



Sep 2012

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CALENDAR OF EVENTS:

Veterinary Deputy Accreditation Seminar

October 4

Young Ag Leadership Conference

October 5-7

Northern International Livestock Exposition (NILE)

October 16-20

Montana Wool Growers Convention

December 1-2

Montana Stockgrowers Meeting and Trade Show

December 13-15

MVMA Winter meeting

January 25-26

StockQuotes Animal Health Newsletter

<http://liv.mt.gov/ah/newsletter>

Quarterly Newsletter from the Animal Health Division of the Montana Department of Livestock:

Volume 5, Issue 3

State Veterinarian Notes

I'll start this issue with a couple of announcements relating to the trichomoniasis program. First, the official color for trich tags as of September 1st is orange. Second, based on your feedback, as well as a recent study that showed minimal reduction in sensitivity from pooled samples, the lab can pool most trichomoniasis samples at the veterinarian's request. Please note that individual samples must be submitted, and the laboratory will combine up to five bulls per pool. Hope this change helps livestock producers continue surveillance for this disease while keeping costs reasonable.

The options for electronic documentation of animal testing and transport continue to expand. A recent addition is a PDF form (eCVI) developed by Colorado and Kansas that can be filled out and emailed to the state of destination. This is already used by several dozen veterinarians in Colorado and Kansas and has been well received. Please contact the MDOL office if you'd like to start using this option. The eCVI PDF augments other electronic solutions I've previously discussed including GlobalVetLink, USDA's VSPS, as well as MDOL's online permitting for equine imports (<http://animalhealthimports.mt.gov>) which has recently received some updates and bug fixes.

West Nile Virus (WNV) made its unwelcome return this summer with six equine cases. Hot dry weather such as we experienced in 2007, also prompted concerns over bluetongue (BTV). While Epizootic Hemorrhagic Disease (EHD) has been documented in a number of states, including Nebraska and Illinois, we've had very limited EHD (in wildlife) and no BTV documented in Montana as of late September (knock on wood). More on the recent WNV cases and other reportable diseases later in this issue.

Also in this newsletter is a column on Johne's disease based on a recent journal article from the Veterinary Clinics of North America-Food Animal Practice. I've tried to

capture the main points of this issue including transmission, management, and treatment. Of particular note are recommendations for management of purebred/seedstock herds.

As you may know, the inhumane practice of soring horses continues in some Tennessee Walking Horse circles. By establishing minimum penalties for violators under the Horse Protection Act, the USDA has recently taken a more forceful approach with horse associations that seemed to turn a blind eye to this practice. The American Association of Equine Practitioners (AAEP) has a standing position statement condemning soring, and the AVMA recently praised the USDA's efforts to curb this practice. Please see the USDA column for more information on the Horse Protection Act.

Also, please see the staff column. We're using the space in this issue to highlight Dr. Abbey Canon who recently joined the department of public health (DHHS) for a two-year assignment from the National Public Health Service. Dr. Canon will work on strengthening communication between public and animal health. She will also help coordinate incidents involving rabies as it pertains to postexposure prophylaxis for people and rabies quarantines for animals. As part of this "bridging" effort, we'll be including an insert with this StockQuotes newsletter starting with an overview of Q-Fever with this edition.

Please see the brucellosis column for a summary of our recent brucellosis program audit. The review was conducted to allow Montana to continue state management of our brucellosis program and maintain Brucellosis Class Free status which allows the majority of Montana cattle to ship interstate with no brucellosis testing restrictions. The main issues identified in the review are listed in the full column but I'll just say briefly (spoiler alert) that Montana's evaluation went well. ☺ mz

Reportable Diseases

In Montana and elsewhere, a number of zoonotic diseases have made their appearance this summer. The list includes rabies, West Nile Virus (WNV), vesicular stomatitis (VS), swine flu, and Q fever.

RABIES: To date, Montana has seen 16 cases of rabies (1 horse, 1 dog, 1 cow, 3 skunks, and 10 bats). Counties with positive rabies cases include Big Horn, Carter, Custer, Gallatin, Lincoln, Mineral, Missoula, Rosebud, Wheatland, and Yellowstone.

