The Lasher Laboratory

A Small Flock Owner's Best Friend

Cooperative Extension•Delaware State University

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What is Lasher Laboratory?

The University of Delaware-Lasher Laboratory is a diagnostic laboratory dedicated to poultry disease diagnosis, research and extension for the Delmarva Peninsula (DE, MD, VA Eastern Shore). It is named after Hiram Lasher who co-discovered Infectious Bursal Disease (Gumboro Disease) named after the town of Gumboro, DE, where the virus was isolated from a poultry farm. He was a pioneer in poultry vaccine development and manufacturing.

What can the diagnostic lab do for you?

My birds look sick…what do I do? First, you need to call the poultry veterinarian at the Lasher Laboratory. The discussion between you and the vet will determine which lab tests will be performed, and what disease control and treatment options are appropriate for your bird or flock.

What samples do I need to take to the lab? Diagnostic services are free to smallholder hobby poultry and pet bird owners in the state of Delaware, and eastern shore of MD and VA. You may submit live birds, sick birds or dead birds that recently passed away (not yet decomposed). By submitting a bird to the lab that is exhibiting symptoms of an illness, you may be able to save the rest of your flock from the same illness. Birds that are submitted to the lab for diagnosis are not returned to the owner due to necropsy (veterinary term for animal autopsy/dissection), organ sample collection and testing procedures, and general biosecurity considerations. A veterinarian who specializes in poultry and avian diseases performs the necropsy and makes a preliminary diagnosis in a written necropsy report. Hence, the job title "Poultry Disease Diagnostician."

Below, you will find a list of services offered by the Lasher Laboratory. The first six services are free and are part of normal necropsy sample collection procedures. These six tests are ordered by the diagnostician performing the necropsy.

1. *Humane euthanasia:* The diagnostic lab is able to visually inspect your birds prior to a humane euthanasia in preparation for a necropsy. This means that if you submit your bird to the lab, then rest assured that your bird will be put to sleep in a humane and dignified manner.

2. *Gross Pathology Reports:* Upon examination of your bird, the diagnostician in the lab will note any lesions, tumors, or any other pathological findings that point to the need for further tests. These findings will be noted in the report you receive shortly after submitting your bird.

*Infectious poultry diseases, like human and animal diseases, are caused by what we commonly refer to as germs/bugs. To be more specific, they are viruses, bacteria, fungi/mold, worms, and other protozoal parasites, or a combination of the above-mentioned infectious organisms. *It is important to accurately determine the specific cause of the disease to be able to recommend the right course of treatment or disease control (for example: supportive therapy, antibiotic therapy, vaccination, etc.).*

3. *Viral Poultry Respiratory Disease Screening (PCR) and Virus Isolation:* Samples collected during necropsy undergo tests for the evidence of common viral poultry diseases in the region, using rapid, highly sensitive, and accurate DNA testing. Further isolation and identification of important poultry viruses may also be done, which may take two to four weeks to complete.

4. *Bacterial Disease Testing and Antibiotic sensitivity testing:* Bacterial culture samples may be taken and tested further depending upon the necropsy findings of the diagnostician. Bacterial culture and antibiotic sensitivity may take a few days to two weeks, depending on the type of bacteria being isolated.

5. *Blood/ Serum Antibody testing:* Antibodies are protein substances in the blood that indicate exposure to specific disease organisms. They are produced to fight off the infection and they linger in the blood, even long after the bird recovers from sickness. The Lasher lab has specific lab tests that detect antibodies to common poultry diseases as another way to diagnose certain diseases. The blood samples are collected from a live bird, sick bird or multiple birds in a sick flock, usually as a disease surveillance tool.

6. *Fungal/ Mold analysis:* Sometimes upon necropsy, it becomes evident to the diagnostician that perhaps a fungus or mold is to blame for the illness. Samples are taken at necropsy for fungal/mold culture and identification. Fungal culture may take a few days to two weeks, depending on the type of fungus or mold being isolated.

**On-site flock evaluation or live bird evaluation/sample collection without euthanasia:* There will be occasional instances where sacrificing a beloved pet bird or a valuable show bird or breeder for diagnosis is not an option for the owner. You may take your sick bird to a veterinarian for diagnosis and or treatment. Alternatively, you may call the state vet's office, university poultry extension specialist, or county extension personnel to arrange an on-site visit and evaluation. The private veterinarian and Ag extension personnel will coordinate with the diagnostician at Lasher lab as to what available/appropriate tests to run at Lasher lab so that the correct samples are collected

on-site. Lastly, in special circumstances, you may discuss your case directly with the Lasher poultry diagnostician and schedule a visit to the Lasher lab compound where appropriate samples may be collected by the diagnostician. ***It is important to call ahead and schedule a specific time.*** The diagnostician will need time to prioritize seeing your sick bird first before working on his daily cases, so as not to expose your bird to other diseases. Be advised that there are limitations as to what diagnostic tests are available to be performed on live birds without the benefit of necropsy. ***Necropsy and lab testing is still the ideal option for poultry disease diagnosis.***

- *Tracheal (throat) Swabs:* Important poultry diseases like Avian Influenza, Newcastle Disease, Infectious Bronchitis, Infectious Laryngotracheitis, and Mycoplasmosis/Chronic Respiratory Disease may be preliminarily diagnosed by testing throat swabs. Confirmatory diagnosis may have to be done using viral and culture methods. Your private veterinarian, university poultry extension specialist, or state vet's office personnel may perform the swabbing and they may submit the samples for analysis, with prior notification and consent from Lasher lab.

