosis:

The combination of a serologic and an antigen detection test, especially PCR, or culture, is a practical diagnostic scheme to confirm chlamydiosis. In live birds, the preferred sample for bacterial culture or PCR is a single conjunctival, choanal, or cloacal swab. Multiple samples collected throughout 3–5 days are recommended for detection of intermittent shedding by asymptomatic birds.

Antibodies may or may not be detectable depending on the test used and on the level and stage of infection. Interpretation of titers from single serum samples is difficult. A 4-fold increase in titers between paired acute and convalescent samples is diagnostic, and high titers in a majority of samples from several birds in a population are sufficient for a presumptive diagnosis.

Prevention and Treatment:

Human and avian chlamydiosis is a reportable disease; state and local governmental regulations should be followed wherever applicable. No effective vaccine for use in birds is

available. Treatment prevents mortality and shedding but cannot be relied on to eliminate latent infection; shedding may recur. Tetracyclines (chlortetracycline, oxytetracycline, doxycycline) are the antibiotics of choice.

Appropriate biosecurity practices are necessary to control the introduction and spread of chlamydiae in an avian population. Minimal standards include quarantine and examination of all new birds, prevention of exposure to wild birds, traffic control to minimize cross-contamination, isolation and treatment of affected and contact birds, thorough cleaning and disinfection of premises and equipment (preferably with small units managed on an all-in/all-out basis), provision of uncontaminated feed, maintenance of records on all bird movements, and continual monitoring for presence of chlamydial infection.

The organism is susceptible to heat (it may be destroyed in <5 min at 56°C) and most disinfectants (eg, 1:1,000 quaternary ammonium chloride, 1:100 bleach solution, 70% alcohol, etc) but is resistant to acid and alkali. It may persist for months in organic matter such as litter and nest material, but thorough cleaning before disinfection is necessary.

Zoonotic Risk:

Avian chlamydiosis is a zoonotic disease that can affect people after exposure to aerosolized organisms shed from the digestive or respiratory tracts of infected live or dead birds or by direct contact with infected birds or tissues. Human disease most often results from exposure to pet psittacines and can occur even if there is only brief contact with a single infected bird. Other persons in close contact with birds such as pigeon fanciers, veterinarians, farmers, wildlife rehabilitators, zoo keepers, and employees in slaughtering and processing plants or hatcheries are also at risk. Recent studies showed that zoonotic transmission of *C psittaci* in poultry industry workers is likely underestimated. Precautions should be taken when examining live or dead infected birds to avoid exposure (eg, dust mask and plastic face shield or goggles, gloves, detergent disinfectant to wet feathers, and fan-exhausted examining hood).

Some individuals, especially pregnant women and those with impaired immunity, are more susceptible than others. The illness in people is usually respiratory and varies from flu-like symptoms to systemic disease with pneumonia and possibly endocarditis and encephalitis.

Source; The Merck Manual

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.

1. Chicken embryo origin (CEO) vaccines can be administered through an eye drop or mass vaccination, such as spray or water. **While these CEO vaccines result in a better immunity, CEO vaccines have the capability of reverting to virulence and causing full-blown ILT signs. It can cause severe clinical signs and disease. Also, chickens treated with CEO vaccine can become carriers of the virus, putting unvaccinated flocks at risk.**

2. Tissue culture origin (TCO) vaccines have a relatively low level of infectiousness and are administered by an eye drop. A disadvantage of TCO vaccines is that the level of immunity is limited; the advantage of this is that it causes a less severe reaction. *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.*

3. Recombinant ILT vaccines have been developed. 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.

Please note that vaccination of show birds in PA is not required by PDA for show entry, and if used, it must be used properly.

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 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.

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.

Exhibition Poultry –

Isolate all show birds from the rest of your flock for 30 days after returning from the show, and care for those birds last every day. Do not share equipment between the birds during this time.

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, and discuss vaccination options with a veterinarian.

Source; Dr. Eric Gingerich; DVM, Donna K. Carver, DVM, PhD, ACPV; PDA

***Salmonella enteritidis* (SE) Facts**

Egg-associated salmonellosis is considered to be 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. Since then, SE risk-reduction programs for table egg layer flocks and breeder flocks which produce them have been developed in many states and at the federal level. 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 may have a 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.

How eggs become contaminated

Most types of *Salmonella* live in the intestinal tracts of animals and birds and are transmitted to humans by contaminated foods of animal origin.

Salmonella enteritidis may infect the ovaries of healthy appearing hens and may contaminate the eggs before the shells are formed.

Due to intermittent shedding by the hen, an infected hen can lay many normal eggs while only occasionally laying an egg contaminated with the *Salmonella* bacterium.

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. Cook thoroughly. 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) unless using pasteurized eggs.
- Avoid restaurant dishes made with raw or undercooked, unpasteurized eggs. Restaurants should use pasteurized eggs in any recipe that calls for pooling of raw eggs.

Poultry producers can take steps to reduce the risk of salmonella in their flocks, to include purchasing stock from NPIP SE-clean breeding stock, maintaining a sanitary flock environment, and environmental testing.

