When trying to diagnose Mycoplasma hyopneumoniae infection in live pigs, it is critical to sample MHP colonization sites characterized by respiratory type epithelium, such as the trachea. We have developed some “Best Practice” guidelines to help with getting these samples to the lab. These guidelines will ensure that samples arrive in a manner that is appropriate for processing and testing.

Tracheal sampling can be achieved with a bit of technique and a few tools (snare, oral speculum, laryngoscope, post-cervical AI rod, scissors, gloves, 5ml snap cap tube and 2mls of PBS).

At the ISU VDL, a variety of MHP testing is available (PCR, ELISA, IHC) Monday - Friday.

Additionally, due to a growing interest in screening expected negative MHP breeding stock by PCR prior to movement and/or as part of a follow-up to MHP ELISA positive test results in expected MHP negative herds, MHP PCR testing through the VDL’s Health Assurance Testing Services (HATS) lab is an additional service that provides benefits of additional segregation within the lab and helps the VDL better understand the context of the particular submission.

A short demonstration video is available on the ISU VDL website: vetmed.iastate.edu/vdl

The basic instructions are as follows:

1. Safely snare the pig.
2. Place the oral speculum inside the oral cavity to open the mouth.
3. Use the laryngoscope to lower the tongue and improve visibility.
4. Locate the larynx at the back of the mouth.
5. Gently insert the end of the rod (use the end with the clear plastic adapter). When you enter the trachea you will notice a change in vocalization.
6. Gently insert the rod up and down the trachea, then quickly remove.
7. Remove speculum and snare.
8. Insert the end of the rod into a 5ml snap cap tube filled with 2mls PBS and cut off rod so that it fits inside the closed tube.
9. Label the tube and submit to lab with appropriately completed paperwork.
Brucella testing: What's the Best Test? 

Wendy Stensland
Receiving

Wendy was born and raised in Iowa, except for a few brief years spent in Missouri. She spent most of her youth on her family farm raising hogs. She attended Iowa State University, receiving her Bachelors of Science degree in Biology.

Wendy began working in the ISU VDL in 2001. Wendy serves as the mailroom supervisor, providing daily leadership and oversight to the samples and cases received. She also actively manages the program, non-program, and zoonotic disease surveillance and reporting responsibilities at the ISU VDL. In such, she has frequent correspondence and provides the necessary diagnostic and/or disease incidence information to ISU VDL, clientele and the appropriate university, state, and federal animal health and public health officials and agencies.

Wendy, along with her husband Scott, have four adult children. She enjoys lifting weights, drinking craft brews, gardening and being outside.

Moving animals across State borders.

First, find out which test, if any, is required for entry of the species-type into the State of destination. If only a negative Brucella test result is required, we recommend the Brucella abortus/ suis Buffered Acidified Plate Antigen (BAPA) screen test, which the ISU VDL forwards the sample to National Veterinary Services Laboratory (NVSL) for confirmatory testing. NVSL sends their test results to the area-veterinarian-in-charge, the USDA Brucella epidemiologist, veterinarian of the State of origin, and to the ISU VDL. ISU VDL reports only the result of the NVSL confirmatory tests. The Brucella epidemiologist issues the official interpretation of the results.

Brucella canis.

This is a significant reproductive disease agent of dogs, an intracellular bacterium and often found in breeding kennels throughout the United States (3). While generally thought of as an organism that produces abortions, the clinical signs of B. canis infection are varied and can be misinterpreted (3). Thus, it is possible for infected animals to raise infected puppies that can enter consumer markets (3). Routine testing and retesting helps kennel owners and veterinarians detect antibody against, and therefore infection from, B. canis. Any one of several tests detect B. canis antibodies. The essence of diagnosis is time, not in a test result alone (4). Time and retesting become the diagnostician’s allies. The ISU VDL offers one test platform for B. canis antibody testing: B. canis rapid slide agglutination test (RSAT).

In the event the confirmatory Brucella FPA result is negative, the ISU VDL forwards the sample to National Veterinary Services Laboratory (NVSL) for confirmatory testing. NVSL sends their test results to the area-veterinarian-in-charge, the USDA Brucella epidemiologist, veterinarian of the State of origin, and to the ISU VDL. ISU VDL reports only the result of the NVSL confirmatory tests. The Brucella epidemiologist issues the official interpretation of the results.

Table 1. Summary of B. abortus/suis BAPA Screen Test.

<table>
<thead>
<tr>
<th>Test Name</th>
<th>Species</th>
<th>Purpose of Test</th>
<th>Screening</th>
<th>Confirmatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>BAPA Screen</td>
<td>Bovine, Porcine</td>
<td>Screen</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brucella FPA</td>
<td>Bovine, Porcine</td>
<td>Confirmatory</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In the event the confirmatory Brucella FPA result is non-negative, the ISU VDL forwards the sample to National Veterinary Services Laboratory (NVSL) for confirmatory testing. NVSL sends their test results to the area-veterinarian-in-charge, the USDA Brucella epidemiologist, veterinarian of the State of origin, and to the ISU VDL. ISU VDL reports only the result of the NVSL confirmatory tests. The Brucella epidemiologist issues the official interpretation of the results.

Table 2. Brucella canis test reaction(s) and Interpretation.

<table>
<thead>
<tr>
<th>Animal ID</th>
<th>Specimen</th>
<th>Test Name</th>
<th>Result</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunky</td>
<td>Serum</td>
<td>B. Canis RSAT</td>
<td>Pos</td>
<td>&quot;Positive&quot;</td>
</tr>
<tr>
<td>Story</td>
<td>Serum</td>
<td>B. Canis RSAT</td>
<td>Neg</td>
<td>&quot;Negative&quot;</td>
</tr>
<tr>
<td>Brucella</td>
<td>Serum</td>
<td>B. Canis 2-ME-RSAT</td>
<td>Pos</td>
<td>&quot;Positive&quot;</td>
</tr>
<tr>
<td>Brucella</td>
<td>Serum</td>
<td>B. Canis 2-ME-RSAT</td>
<td>Neg</td>
<td>&quot;Negative&quot;</td>
</tr>
</tbody>
</table>

Questions?

Please contact ISU VDL Client Services at 515-294-1950 or isuvdl@iastate.edu