- *Fecal samples for ID of intestinal parasites (worms, coccidia, other protozoa):* After consulting with your veterinarian and the Lasher diagnostician, it may be appropriate to collect freshly voided fecal samples to look for intestinal parasites. Usually, combined fecal samples from several birds are appropriate samples from a flock with egg production or weight gain problems. Individual samples may be appropriate in individually confined birds or when only one or very few birds are sick and are already isolated. Transport the fecal sample in a cooler with an ice pack to the Lasher Lab and they will perform microscopic examinations of the feces to determine if the eggs of worms are visible.

Guidelines for submitting Live or Dead Birds:

Please keep in mind that the quality of the result is determined by your ability to get the sample to the lab in a timely manner. Birds that have been dead and un-refrigerated for several days, have decomposed, or have been frozen are unlikely to yield much information of value. Call the lab before coming in with your sample to be sure that they are open: (302) 856-2585, ext. 702.

Dead Birds:

1. ***Do not freeze dead birds.*** Never freeze a dead bird because ice crystals destroy the tissues that the diagnostician uses to make an accurate diagnosis.

2. If you find a dead bird, triple wrap it and place it in a refrigerator until you can take it to the lab within a day or two of discovery. The procedure for triple-wrapping follows:

   a. This procedure requires 3 trash bags, tape, Lysol, and paper towels. Once you find the dead bird place it into the first plastic bag, seal it with tape, and spray the outside of the entire bag with Lysol. Wipe down the outside of the plastic bag.

   b. Next carry the bird to the entrance of your home and place it inside the second plastic bag, tape it shut, spray with Lysol, and wipe down the outside of the second bag.

   c. Bring the bird to the refrigerator, but before placing it inside the refrigerator, place it into the third plastic bag. Tape the bag shut, repeat the Lysol spray and wipe procedure on the outside of the bag.

   d. The bag is now triple wrapped and can be placed inside your refrigerator until you are ready to drive the sample to the Diagnostic Laboratory. Drive the deceased bird to the diagnostic lab in a cooler with an ice pack.

Live (Sick) Birds:

1. Place the sickened bird in quarantine on your farm until you are ready to drive to the diagnostic lab. Provide food and water for the bird.

2. Place the bird in a disposable container or cardboard box. Cut out sufficient air holes/ small windows for adequate ventilation for the drive to the diagnostic lab. Apple or orange boxes from the produce department of the grocery store are usually free and have large holes for ventilation.

3. If you are dropping off the bird in the box, the box will be incinerated for disease control purposes after the bird is necropsied.

Where is the Lasher lab located?

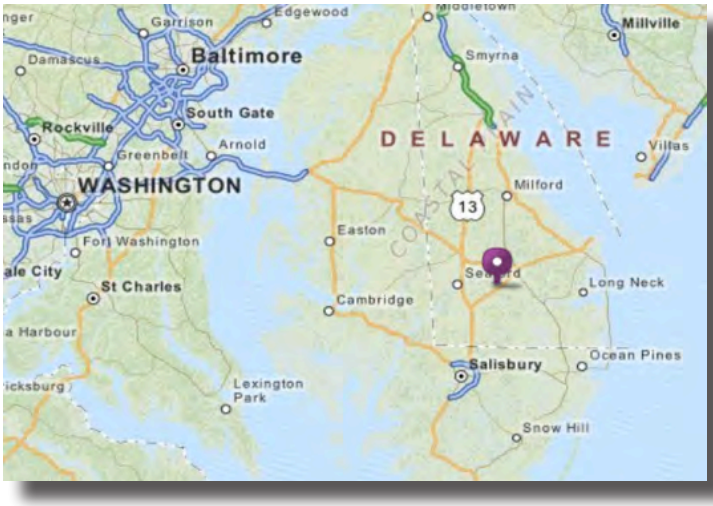
The Lasher Laboratory is located at 16483 County Seat Highway, Georgetown, DE 19947. Leave your birds inside your vehicle while you go inside Lasher lab and coordinate admission of birds/ samples with any of the personnel inside the Lasher lab building. After normal lab hours (Necropsy holding room is always open 24 hours, 7 days a week), birds/samples that you bring for necropsy are dropped off at the necropsy holding room. Please notify the diagnostician that you dropped off birds/samples, and fill out the accession sheet provided in the necropsy holding room as best as you can.

Directions from Points North:

- Travel south using US Route 1
- Merge onto US Rt. 113 South (Approximately 16 miles) to the junction of Route 9 (County Seat Highway) in Georgetown, DE (there will be an Exxon gas station on the right at this light on the southbound lane).
- Turn west (right) onto Route 9 and proceed west 4.7 miles.
- You will pass a Sussex Tech High School on the right. There is a stoplight at the school.
- Continue past the school 1.5 miles to reach the brick UD buildings on the right.

