



StockQuotes Animal Health Newsletter

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CALENDAR OF EVENTS:

Veterinary Deputy Accreditation Seminars, Helena
June 20, September 19, Helena

Montana Stockgrowers Assoc. Mid-Year Meeting
June 7-8, Missoula

Last day of 63rd Legislative Session
April 27

Board of Veterinary Medicine
May 21, Helena

Montana Board of Livestock
May 21-22, Helena

MVMA Summer Meeting and Trade Show
June 23 - 25, Kalispell

State Veterinarian Notes EHV-1 Cases

The biggest regulatory development this quarter has been the publication of the rule on Animal Disease Traceability (ADT). With the inclusion of cattle and domestic bison in this latest rulemaking, USDA now has identification requirements for all the major livestock species. Please see the ADT column for a full review on what these requirements mean for veterinarians sending animals interstate.

ASSISTANT STATE VETERINARIAN: I'm pleased to announce that in January, Dr. Tahnee Szymanski assumed the duties of assistant state veterinarian with the Animal Health Division. Dr. Szymanski has been with the department for 4 1/2 years, and demonstrated remarkable dedication and skill in addressing trichomoniasis, rabies, federal cooperative agreements, and a multitude of other duties. I know Dr. Szymanski will do well in serving Montana's livestock community and MDOL in this additional capacity.

EMAIL NOTIFICATIONS: Since the last quarterly newsletter, I sent out four emails with a variety of current information on Johne's, traceability, loan repayment and brucellosis. While the print version of this quarterly newsletter reaches approximately 700 veterinarians, we are able to reach only 410 of you with more timely (or emergency) updates by email. If you'd like to receive the most up-to-date information, contact our office and we will add you to the distribution list.

ANNUAL REPORT: It took us a while, but we compiled the Animal Health Division annual report for 2012. The report includes a tally of rabies case investigations. We were involved in 15 incidents involving 80 pets exposed by rabid or suspected rabid wildlife. Nearly half of the cases took place in July and August. In one incident, 34 animals were exposed that included a semi-feral population of barn cats; only three of which were vaccinated. Interestingly, the owners vaccinated, and quarantined 29 animals for the necessary six month period.

MDOL has been investigating two isolated events of EHV-1 in March.

A horse has been diagnosed with wild type (non-neuropathogenic) EHV-1 after participating in an event in Ravalli county the first weekend of March. Ten days after the event, the mare presented as afebrile but ataxic and progressed to recumbency before making a recovery. The horse was confirmed positive by nasal swab PCR.

A second animal was diagnosed in Gallatin County after an event in southern California. The mare only showed respiratory signs but was tested after the California show reported a positive neurological EHV-1 case in another animal that had attended. The Gallatin Co horse tested positive for both, the wild-type and neuropathogenic EHV-1.

MDOL recommends twice daily rectal temperatures of exposed animals for 14 days. For animals who exhibit clinical signs, MDOL recommends a nasal swab and blood sample be submitted for testing.

Several recent publications provide interesting data analysis of EHV-1 outbreaks. A retrospective study of the Ogden, Utah outbreak, published in the Journal of Veterinary Internal Medicine, found a higher risk of neurological disease when animals are female and when animals have a greater number of biosecurity risks. Interestingly, the study found that animals that receive zinc supplementation have a lower risk of developing neurologic symptoms.

A separate study found a higher risk of neurologic signs associated with receiving frequent doses of EHV vaccine during the previous 12 months. Current recommendations regarding vaccinating in the face of an outbreak continues to be a controversial topic.

MDOL will be releasing additional information regarding EHV-1 and recommendations for exposed and infected animals. ☒

Please subscribe to the email list and/or check our Facebook page for current info.

By Tahnee Szymanski, DVM

(Continued on page 6)

Brucellosis Update



A helicopter transports a captured elk to the field testing area where the animal will be pregnancy checked and tested for brucellosis

Bison hunt harvest data for 2012-2013 season (preliminary)

Hunting District	385-GARDINER	395-W YEL-LOWSTONE	TOTAL
Bulls Taken	98	31	129
Cows Taken	43	43	86
Unknown Sex	33	1	34
Total Bison	174	75	249

ELK SURVEILLANCE: All 100 elk captured this January in the Pioneer Mountains near Dillon have tested negative for brucellosis. This was the third annual capture of the five-year study to test elk around the perimeter of the DSA (Designated Surveillance Area). This tells us that the boundary of the western side of the DSA is well-placed. Future elk capture areas may include the Tobacco Roots and the eastern boundary of the DSA. We continue to be very concerned about the increase in distribution of wildlife with brucellosis, and I'm thrilled with this year's results.