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

Salmonella in Backyard Flocks

Accessible version: <https://www.cdc.gov/healthypets/publications/healthy-families-flocks.html>

HEALTHY FAMILIES AND FLOCKS

Live poultry, such as chickens, ducks, geese, and turkeys, often carry harmful germs such as *Salmonella*. While it usually doesn't make the birds sick, *Salmonella* can cause serious illness when it is passed to people.

HANDWASHING PROTECTS YOU FROM GERMS



- Always wash your hands with soap and water right after touching live poultry or anything in the area where they live and roam.
- Adults should supervise handwashing for young children.
- Use hand sanitizer if soap and water are not readily available.

HANDLE BIRDS SAFELY



- Children younger than 5 years, adults older than 65 years, and people with weakened immune systems should not handle or touch chicks, ducklings, or other live poultry.
- Do not bring chicks, ducklings and other live poultry to schools, childcare centers, or nursing homes.
- Do not snuggle or kiss the birds, touch your mouth, or eat or drink around live poultry.

SAFELY CLEAN COOPS

- Clean any equipment used to care for live poultry outside, such as cages or feed or water containers.
- Set aside a pair of shoes to wear while taking care of poultry and keep those shoes outside of the house.



POULTRY BELONG OUTSIDE

- Do not let live poultry inside the house, especially in kitchens.
- Do not let live poultry in areas where food or drink is prepared, served, or stored.



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Have a Backyard Flock? Don't Wing it.
Visit www.cdc.gov/features/salmonellapoultry
for more information

CS274178A

SECTION XIII: LEG BAND SIZE CHARTS

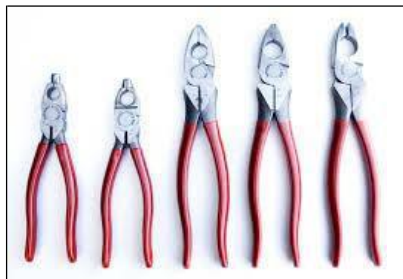
(Approximate Sizes)

Butt-End Style Leg Band Size Chart



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

Official Leg Band Distribution Sheet

CPT Name:

(Retain records for 2 years)

CPT License #:

DISTRIBUTION INFORMATION

OFFICIAL LEG BAND INFORMATION

Date	Bands Issued To:	Premise ID #	Starting Leg Band #	Ending Leg Band #

**SECTION XIV: PA EXHIBIT BIRD RAPID
PULLORUM PLATE TEST FORM and OWNER-
ENDORSED AVIAN 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 BAHDS 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 17110
717-783-6897

PDA rev 11/2/16

OFFICIAL OWNER ENDORSED AVIAN POULTRY HEALTH CERTIFICATE

A completed owner-endorsed avian health certificate or a certificate of veterinary inspection must accompany all avian species, and their hatching eggs to an exhibition. The certificate must be presented to exhibition management prior to cooping of all avian species or display of hatching eggs. This owner-endorsed health 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 all poultry, including chickens, turkeys, waterfowl, game birds (such as pheasants, partridge, quail, grouse, and guineas), ratites, and hatching eggs (all samples must be collected by a Certified Poultry Technician or a Category II Accredited Veterinarian):

a. Avian influenza testing and verification:

i. National Animal Health Laboratory Network (NAHLN) protocols for sample collection, including the number of swabs/tube of viral transport media (see vi and vii below), and testing shall be followed. All samples must be tested at a NAHLN laboratory.

ii. All poultry, including chickens, turkeys, waterfowl, game birds, and ratites, and their hatching eggs must originate from a flock in which a random, representative sample of a minimum of 30 birds, three (3) weeks of age or older, were tested for avian influenza within the 30 days prior to entry into the exhibition.

iii. If there are fewer than 30 birds in the flock, all birds of age must be tested.

iv. Test results must be negative.

v. All poultry and hatching eggs must be accompanied by the most recent test report (photocopies are acceptable).

vi. Chickens, turkeys, game birds, and ratites may meet the testing requirements with blood testing or tracheal/oropharyngeal swab testing. If swab samples are collected, swabs from different species — e.g. chickens and turkeys — may not be combined in a tube of viral transport media (BHI). If 5 or fewer swabs are collected per tube, the swab tips may be left in the tube. If between 5 and 11 swabs per tube are collected, swirl the swab tip in the BHI liquid, press the swab tip against the inner surface of the tube to remove excess material into the tube, and discard the swab in a biosecure manner.

vii. Waterfowl such as ducks and geese must be tested with cloacal swab samples. Swabs from different species — e.g. ducks and geese — may not be combined in a tube of viral transport media (BHI). Up to 5 swabs may be placed per tube for waterfowl testing. Swab tips may be left in the tube.

viii. Poultry not meeting the testing requirements shall not be comingled with or added to the tested flock after negative samples have been collected and before poultry or hatching eggs enter the exhibition.