Directions from Points South:

- Travel north using US Route 113 North
- Follow US Route 113 North to the junction of Route 9 in Georgetown, DE (there will be an Exxon gas station on the right at this light on the southbound lane).
- Turn west (left) onto Route 9 and proceed west 4.7 miles.
- You will pass a Sussex Tech High School on the right. There is a stoplight at the school.
- Continue past the school 1.5 miles to reach the brick UD buildings on the right.



Drop-off Procedures:

1. Phone first to check that the Lasher Laboratory is open: (302) 856-2585 x702. The lab is closed on weekends and holidays.

2. Drive to the Lasher Laboratory (Figure 1). It is the one-story brick building next door to the two-story brick UD Carvel Research and Education Center buildings.

3. The necropsy entrance is located behind the Lasher Laboratory. To the west of the parking lot is Tyndall Road (County Road 444). This road takes you to the necropsy entrance (Figure 2). Look for a sign with blue letters on a white background that marks a gravel driveway (Figure 3).

4. Park in one of the three parking spaces that are to the right of the necropsy room (Figure 4).

5. Place your bird in a cardboard box (with air holes) into the after-hours drop-off lean-to that is to the right of the parking spaces. This room contains a refrigerator and shelves. If you have a dead chicken to drop off, then place it in the refrigerator. Place your box containing a live bird on the shelves.

6. Fill out the submission form (also called an accession form) completely and use the map on the wall to locate the grid in which you live. Be sure to leave lots of detail as to the length of sickness, symptoms, and copies of your sick log (if you have one).

7. Attach the submission form (accession form) to the box or bag. Using the phone in this room, dial extension 702 to inform the secretary that you have dropped off a sample.

8. Walk through the footbath as you leave.

Figure 1. The Lasher Laboratory as seen from County Seat Highway.

Figure 2. *Look for the Necropsy Entrance Only sign which marks the driveway to necropsy drop-off parking.*

Figure 3 (below). *This driveway is marked by the Necropsy Entrance Only sign. It leads straight back to the parking for necropsy drop-offs.*

Figure 4. *The three parking spaces are denoted by the red arrows in the photograph. The necropsy room is located to the right of the parking spaces. The after-hours drop-off room is the small lean-to to the right of the parking spaces.*

This is an overhead view of the Lasher Laboratory in relation to County Seat Highway (Route 9) as well as the necropsy lab in the back which is indicated by the red star. The yellow line indicates the marked route drivers should take when driving their vehicles back to the drop-off site for the necropsy lab.

What to do while waiting for a diagnosis:

The diagnostic lab is where many people drop off sick chickens. You will want to blow your nose, take a shower, wash your clothing, and scrub your shoes with a solution of bleach and water before coming into contact with your flock. If you can do so, take your car through a car wash to minimize the risk of bringing home a disease agent on your tires or with dirt on your car. Also, do the following as you wait to hear from the diagnostic lab:

- Quarantine any newly sickened birds. Keep them away from members of your flock that appear to be well until you hear from the diagnostic lab.
- Care for birds in quarantine last during your daily routine.
- Separate the equipment to be used in your quarantine area from your regular chicken coop. This will prevent cross-contamination as you wait to hear from the lab. To be sure that someone does not accidentally use quarantined equipment for your regular flock, mark the equipment with red tape.
- Keep the feed for your quarantined chickens in a separate container. Again, this helps to prevent cross contamination.
- Do not attend poultry meetings. Minimize movement on and off of your farm until you have a diagnosis. This makes you a good neighbor to your fellow flock owners.
- Once you have a diagnosis and a treatment plan, put it into effect to help your flock. Treat sick chickens first and then watch the rest of the flock for symptoms.
- Keep a sick log to help you track daily treatments and symptoms that you see. Three weeks after the last date in which you saw symptoms, you may return quarantined birds to your regular flock.

Summary

Most veterinarians do not treat chickens or other poultry. But you do not need to feel alone if a member of your flock falls ill. The diagnostic lab is a free tool for you to use in determining what treatment is right once a diagnosis is made. Make informed decisions when members of your flock fall ill by using the diagnostic services that are provided to you at low or no cost. Spending money on antibiotics from the feed store could be a costly mistake without getting a diagnosis first. If you have any questions about good management practices or using the diagnostic lab for your flock, contact Dr. Brigid McCrea at (302) 857-6432 and she will gladly assist you. You are not alone when your chicken gets sick.

Mission

The mission of the Lasher Laboratory is to provide diagnostic services to the Delmarva Peninsula commercial poultry companies and smallholder private poultry producers in a timely and accurate manner, and provides independent expert opinion on poultry disease detection and control, and mostly anything related to poultry management.

The Lasher Laboratory is open Monday through Friday from 8 AM to 4:30 PM. It is closed on weekends and holidays. The telephone number for the Lasher Laboratory is (302) 856-2585 ext.702.

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