Unfortunately, the laboratory determined several samples as “unsuitable” for testing due to improper submission techniques. An unsuitable rabies test greatly complicates the management of these cases, especially if human exposure is involved. In the U.S., between 23,000 and 38,000 people per year receive poste-exposure prophylaxis vaccinations at a cost of over \$2,000 each.

In a couple of recent submissions, part of the brain was sent in formalin instead of refrigerated and fresh. If you are not familiar with current submission techniques for rabies testing, MDOL can provide you with the current protocol. Dr. Layton has also provided a brief refresher in the laboratory section of the newsletter.

WEST NILE VIRUS (WNV): For the first time since 2009, MDOL is seeing positive cases of WNV. This is a little surprising for those who felt that the dry summer would not be ideal for transmission of the disease. Montana has had 6 positive cases; one case each in Carbon, Cascade, Richland, and Yellowstone counties, and two positive cases in Powder River County. Only one animal, a 3 year old grade mare who had received a single dose of vaccine in 2009, had any history of WNV vaccination. The mare presented with severe ataxia, but appears to be making a full recovery. One other animal recovered, however, the remaining 4 cases either died or have been euthanized.

Q FEVER: MDOL, in cooperation with the Centers for Disease Control (CDC), is conducting ongoing surveillance on a Q fever positive goat herd that was part of the 2011 investigation. The herd were tested during kidding season and then again 3 months later. The animals will be sampled again in December and one more time mid-kidding in 2013. The purpose of the surveillance is to gather information on the shedding patterns

of affected flocks. While it's known that peak shedding occurs near parturition, the study aims to assess long term shedding including subsequent kidding cycles. This data will hopefully allow human and animal health officials to make more practical recommendations for positive flocks.

VESICULAR STOMATITIS (VS): In early September, USDA conducted a foreign animal disease (FAD) investigation in Ravalli County. The horses on the premises had a history of recent travel and lesions on the nares and oral mucosa. Fortunately, the FAD investigation suggested trauma, rather than VS which was confirmed by samples submitted to the National Veterinary Diagnostic Laboratory in Ames, IA. We appreciate the report from the astute clinician who contacted our office.

New Mexico and Colorado have seen numerous VS cases throughout the summer. To date, 2 equine premises in 2 Colorado counties and 32 equine premises in 10 New Mexico counties have been VS positive in 2012. At this time, only 5 premises (4 New Mexico, 1 Colorado) remain under quarantine. Quarantines are released 21 days after lesions have healed in all affected animals.

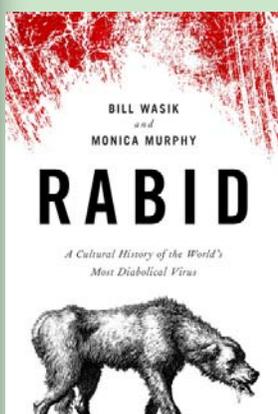
For those of you who have written health certificates for equine movements this summer, you may have encountered increased requirements in response to the outbreak. MDOL has adjusted Montana's import requirements to enable Montana veterinarians to provide adequate certifications statements on horses destined for Canada that recently originated from either New Mexico or Colorado.

SWINE INFLUENZA: Since the beginning of 2012, 297 cases of the H3N2v strain of swine influenza in people have been identified. The cases were primarily found in young people who exhibited at state or county fairs in Indiana, Ohio, and Minnesota. Subsequent testing of pigs at state fairs showed that animals may be shedding the virus without demonstrating clinical signs. The current strain of swine influenza shares a gene with the 2009 H1N1 pandemic virus which likely accounts for the easy transmission of the virus from swine to people. The primary risk factor identified to date is close or prolonged association with swine. ☒

By Tahnee Szymanski, DVM



MDOL's Todd Stanley assisting with sampling of Q fever affected goat herd.



Above: A recently published book about the history of rabies.

Johne's Disease Overview

Johne's continues to challenge Montana producers and their veterinarians. During the last fiscal year, MDOL received 1449 Johne's ELISA submissions with 41 positive results. During the same period, we received 12 positive confirmatory samples (PCR or culture) from 121 submissions from seven herds.

While Johne's is not a quarantinable disease, Dr. Szymanski and I have been following up with veterinarians that submit positive samples to review herd management. Dr. Layton has written several articles on this topic for this newsletter, but it may be helpful to highlight several key points.