b. Pullorum-typhoid testing and verification:

i. National Animal Health Laboratory Network (NAHLN) protocols for sample collection and testing shall be followed.

ii. Poultry, including chickens, turkeys, game birds, and ratites (waterfowl are excluded), and their hatching eggs;

- (1). Must originate from a flock currently enrolled, tested, and in good standing on the NPIP Pullorum-typhoid Clean Program, with no break in the chain of ownership by NPIP participants, and the poultry or hatching eggs must be accompanied by the most recent laboratory test report or 9-3 form (*Report of Sales of Hatching Eggs, Chicks, or Poults*) which includes the NPIP number; or NPIP 9-2 form (*Flock Selecting and Testing Report*) for the rapid whole blood agglutination plate test which includes the NPIP number (photocopies are acceptable); or (2). Must originate from a flock currently enrolled, tested, and in good standing on the PA Pullorum Equivalent Program, with no break in the chain of ownership by program participants, and the poultry or hatching eggs must be accompanied by the most recent laboratory test report which includes the program enrollment number, or state rapid test reporting form for the rapid whole blood agglutination plate test for pullorum-typhoid which includes the program enrollment number (photocopies are acceptable); or
- (3). All individual poultry, including chickens, turkeys, game birds, and ratites (waterfowl are excluded), or poultry providing hatching eggs (maximum of 300 from a flock) entering a Pennsylvania exhibition must have had a pullorum-typhoid test within the ninety (90) days prior to the opening date of the exhibition. The poultry or hatching eggs must be accompanied by the most recent laboratory test report; or the Department's rapid test reporting form for the rapid whole blood agglutination plate test for pullorum-typhoid performed on non-NPIP birds (photocopies are acceptable).
- (4). Test results must be negative.
- (5). The following age restrictions apply for pullorum-typhoid testing:
 - ◆ 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.
 - ◆ Poultry which is individually tested for pullorum for exhibition must have a negative pullorum test if of age at the time of entry into the exhibition.

4. **Bird identification:** All poultry, including chickens, turkeys, waterfowl and game birds entering an exhibition must bear an individual **OFFICIAL STATE LEG BAND**. For PA poultry, official crimp-style leg bands will show "PDA" on the bands, and official Butt-end band numbers begin with the prefix "PA". Ratites must be identified with a neck band or an electronic implant device (the exhibitor must supply a reader). Pigeons, doves, and other avian species such as psittacines and passerines must bear a unique individual identification leg band (official state leg bands are not required except for poultry).

Description of all birds (number, age, color, gender) or hatching eggs:

5. **Verification of avian health status:**

All avian species (and hatching eggs) for exhibition or display are free from evidence of infectious and contagious diseases.

6. **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 avian species and their hatching eggs which I will be exhibiting". The name and phone number of the consulting veterinarian must be included on the entry form.

Owner Signature: _____ **Date:** _____

To report illness or mortality in your flock, call the Pennsylvania Department of Agriculture at 717-772-2852. Additional owner-endorsed health certificates are available from the nearest Department of Agriculture regional office or on the website at www.agriculture.pa.gov.

SECTION XV: CPT COURSE POWER POINT PRESENTATION HANDOUT

▶ Certified Poultry Technician Training



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, ***extra training is required and you must be licensed as a LBMS CPT***

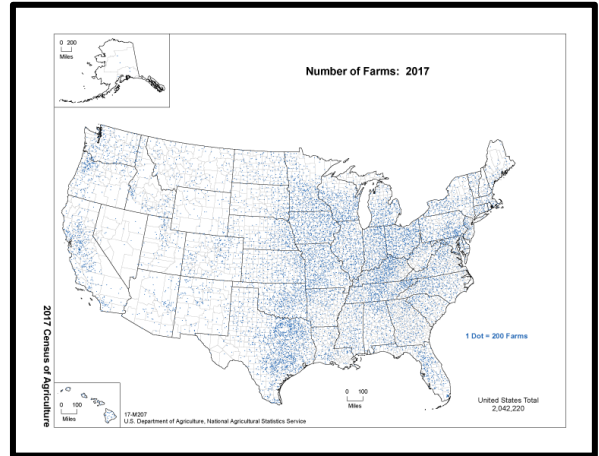
SIGNS OF ILLNESS IN BIRDS/FLOCKS

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

REPORTABLE DANGEROUS TRANSMISSIBLE AVIAN DISEASES

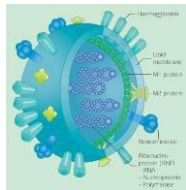
- ✓ Avian influenza
- ✓ Newcastle disease
- ✓ Avian mycoplasmosis (MG/MS)
- ✓ Salmonella pullorum
- ✓ Salmonella gallisepticum (fowl typhoid)
- ✓ Avian chlamydiosis (psittacosis)
- ✓ Duck viral enteritis

AVIAN INFLUENZA



AI CLASSIFICATION- SURFACE PROTEINS

- H (hemagglutinin) type (H1 – H16)
- N (neuraminidase) type (N1 – N19)
- Low pathogenicity vs high pathogenicity
- A low path virus can mutate and become high path



