

Illinois Department of Agriculture Animal Disease Laboratory Laboratory Notes

April 1, 2015



Accredited by the American
Association of Veterinary
Laboratory Diagnosticians

AAVLD

The laboratory has applied for and received accreditation by the American Association of Veterinary Laboratory Diagnosticians, a non-profit professional organization whose goals are:

- Disseminate information relating to the diagnosis of animal diseases
- Coordinate diagnostic activities of regulatory, research, and service laboratories
- Establish uniform diagnostic techniques
- Improve existing diagnostic techniques
- Develop new diagnostic techniques
- Establish accepted guidelines for the improvement of diagnostic laboratory organizations relative to personnel qualifications and facilities
- Act as a consultant to the United States Animal Health Association on uniform diagnostic criteria involved in regulatory animal disease programs

Accreditation by the AAVLD requires a lengthy application process, a site visit by a team of trained inspectors, and approval by the organization accreditation committee.

The laboratory is also a member laboratory of the National Animal Health Laboratory Network (NAHLN), a member laboratory of the Food Emergency Response Network (FERN), and an authorized laboratory of the National Poultry Improvement Program (NPIP).

Avian Influenza Update

Highly pathogenic avian influenza (HPAI) has been detected in

two turkey flocks in Missouri, a flock in Minnesota, and in Arkansas, as well as in the North-western US. HPAI poses a significant risk to backyard poultry and could impact commercial poultry. Highly pathogenic strains of avian influenza produce fatal infections in poultry with mortality reaching 100% with some strains. Avian influenza should be strongly suspected when high mortality occurs in flocks of chickens or turkeys. Avian influenza is a reportable disease.

Meet the Staff

Shelley Snyder is a Microbiologist II at the laboratory. She works in the molecular biology and virology sections, performing many of our PCR tests, rabies examinations, and a number of other procedures. Shelley has been with the laboratory for 23 years and has worked in the serology, bacteriology, and virology sections of the laboratory, starting out as a Laboratory Technician I and working up to her current position. Shelley has a BS in wildlife conservation with a minor in biology.



Shelley has lived on both coasts, and in Oklahoma, and currently resides in Gilson, Illinois in Knox county. Before joining the laboratory, Shelley served four years in the US Navy and was stationed in the Phillipines, Iceland, and Maine where she worked on aircraft hydraulic systems. Shelley has three older sisters and several nieces and nephews, great-nieces and great nephews. She

enjoys traveling (she got her wonderlust from serving in the Navy), hiking, reading, and attending baseball games. She has a number of cats at home.

New tests

Positive fecal cultures for Johne's disease will now receive confirmation by polymerase chain reaction (PCR) testing. In the past cultures that grew on appropriate media were assumed to represent Johne's bacillus; however, now we have the technology to confirm a positive culture as *Mycobacterium avium* ssp *paratuberculosis*. The confirmatory test will add \$35.00 to the cost of a positive culture.

Lead toxicosis

Spring generally brings a few calves under 300 pounds with a vague history of CNS signs and no demonstrable lesions. A primary rule out in these cases is lead toxicosis. If positive, we can generally demonstrate lead in organs or whole blood, but timely suspicion will allow you to identify old batteries several days sooner than the lab results arrive and can prevent other losses. Assurance from producers that there are no batteries around is common, but they should be strongly encouraged to look again.

Abortion submissions

The lab receives a number of aborted calf submissions each spring and fall to test for infectious causes of abortion. Here are a few helpful observations:

- One of the last things to happen developmentally before birth in a bovine fetus is eruption of the incisors. If the

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incisors are erupted, the calf is at or near term.

- Placenta, that is, a cotyledon, is often valuable and sometimes the only location a lesion can be found. If placenta is available, please include cotyledons in fresh and fixed samples.
- Fresh tissues to be submitted include lung, liver, kidney, and placenta.
- Fixed tissues to be submitted include brain, lung, heart, liver, kidney, placenta, and an ear notch.
- Submitting ocular fluid (aqueous humor) for nitrate/nitrite analysis is of potential value; however, putrefactive bacteria can produce endogenous nitrate and nitrite that mimic the findings in nitrate toxicosis. Illness in the dam and other exposed adults, abortion within 1-2 weeks of exposure to contaminated feed, and elevated levels of nitrates in feed are required for a definitive diagnosis of nitrate-induced abortion.
- Counseling your client that abortion workups are done to rule out infectious conditions, and may not produce an absolute determination of the cause (which are myriad), will go a long way toward avoiding disappointment from a negative workup.

Fair Season

It's not too early to begin reminding clients of the serology testing and veterinary inspection requirements for fairs and other exhibitions. In-state certificates of veterinary inspection and associated blood tests are good for 90 days.

Expected laboratory turn-around time at the laboratory for

serology during fair season will be **FOUR** working days. If shorter turn-around times are required, submissions will be subject to an emergency fee of \$50.00 per accession. Should additional tests be necessary, i.e., a confirmatory test is required following a positive result on a screening test, results of that confirmatory test will not be available the same day. The sample must be at the laboratory by 10:30a for same day emergency service.

Biosecurity

The recent and rapid spread of porcine epidemic diarrhea reminds us all that biosecurity is an important part of modern livestock production. While veterinarians are generally well up on security issues, it is always good to remind producers to beware of security on their farms.

An acronym currently employed to help organize thinking is "IRS"- isolation, resistance, sanitation.

Isolation

- Isolate all new livestock purchases for at least 30 days and retest for target diseases before addition to the herd.
- Prevent or restrict visits by outside personnel.
- Minimize fomites (contaminated items-boots, clothes, vehicles) entering the facility.
- Ensure that anyone returning from foreign travel is restricted from contact with animals for 7 days and do not bring any food items back from foreign travel.

Resistance

- Maintain vaccination status of the herd
- Vaccinate all new arrivals before admitting to the herd
- Exposure of breeding stock to infectious agents already

present in the herd will ensure passive immunity in neonates.

Sanitation

- Clean between groups to minimize environmental buildup
- Use boot baths and, in confinement situations, change clothes before moving between production stages
- Wash trailers after hauling animals

These few points are just a skeleton of what could be written. All producers will benefit from your occasional reminders to "protect yourself first."

Forms on Website

If you haven't visited our updated website lately, please do so. The Agriculture website has been overhauled and updated with lots of helpful information. The form for serology submissions, commodity requests, and our standard submission form are all there in fillable formats. Also on the website is our Animal Disease Laboratory Tests and Fees schedule which will give you an idea of turn-around time, sample(s) to submit, and cost per test. Go to <http://www.agr.state.il.us/laboratory-services/>

Remember that numbered commodity items (tags or certificates) and tuberculin must be assigned to an individual licensed accredited veterinarian rather than just to a practice.

Shipping Charges

Shipping charges for supplies (tags, certificates of veterinary inspection, EIA forms, etc.) and samples forwarded to other laboratories will increase to \$13.00 per package on April 1, 2015.