PREVALENCE: Dairy herds have significantly higher infection rates than beef herds. While studies have shown that up to 70% of dairies may be affected, it's estimated that the number of positive beef herds is between 8 - 28%. The low end of that range is almost certainly an underestimate because that study was designed to detect Johne's herds where at least 10% of the animals are affected. The 28% comes from a Canadian study published in 2002.

TRANSMISSION: Animals typically get exposed to the Johne's organism in the first six months after birth or get infected while still in utero. A 2009 study reports that the likelihood that a clinically positive dam will transmit the disease to her fetus is nearly 40%.

"Trojan Horse" purchased animals are the most common culprit in spreading Johne's from herd to herd with subclinically infected breeding bulls presenting a high risk. The November 2011 Veterinary Clinics of North America journal states that Johne's "infected cattle are not suitable as breeding livestock; they will have a shortened herd life and will likely transmit this incurable, contagious, infectious disease to the buyer's herd." These concerns are consistent with the Federal Code of Regulations (9 CFR 71.3 9) that make it illegal to move animals affected with Johne's interstate. Additionally, selling seedstock from a positive herd may make the seller financially liable for the consequences of spreading the disease into a naïve herd. For all these reasons, seedstock producers are in a position to reap the greatest benefit from enrolling in a Johne's certification program as well as pursuing aggressive efforts to rid their herd of this disease.

The journal also recommends purchasing additions from a known low-prevalence herd that has an established control program rather than from a herd with unknown status. While this recommendation is particularly instructive for dairy herds where the Johne's incidence is higher, it should also be considered with beef herds where the chance of "buying" the infection is somewhat lower.

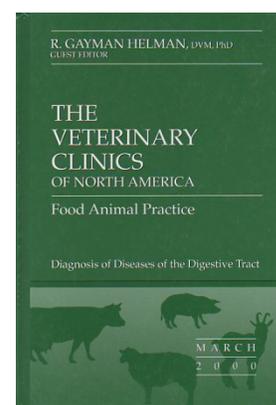
Short of purchasing animals from a herd of known Johne's status, the new owner can test newly acquired animals, but based on the long incubation period for the disease, testing of young, non-clinical animals is often unrewarding.

CONTROL: The lack of a highly sensitive test, delayed onset of the disease, and a significant rate of in utero transmission have hampered control efforts. However, several strategies are recommended including:

- 1) Eliminating all PCR/culture positive animals (and possibly their most recent calf) from the herd.
- 2) Improving sanitation of calving and calf facilities to reduce the exposure to calves in the first 6 months of life.
- 3) For herds conducting active testing programs, separating adults by serological status into test positive and negative groups may reduce exposure to naïve animals. Seropositive animals need enhanced observation and testing.

TREATMENT: For high value livestock, treatment can extend the life of an animal and to reduce the shedding to herdmates. Isoniazid, rifampin and clofazimine are most commonly used for cattle, though each of these is "extra-label". Additionally, levamisole for its immune modulation properties and monensin may be of benefit when combined with other strategies. Treatment has been shown to ameliorate diarrhea and maintain body condition, but is not curative and, therefore, must be maintained for the life of the animal. While not practical on a herd basis, treatment may have applications for valuable bulls for semen collection and other select uses.

The Nov. 2011 issue of the Veterinary Clinics of North America - Food Animal Practice was used as a reference for this column. ☘ mz



Veterinary Clinics of North America - Food Animal Practice. The November, 2011 issue focuses on Johne's disease. It's worth reading.

Brucellosis Program Audit



Photo credit: Matt Gouras

In mid-September, a group state and federal animal health officials conducted an audit of Montana's brucellosis program. In addition to USDA staff, the review team included members from the livestock agencies of the three Greater Yellowstone Area states, as well as the state veterinarian of Washington. The team focused on livestock testing, wildlife surveillance, and traceability of livestock using identification and brands.

While the final report is not yet complete, the exit interview contained several recommendations, some of which include: 1) Conduct more public outreach to inform and educate cattle producers throughout the state of the brucellosis surveillance program. 2) Increase the number of herd plans for herds that utilize the DSA year-round or seasonally. 3) For the three GYA states, standardize how surveillance is conducted for seasonal herds. 4) Ensure that cattle being shipped directly to slaughter from ranch of origin be tested for brucellosis because of the decreasing national brucellosis slaughter surveillance program (MCI). 5) Resume the use of late elk hunts as a method to redistribute elk to reduce conflict with livestock at key times of the year. We look forward to reviewing these recommendations.