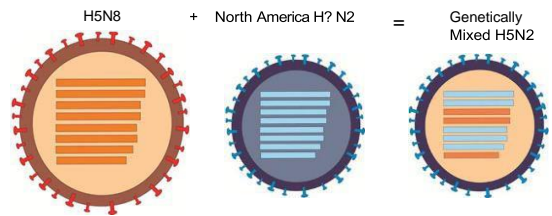
AVIAN INFLUENZA (BIRD FLU)

- Low pathogenic AI (LPAI)
 - Mild to moderate disease
- Highly pathogenic AI (HPAI)
 - Severe disease
 - High mortality
- Severity of disease related to environmental conditions and concurrent infections

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

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 for indemnity

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 AI 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 AI 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

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



 pennsylvania

DEPARTMENT OF AGRICULTURE

BUREAU OF ANIMAL HEALTH AND ZOOLOGICAL SERVICES

PA-BREHISZ DATA INFORMATION SHEET

Address: _____
 County: _____ Township: _____

Primary contact (Correspondence and Emergency Contact)

Name: _____ Address: _____
 Home Phone: _____ Business Phone: _____ Cell Phone: _____
 Check all that apply: Retail Owner Manager Retail Owner Other _____

Secondary contact (Correspondence and Emergency Contact)

Name: _____ Address: _____
 Home Phone: _____ Business Phone: _____ Cell Phone: _____
 Check all that apply: Retail Owner Manager Retail Owner Other _____

Domestic Species at this location

<input type="checkbox"/> Dairy Cattle	<input type="checkbox"/> Sheep *	<input type="checkbox"/> Turkeys
<input type="checkbox"/> Poultry Growers	<input type="checkbox"/> Goats *	<input type="checkbox"/> Waterfowl
<input type="checkbox"/> Veal Growers	<input type="checkbox"/> Dairy	<input type="checkbox"/> Rabbits
<input type="checkbox"/> Beef Cattle	<input type="checkbox"/> Hogs	<input type="checkbox"/> Wildland Game Birds
<input type="checkbox"/> Cow/Calf	<input type="checkbox"/> Camels/Alpacas	<input type="checkbox"/> Pigeons
<input type="checkbox"/> Backgammon	<input type="checkbox"/> Guinea	<input type="checkbox"/> Chickens
<input type="checkbox"/> Pheasants	<input type="checkbox"/> Cattle	<input type="checkbox"/> Geese
<input type="checkbox"/> Geese	<input type="checkbox"/> Deer	<input type="checkbox"/> Hens
<input type="checkbox"/> Buntings	<input type="checkbox"/> Elk	<input type="checkbox"/> Trout
<input type="checkbox"/> Finches	<input type="checkbox"/> Equine	<input type="checkbox"/> _____

*If you have a USDA Scrapie ID please list

Submit Online: Bureau of Animal Health & Zoological Services
 2025 N. Cameron St. Harrisburg, PA 17110-3001 | Tel: 717-725-2000 | www.pasda.com

ANY QUESTIONS ABOUT AI?
AI INFORMATION RESOURCE:
WWW.APHIS.USDA.GOV

NEWCASTLE DISEASE VIRUS (NDV)

- 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

ccc.ca.gov

NEWCASTLE DISEASE OUTBREAK 2018- 2020

Newcastle Disease confirmed in the US for the
first time in 15 years

by [News Desk](#)

Between May 17, 2018 and May 31, 2020, USDA confirmed 476 positive premises in California as infected with NDV, including 4 commercial premises. Spread to Utah and Arizona due to movement out of quarantined areas.
>1.2 mil birds destroyed.

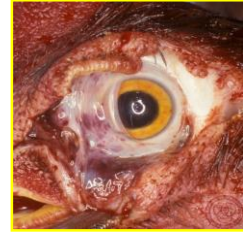
PURPLE DISCOLORATION OF SKIN



ULCERS AND NECROSIS IN THE GASTROINTESTINAL TRACT



HEMORRHAGES OF CONJUNCTIVA AND THIRD EYELID



INFECTIOUS CORYZA

- Infectious respiratory disease of chickens
- *Avibacterium paragallinarum*
- Short incubation period (1 – 3 days)
- High morbidity, low mortality (if uncomplicated)
- Spread by carrier chickens; fragile in environment
- Affecting mostly layers, but also pullets and broilers
- Not a Dangerous Transmissible Disease or Reportable Disease in PA – PADLS leading the outreach

Thanks to: P. A. DUNN, E. A. WALLNER-PENDLETON, B. C. LOVE, M. KAHN, M. OPITZ

NORTH ATLANTIC REGION

- 3 documented outbreaks in commercial chickens in last decade:

- CT
- ME
- PA



In 2019, it was estimated that half of the layer flocks in PA have been affected by Coryza.

