

Answer the Call

Treating urban flocks benefits owners and animal health officials



Poultry owners who want to show, sell or trade their birds in Texas, must have their flocks certified as free from pullorum disease and fowl typhoid under the Texas Pullorum-Typhoid Program, which the Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL), manages. In addition, TVMDL maintains two laboratories dedicated to poultry diagnostics; they are located in Center and Gonzales. Yearly, TVMDL poultry epidemiologists survey thousands of birds across the state to ensure flock health.

Today, not all flock owners are commercial corporations or rural backyard growers. Urban flocks are on the rise, and many new bird owners have only two or three birds to provide eggs. Testing these birds is as imperative as testing at commercial producers because these birds come into regular contact with other family pets, increasing health risks.

With the help of TVMDL, veterinarians can learn the best method to perform a live-bird tracheal swab and also to safely take a blood sample from poultry, the two samples TVMDL uses to test for diseases like avian influenza, infectious bronchitis or Newcastle disease. Veterinarians service the Texas animal health industry by certifying poultry are healthy.

Perform a Tracheal Swab

A tracheal swab is the suggested method for taking a sample from the



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upper respiratory tract. The swab method can determine if a bird is infected with a virus or bacteria. TVMDL recommends swabbing a live bird in a well-lit area so that the larynx is visible.

Timing the opening and closing of the larynx helps to time the insertion of the swab into the trachea. The main concern when swabbing is to avoid swabbing just the mouth, pharynx or esophagus.

Supplies: To perform the trachea swab successfully you need polyester (dacron) swabs with a plastic shaft, a brain heart infusion (BHI) broth in tube (recommended 3 ml), and a zip-to-lock style bag.

In order to properly control the bird during the swab, place your thumb and index finger on either side of the beak, helping to hold the mouth open. Then, insert the swab into the trachea. After swabbing, place the swab in the BHI broth; swirl vigorously. Next, remove the swab from the BHI tube by pressing it against the tube sides repeatedly so that excess liquid is off the swab, then cap the tube. Now, dispose of the swab.

Use only one swab per bird and, if testing multiple birds at one location, pool no more than five swabs per tube of BHI broth. Remember to keep the BHI broth cool. Last, label the tube and place in zip-to-lock style bag; the bag should be labeled with bird's location and owners contact information.

After these few steps, the sample can be sent via free FedEx mailing label to TVMDL for testing.

Collect Blood with Ease

The aim of blood collection with any animal is to obtain a quality serum sample, free of hemolysis and contamination. While poultry are small, they can be easily managed to obtain the necessary sample. TVMDL recommends following these steps for success.

Supplies: To collect blood you need a 3 or 5 ml syringe; a 20-gauge, 1.5-inch needle; red top tube; zip-to-lock style bag.

Using the syringe and needle, prepare for collection by pulling the plunger back to break the seal and prevent sudden suction that can cause the vein to collapse. Next, identify the brachial—wing—vein, this vein will provide sufficient blood.

Once the area is identified, remember to pull back the plunger gently to avoid collapsing the vein. If the blood flow stops, rotate the needle to move the bevel from the vein wall. Occasionally, a hematoma will form, just like with any other animal. If this impedes blood flow, attempt the collection from the other side.

To create an optimum sample for delivery to TVMDL, remove the needle from the syringe and transfer the sample to a red top tube (remove the cap) without vacuum assistance. Collect at least 1 ml of blood, more if possible; however, leave at least one-fourth of the tube empty and recap the tube. Now, allow clotting with the tube in a slanted or horizontal position. The aim is to increase serum yield in the tube. Remember to incubate at room temperature until the blood separates into a cell clot and clear-to-yellow translucent serum. If shipping the clot and serum to the lab takes more than 24 hours, please separate the serum for the clot.

Now, clearly label the zip-to-lock style bag for shipping or delivery. It is important to keep samples cool with an ice pack if shipping takes more than four hours.

About TVMDL:

The Texas A&M Veterinary Medical Diagnostic Laboratory protects animal and human health through diagnostics. An agency of the Texas A&M University System, TVMDL comprises two full-service laboratories, in College Station and Amarillo, and two poultry laboratories, in Center and Gonzales.

If you have questions regarding the Texas Pullorum-Typhoid Program, contact J.C. Essler, poultry programs administrator, at (979) 845-4186 or at jessler@tvmidl.tamu.edu.

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