The review team also made several commendations. Of particular note were: 1) The multi-year elk capture and surveillance project provides valuable data. 2) MDOL has been responsive to new wildlife surveillance information by adjusting the DSA boundary in a timely manner. 3) Recently deployed brands software at livestock markets allows electronic tracking of sold cattle and rapid identification of cattle requiring brucellosis testing. 4) Application of risk assessment and herd plans is tailored to individual operations. 5) Cattle that utilize the DSA seasonally, even during the low risk period, conduct cull cow surveillance. 5) High rate of testing of test eligible cattle in the DSA. (Based on MDOL's calculations, Montana will find brucellosis with 99% confidence if it exists at a rate of 0.005% prevalence within the DSA).

Many, many thanks to Montana's producers, veterinarians, and our FWP and USDA partners that are critical to the successful review. Also, much credit goes to our Dr. Eric Liska and Amy Patterson for their diligent work on the program. ☺ mz

Horse Protection Act

Soring is an abusive practice used to accentuate a horse's gait, accomplished by irritating or blistering a horse's forelegs through the application of chemicals or mechanical irritants, or inhumane hoof trimming or pressure-shoeing techniques.

The Horse Protection Act (HPA) is a Federal law that prohibits horses subjected to the practice from participating in shows, sales, exhibitions, or auctions. The HPA also prohibits drivers from transporting sore horses to or from any of these events. USDA-APHIS-Animal Care (APHIS) enforces the HPA and works with the horse industry to protect against such abuse and ensure that only sound and healthy horses participate in shows.

Responsibility for preventing sore horses from being exhibited, shown, or sold rests with the managers of these events and with horse owners, trainers, riders, and sellers. Event managers, however, have the primary legal responsibility to exclude or disqualify sore horses at their shows, sales, auctions, or exhibitions.

APHIS established the Designated Qualified Person (DQP) program to facilitate HPA enforcement. DQPs are veterinarians, farriers, horse trainers, or other knowledgeable horsemen who have been formally trained and licensed by USDA-certified horse industry organizations or associations. DQPs are hired by the managers of a show or sale to ensure that sore horses are not allowed in the ring. DQPs inspect every Tennessee walking horse and racking horse before they may be shown, exhibited, or sold.

Sore horses often have tissue damage including swelling, pain, abrasions, or oozing of blood or serum. Inspectors also measure for proper shoeing conformations and look for training devices that are too heavy or improperly applied. Heavy, rigid devices banging on the pastern during repeated workouts can cause soring. In addition to a physical exam, thermography and chemical testing can also be used to identify sore horses.

For more information, please visit: www.aphis.usda.gov/animal_welfare/hp ☺

By Tom Linfield, DVM (USDA-APHIS-VS)



Do's and Don'ts of Laboratory Submissions

The Veterinary Diagnostic Lab will now pool trichomoniasis samples at the submitting veterinarian's request. Samples from affected herds and from ongoing epidemiological investigations will continue to be run as single samples. Please see below for additional details on trichomoniasis as well as rabies submissions.

INFORMATION AND HINTS FOR TRICHOMONAS FOETUS POOLED PCR: J. Marshall

- The pooling will be done at the lab in groups of no more than 5 bulls in a pool. Individual samples should be submitted.
- Samples must be packaged to protect the InPouch™ / TF Transit tubes from freezing or overheating (ideal temperature is 70°F).
- The sample should be received by the lab within 24-48 hrs after collection.
- Pooling will cost \$50 per pool, therefore, pools of 3 bulls or more will result in significant diagnostics savings.
- Do not use expired media. Check expiration dates both when you receive pouches from the manufacturer and before using.
- Please label pouches/transport tubes with both bull ID information and sequential numbering that corresponds with the order of animals on SV69.