INFECTIOUS CORYZA

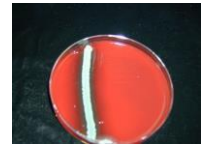


CLINICAL SIGNS:

- facial edema,
- sinusitis,
- rhinitis,
- dyspnea,
- depression,
- decreased egg production

DIAGNOSIS

- May be hard to grow and isolate in lab



PREVENTION OF SPREAD

- Biosecurity on farms
- Biosecurity education for producers
- Development of vaccines (commercial vs autogenous)
- BAHDS/FDA postponed non-essential inspections in affected counties
 - PEQAP
 - RISK
 - FDA Egg Safety
- Moving forward; increased down time between inspections, increased biosecurity for inspectors



DEAD ANIMAL DISPOSAL

- Unmet disposal needs especially for spent fowl or flocks depopulated due to illness
- Composting? It needs to be done properly by licensed haulers and land owners
- Transportation and dumping of diseased flock may pose risk to nearby poultry
- Spread of manure from infected flocks can spread disease
- Rendering options have decreased
- Increasing reports of dead bird transport and improper composting (sight, odor) – from citizens, township officials, concerned producers



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)

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

PULLORUM LESIONS



Ovary with misshapen yolks



Nodules in heart



Infected Navels



Joint infection



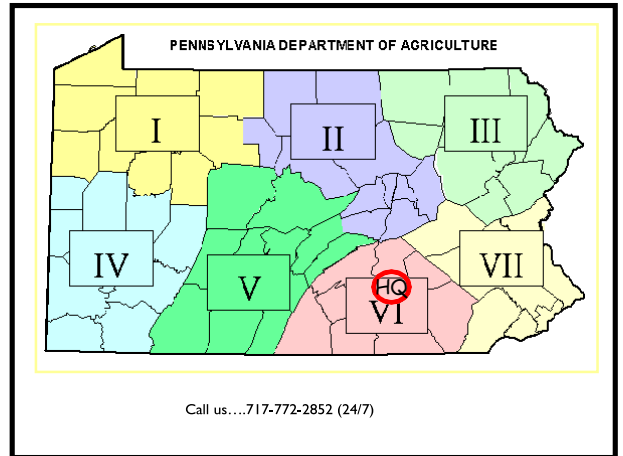
Enlarged liver



“OTHER” SALMONELLAS

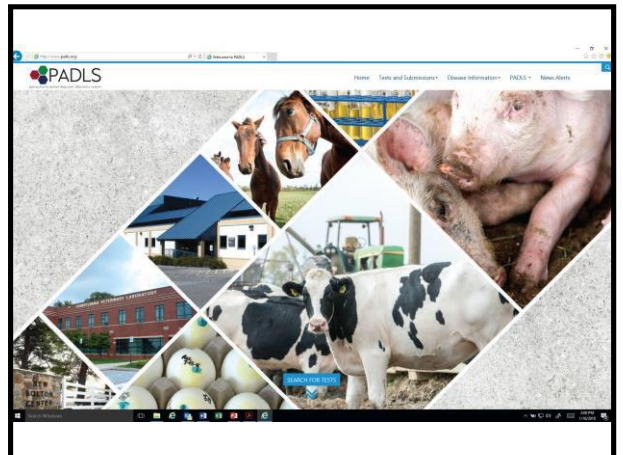
- Not “dangerous transmissible diseases” so no regulatory action except for program flocks & hatcheries
- Many salmonellas live in intestinal tract of healthy birds and other animals
- Some, like SE, are food-borne illness causing fever, abdominal cramps and diarrhea in humans
- May be spread by rodents, insects
- Baby poultry in farm stores – CDC reports hundreds of illnesses every year

IF YOU SUSPECT A
REPORTABLE DISEASE.....



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.)



YOU AS A CPT....

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

PREVENTING DISEASE SPREAD

BIOSECURITY

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

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

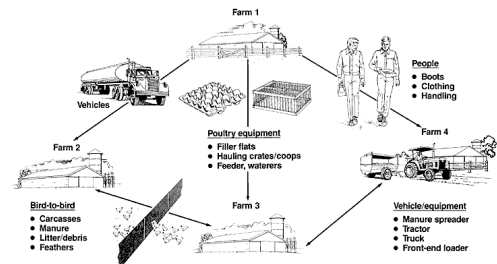
BIOSECURITY

- ✓ 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



USDA United States Department of Agriculture
Animal and Plant Health Inspection Service

Division Alert Number
APHIS 51-55-05
Issued 4/2002

The US Department of Agriculture is an equal
opportunity provider and employer.

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 flockowners, consider NOT having birds of your own

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

NEW ADDITIONS TO YOUR FLOCK

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

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..

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

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

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

BE SURE TO ALWAYS OBEY SIGNAGE



Biosecurity signs



Farm Quarantines

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.)

THINGS YOU CAN USE TO PREVENT DISEASE SPREAD.