RULEMAKING: In response to the review of Montana's brucellosis program by USDA last fall, we've updated administrative rule 32.3.435 which spells out testing requirements for DSA cattle. We clarified that even cattle going to slaughter must be tested for brucellosis (pre-slaughter testing). We also specified that cattle and domestic bison of any age must be tested for brucellosis if they are sold for breeding. While the test eligible age for non-breeding cattle remains 12 months of age, we have found brucellosis in animals younger than a year old, and breeding animals require more certainty of their negative status.

IBMP BISON LAWSUIT: MDOL, FWP and the Gov.'s office were sued by Park County, Park County Stockgrowers, and the Farm Bureau in 2012 for changes to bison management. The complaint stemmed from an increase to the bison tolerance area from a relatively narrow strip of land west of the Yellowstone River to include the entirety of Gardiner basin (bordered by physical barriers). The petitioners alleged an increased disease risk and nuisance presented by bison, failure to comply with statutory obligations by state agencies, failure to follow due process and numerous other counts. On the other hand, MDOL and FWP maintained that those changes will allow more efficient management of bison during the winter and spring months, while not unduly increasing the risk of brucellosis transmission to cattle. Judge Wayne Phillips agreed, and in early January, dismissed all 10 counts. An appeal may be in the works.

BISON HARVEST: More bison have been taken in the hunt than in any previous year since 2005 - the earliest year that I have data. Of the 249 bison taken in 2012, 212 were taken by tribal members and 37 were taken by state licensed hunters. Numbers of bison taken in previous years are: 46 in 2005, 57 in 2006, 166 in 2007, 1 in 2008, 1 in 2009, 194 in 2010, 29 in 2011. A more detailed breakdown of the 2012-13 season is included in the table on this page. (Source: FWP, preliminary data)

WYOMING ELK TESTING: Two blood samples submitted by hunters from elk harvested well outside Wyoming's DSA during the 2012 hunting season tested sero-positive for brucellosis. These samples are the farthest east that brucellosis in elk has been documented in Wyoming. One sample came from a bull and one from a cow. Both were reportedly harvested in elk hunt area 40, approximately 15 miles west of Burgess Junction and 15 miles south of the Montana-Wyoming border (below Hardin).

While we've previously consulted with FWP on the potential risk to Montana herds in this area, this new development in Wyoming has caused us to revisit the issue of elk moving across the state border. Based on recent conversations with his Wyoming counterpart, the local FWP biologist, Shawn Stewart, summarizes the most current information in this way, "So during winter/spring there appears to be at least a 12-14 mile separation between Wyoming cows and calves and the closest Montana cow/calf herd... Some of the northern most groups of Wyoming elk appear to move further north during the Wyoming elk season. These elk do move into Montana but only by about one mile. They move back into Wyoming by about the end of December. There is no known mixing of the Wyoming elk with Montana elk during the brief time the Wyoming elk come a short ways into Montana."

As you might expect, Wyoming is grappling with the next steps that may include additional surveillance, herd plans for producers in the area, or adjusting the DSA boundary. Montana found brucellosis affected elk adjacent to our DSA boundary in 2011 and 2012 which resulted in an expansion of the DSA to include cattle operations that might come in contact with those elk. ☘

By mz (with excerpts from WY media release)

Laboratory Corner:

Neonatal Diarrhea Studies Demystified

Spring is here, and it's a time of changing weather, new life, and – neonatal diarrhea. Fortunately, reaching a diagnosis in cases of calf, lamb, or piglet diarrhea doesn't have to be a frustrating or confusing process. This article highlights three critical components of an ideal case submission (signalment, clinical history, and appropriate samples), and provides an overview of how the Montana Veterinary Diagnostic Laboratory gets from your submitted samples to a diagnosis.