TF PCR TRANSIT TUBE (BIOMED): J. Marshall

Biomed, the maker of InPouch™, developed a new product to assist in Trichomonas PCR testing. These are plastic vials with screw cap lids that contain transport media and are called TF Transit Tubes. The price for the tubes is slightly lower than the InPouch™, but they are only suitable for PCR detection (either individual or pooling) and should not be used for normal culture detection purposes. The InPouch™ still remains the most appropriate medium for culture. The TF Transit Tubes should be easier to inoculate in the field and are easier for sampling for PCR testing in the laboratory.

TF Transit Tubes also have an expiration date, and like InPouch™, out of date tubes are not suitable for PCR processing.

HOW TO GET THE MOST FROM YOUR RABIES TESTING SUBMISSION: B. Layton

Rabies submissions spike during the warmer months of the year. The Centers for Disease Control has established strict protocols for rabies testing and interpretations. In order to avoid unnecessary human post exposure prophylaxis, please, remember:

- Submit the entire brain or decapitated head in a fresh and refrigerated state. The Laboratory personnel will select the preferred sites for rabies DFA and fix portions of the brain for histo-pathologic examination, if needed. Submitting the entire intact body is acceptable for bats and small animals (less than two pounds). This is a change from how many of us were taught. Half fixed/half frozen is NO longer appropriate for rabies submissions.
- Freezing the brain is not recommended because of potential for false positives.
- Provide a complete and accurate history.
- Animals should be killed before sending to the lab. Do not use a method of euthanasia that could damage the brain. Also, freezing alone does not always kill bats. We have had several "bat resurrections" this year.

TIME AND MONEY SAVERS FOR LABORATORY PERSONNEL AND SUBMITTER: B. Layton

- Provide all information requested on the submission forms especially signatures. Do not forget to specify the test that is needed to be performed. This saves unnecessary phone calls from being made and prevents delays in obtaining results.
- Identify specimen with animal/owner names or tags. Also, identify what the specimen is and its site (if not obvious).
- Complete histories often allow for more accurate interpretations. Knowing the vaccination history is imperative in interpreting serology titers.
- Call 406/994-4885 or after hours 406/581-4172 if you have any questions that we can answer to assist you. ☺



TF Transport Tube
Source: <http://www.biomeddiagnostics.com/TF-transit/>



Trichomoniasis tags changed to ORANGE on Sept 1st.

Color schedule is as follows:
Sep 1, 2012 - Tag color changed to Orange
Sep 1, 2013 - Tag color changes to Blue
Sep 1, 2014 - Tag color changes to Yellow
Sep 1, 2015 - Tag color changes to Green
Sep 1, 2016 - Tag color changes to White
Sep 1, 2017 - Tag color repeats (Orange)

Montana Department of Livestock

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Helena, MT, 59620-2001
Return Service Requested
Phone: 406-444-2043
Import line: 406-444-2976
Fax: 406-444-1929



We're on the Web:
www.liv.mt.gov

Staff Corner: Dr. Abbey Canon



We are pleased to announce that Dr. Abbey Canon joined the Montana Department of Public Health and Human Services (DPHHS) in August. Dr. Canon is an Epidemic Intelligence Service (EIS) Officer with the Centers for Disease Control and Prevention (CDC). She received her DVM and BS (Animal Science and International Agriculture) from Iowa State University and her Master of Public Health (MPH) from the University of Iowa.

Dr. Canon's background is in production animal and equine medicine and public health. She has experience and training with international animal and public health, foreign animal diseases, and swine medicine and diagnostics. She was raised on a farm in Iowa, worked as a wrangler in Colorado, as a relief veterinarian at a mixed animal clinic, and at a county health department.

Dr. Canon has a strong interest in infectious diseases and occupational health of veterinary and agriculture workers, including the impact of animal health on human health. She hopes to offer a unique perspective to public health and veterinary medicine in Montana.

In addition to her professional interests, Dr. Canon enjoys spending time with her husband, backcountry packing and trail riding with her mules, fishing, and snowmobiling.

As an EIS Officer, Dr. Canon's activities will include evaluating Montana's animal bite and rabies post exposure prophylaxis surveillance system, designing and conducting epidemiological studies (Q fever), assisting with outbreak investigations, responding to veterinary public health issues.

Please don't hesitate to contact Dr. Canon with any questions, concerns, or ideas about any veterinary public health issue that you encounter in your practice. Email at acanon@mt.gov or 406/444-5980. ✉ ac

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