- ✓ Boots
- ✓ Coveralls/clean clothing
- ✓ Hairnet
- ✓ Gloves
- ✓ Masks
- ✓ Soap and water
- ✓ Foot baths
- ✓ Physical lines of separation



ALWAYS WEAR BOOTS THAT ARE DISPOSABLE OR CAN BE DISINFECTED



PROPER CLEANING TECHNIQUE



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

DISINFECTING AND DISPOSAL OF EQUIPMENT

NON-DISPOSABLE EQUIPMENT

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

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

TYPES OF DISINFECTANTS

- Chlorhexidine (Nolvasan® = .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

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.

SAMPLING SUPPLIES

- Needles
- Syringes
- Sample Tubes
- Swabs

**Minimize amount of supplies taken onto farm

***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

GENERAL RULE

ONE FARM VISIT PER DAY

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

OFFICIAL PDA LEG BANDS (AVAILABLE AT NO COST FROM PDA)

Butt-End leg bands



Applicators specific to band size

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.,

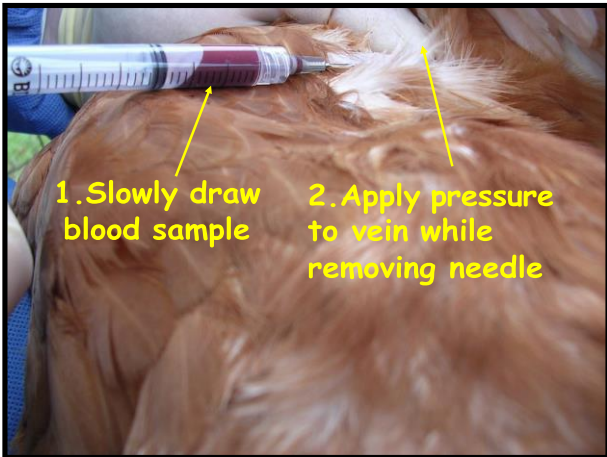
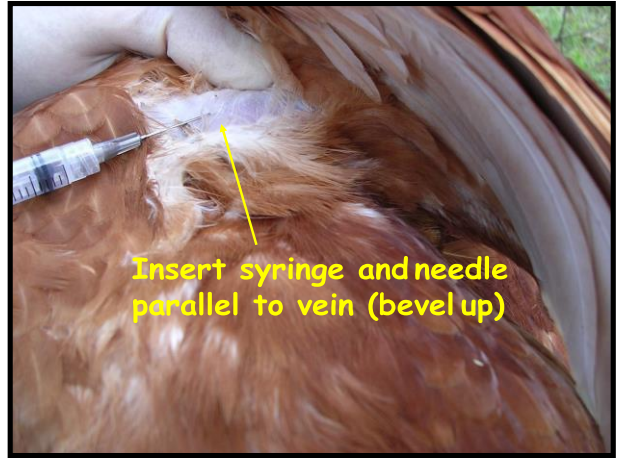
PO Box 72430

Newport KY 41072-

0430 USA 859-261-

2035

USA FAX: 800-261-8247



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 PDA regional offices
- 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

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 (if pullorum testing) in labeled box (do not place labeled tubes in a whirlpack bag)

BLOOD TUBE BOX FOR SHIPPING (SEAL WITH CAPS)



BLOOD TUBE BOX FOR HAND DELIVERY (CAN COVER WITH PACKING TAPE BEFORE SAMPLING)



Include numbering system on box, which corresponds to tube labels, for pullorum testing

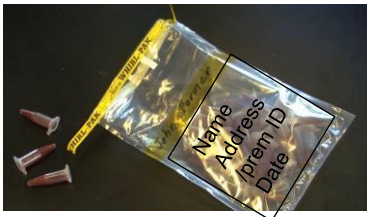
BLOOD SAMPLE HANDLING AND PACKAGING

- ✓ 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. If it's a hot day, keep the samples cool on frozen cold packs immediately after collection.
- ✓ 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
- Chill and submit ASAP

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
- Chill and submit ASAP

SAMPLE HANDLING AND PACKAGING – SNAP CAP TUBES



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
- ✓ Submit enough blood for additional testing in case of a non-negative result at PADLS

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!

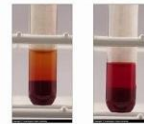
****PADLS accepts the right to determine suitability of a sample**

BLOOD SAMPLES

Acceptable sample



Hemolyzed Samples



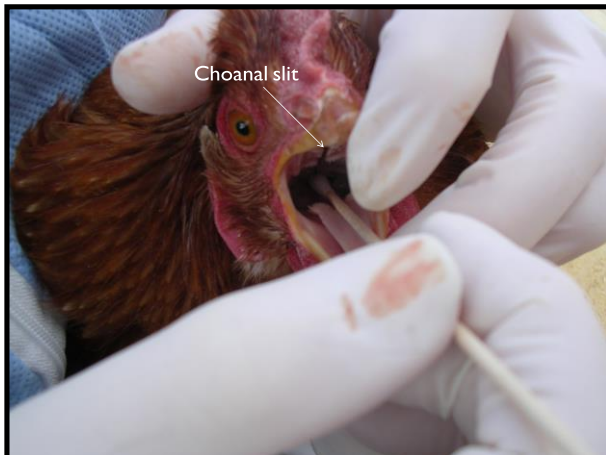
TESTING EGGS FOR AI

- Not as effective as blood testing (AGID)
- Can be used for routine surveillance in low-risk flock
- Submit eggs within a week of lay
- Eggs should be refrigerated after collection
- Submit in flats instead of crates
- Alert lab before submission

TRACHEAL & OROPHARYNGEAL SWAB COLLECTION AND HANDLING

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 sides of the trachea.
- Drag the swab through the choanal slit as you pull the swab out of the bird's mouth.



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.

SWAB HANDLING



CLOACAL SWAB COLLECTION AND HANDLING

FOR AI TESTING OF WATERFOWL

DOMESTIC 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.

Expose the vent



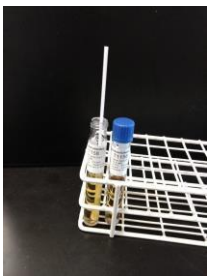
Insert the swab



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

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,

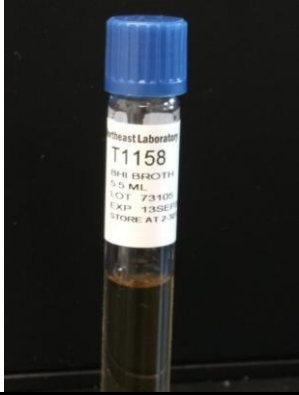
SWAB SAMPLE HANDLING AND PACKAGING

- ✓ 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

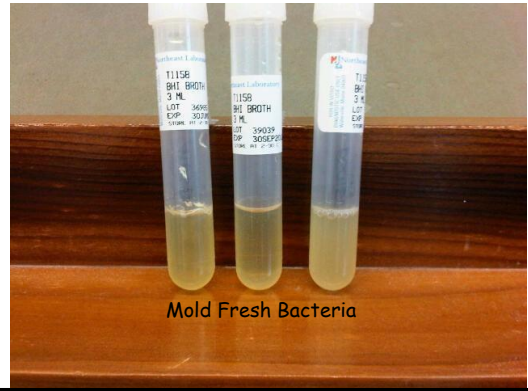
BHI

- 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
- A lab kit contains 6 tubes of BHI, swabs, and whirlpak bags

BHI



BHI



PADLS AI SWAB KIT



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

DO'S AND DON'TS OF SAMPLE SUBMISSION

Do:

- ✓ Place paperwork in plastic bag
- ✓ Secure lids on all boxes
- ✓ Include cold 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

DO'S AND DON'TS OF SAMPLE SUBMISSION

Do not:

- ✓ Do not ship open-top tubes
- ✓ Do not ship or deliver samples just prior to holidays or weekends
- ✓ Do not ship or deliver samples without completed paperwork
- ✓ Do not use "priority mail"
- ✓ Use "overnight mail" or a courier

SHIPPING CONTAINERS



REVIEW: SUBMISSION OF SAMPLES

- **Samples can be hand carried to the laboratory (preferred method) or shipped by overnight mail or courier. (Do not use priority mail).**
- *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.*

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
 - Sent *Priority* mail
- 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**

SAMPLE SUBMISSION FORM (REVIEW)

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 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)

REPORTING OF NON-NEGATIVE TEST RESULTS

- Testing may yield non-negative 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

Rapid Whole Blood Agglutination Plate Test for Pullorum



Plate with Light Source

PLATE TEST SUPPLIES

LOOP



Pullorum Stained
Antigen



BLEEDER with LOOP



IDENTIFYING BIRDS

Remember to ID with
official PDA leg
bands:



*All birds for shows (even
birds tested with the
pullorum rapid plate test)

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

*Keep records of band
distribution for 2
years

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
- CPTs using this test are expected to see some reactors, and testing may be observed

PLATE TESTING FOR PULLORUM

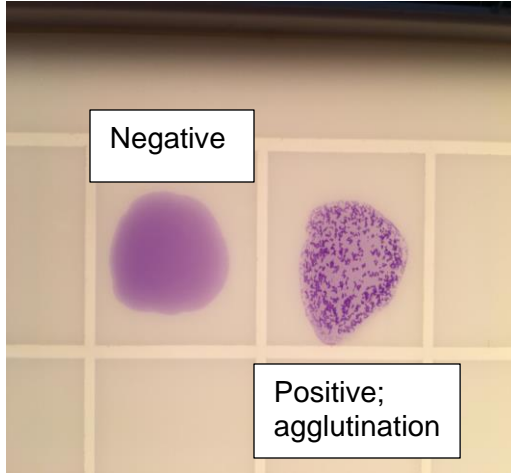


PLATE TESTING FOR PULLORUM

- Recommended only for use by commercial CPTs or those who do a lot of pullorum testing
- 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 (NPIP) 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 (NPIP) 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.

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

ADDITIONAL REQUIREMENTS FOR LBM CERTIFIED POULTRY TECHNICIANS

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

EXHIBITION POULTRY

PENNSYLVANIA REQUIREMENTS



FAIR RULES (POULTRY)

- PDA official identification required-PDA LEG BANDS
- Owner endorsed health certificate or CVI
- 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 \$\$

OWNER-ENDORSED AVIAN HEALTH CERTIFICATE

- Replaces a veterinary health certificate for entry into shows
- Required for all avian species and hatching eggs

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.

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



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

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

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

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

PULLORUM RESPONSE PROTOCOL

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

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)

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** prior to 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** prior to the show

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 possible
- *If confirmed positive at NVSL (AGID or PCR), must restart program & need 150 swabs negative for NY LBMS*

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.

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*

RENEWAL OF CPT LICENSES

- Re-application and license renewal every 2 years before January 1
- **Annual** continuing education required for **NJ LBMS CPTs** - open-book quiz
- Updated information for CPTs is on PDA website
- Quarantine order (2019) – CPT requirements

THE END



Any Questions?

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

NEXT STEPS

1. Please do not remove the completed exams from the classroom-return to the instructor
2. Have your classroom portion of the skills checklist signed by the instructor
3. Schedule your field skills test with your regional PDA veterinarian within 6 months
4. Make a copy, and send completed skills checklist and a \$10 check to PDA Harrisburg within 30 days after field skills test
4. Your license will be provided.

SECTION XVI: 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**

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.**
 - ✓ Waterfowl should be swabbed (cloacal swabs) and tested using virus detection testing. 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.).
 - ✓ 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 requalify 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, or the flock has a non-negative test (confirmed at NVSL), that flock will be considered inactive on the monitored flock program, will have to requalify 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.*
 - ✓ A CPT may collect samples from his or her own flock or a flock owned by a relative.
- “*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.
 - ✓ **A CPT may collect samples from his or her own flock or a flock owned by a relative (new 2017).**

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 NY LBMS-Crate washing: Transporters and distributors delivering birds to the NY LBMS will possess and utilize a working mechanical crate washer which cleans and disinfects crates between uses.
- For NY LBMS-Per NY regulation 45.6-8: Flocks with NVSL-confirmed non-negative tests must have 150 birds swabbed or remove the flock and C&D the premises before entry; and if monitored must restart the program.

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 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. It is not required to provide a PIC to the market owner (just the invoice).

HOW TO COMPLETE A POULTRY INSPECTION CERTIFICATE (PIC)

TESTED FLOCK PIC (PIC version3/24/17)

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) birds¹ were randomly sampled and tested negative for Avian Influenza² 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. 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: _____ 8. Sample Collection Date: _____

9. Lab Accession #: _____

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**).
You have 10 days to move the birds.

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 3/24/17)

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.

Monitored Flock Number = number assigned for the PA Monitored Flock Program by the PA Department of Agriculture.

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) birds¹ have been randomly sampled and have tested negative for Avian Influenza² monthly for a minimum of three (3) consecutive months. Monthly sampling thereafter of thirty (30) randomly selected birds¹ 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. 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: _____ 8. Sample Collection Date: _____
9. Lab Accession #: _____

Sample Collection Date = the date the samples were collected

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 – 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) birds¹ were randomly sampled and tested negative for Avian Influenza² 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. 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: _____ 8. Sample Collection Date: _____
9. Lab Accession #: _____

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 birds¹ 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: _____

¹ Eggs from gallinaceous poultry may be substituted for blood samples for testing of yolk by AGID only at the discretion of the receiving State.

² Using an AI official (approved) test conducted in a VS approved laboratory, pursuant to USDA's Prevention and Control of H5 and H7 Low

Pathogenicity

Avian Influenza in the Live Bird Marketing System Uniform Standards for a State-Federal-Industry Cooperative Program, effective October 20, 2004, as amended and supplemented, available at

https://www.aphis.usda.gov/animal_health/animal_dis_spec/poultry/downloads/lbms_program_standards_final.pdf

Revised March 24, 2017

PHOTOCOPIES ARE ACCEPTABLE

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: _____ Monitored Flock No. _____
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) birds¹ have been randomly sampled and have tested negative for Avian Influenza² monthly for a minimum of three (3) consecutive months. Monthly sampling thereafter of thirty (30) randomly selected birds¹ 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. 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: _____ 8. Sample Collection Date: _____
9. Lab Accession #: _____

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

SECTION C: OFFICIAL/TESTER CERTIFICATION

I certify that I have sampled thirty (30) random birds¹ 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: _____

¹Eggs from gallinaceous poultry may be substituted for blood samples for testing of yolk by AGID only at the discretion of the receiving State.

²Using an AI official (approved) test conducted in a VS approved laboratory, pursuant to USDA's Prevention and Control of H5 and H7 Low Pathogenicity

Avian Influenza in the Live Bird Marketing System Uniform Standards for a State-Federal-Industry Cooperative Program, effective October 20, 2004, as amended and supplemented, available at

https://www.aphis.usda.gov/animal_health/animal_dis_spec/poultry/downloads/lbms_program_standards_final.pdf

Revised March 24, 2017