SIGNALMENT is probably the single most important piece of information you can provide with a submission. Many pathogenic organisms affect animals within specific age groups, so the tests we run on each case are dependent on both age and species. For example, enterotoxigenic *E. coli* most frequently affects animals up to 5 days old, so PCR for the fimbrial antigen K99 is routinely performed on specimens from animals in this age group. Similarly, Cryptosporidia and Coccidia affect animals older than 5 and 18 days, respectively. Depending on the age of the animal, direct microscopic examination with an Acid Fast stain (Cryptosporidia) and a fecal flotation (Coccidia) will be performed. Other tests, such as fluorescent antibody testing for Transmissible Gastroenteritis of swine, are species-specific and age-specific.

HISTORY: The clinical history is another important factor of the neonatal diarrhea workup. The nature of the diarrhea (watery, bloody) and the number of animals affected offer us important clues as to which infectious agents could be involved. Examples of diagnostic tests prompted by the clinical history include anaerobic culture in cases where Clostridial disease is suspected and culture of lung or liver to evaluate for septicemia.

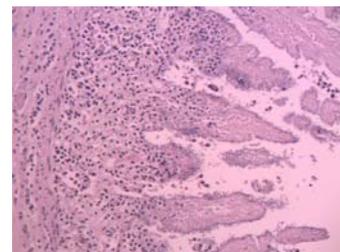
DIAGNOSTIC SAMPLES: Appropriate sample submission can make all of the difference in whether a definitive diagnosis is reached. A complete submission will include blood, feces, fresh tissues (small and large intestine, mesenteric lymph node, lung, liver, and spleen), and formalin-fixed tissues (lung, liver, heart, spleen, kidney, mesenteric lymph node, jejunum, ileum, and colon). This allows us to perform Gram negative cultures of gut contents or feces, as well as enrichment for Salmonella and a Gram stain to evaluate for the presence of Gram positive rods. The

presence of large numbers of Gram positive rods will prompt an anaerobic culture. The primary viruses associated with neonatal diarrhea are Rotavirus and Coronavirus, and we routinely perform an ELISA test on intestinal content for Rotavirus. Coronavirus is less common, but we can confirm a diagnosis via PCR or fluorescent antibody testing on intestinal content, or by immunohistochemistry. In young animals (less than 7 days old), serum IgG levels are assessed to evaluate passive transfer of immunity.

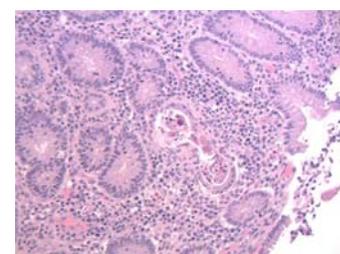
Finally, submission of formalin-fixed samples of the gastrointestinal tract is vitally important, as the microscopic appearance of the affected intestine will help establish the significance of any other findings. As an example, isolation of *Clostridium perfringens* from the gut can be of questionable significance in the absence of characteristic histologic lesions. In addition, some pathogens, such as attaching and effacing (enteropathogenic) *E. coli* can exhibit distinct histologic changes. Submission of multiple samples from several different sites (2 sections each of jejunum, ileum, and colon) will ensure that focal or segmental lesions are not missed.

By providing quality samples and accurate accompanying information, you enable us to tailor our diagnostic workup to each case received in order to maximize our effectiveness and provide you with a reliable, timely diagnosis. We appreciate the opportunity to participate with you in finding solutions to herd health problems. ☺

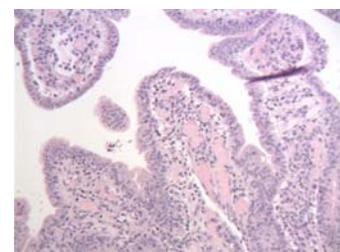
By Stephen Smith, DVM, Veterinary Diagnostic Laboratory Pathologist



Clostridial enteritis in a calf; 200X; note mucosal necrosis and lining of the villi by large bacterial rods.



Coccidial enteritis in a calf; 200X; several oocysts are present within mucosal crypts.



Rotaviral enteritis in a calf; 200X; note marked villus shortening. All images above by Stephen Smith, DVM.

LAB SUBMISSIONS REASON FOR TEST:

When we examine SV-2A lab submission forms at the Helena office, we always review the "Reason for Test" box to assess whether the submission is for routine surveillance or whether a notable disease event is taking place. When this field is blank, or is particularly uninformative like "diagnostic", we are likely to follow up with an inquiry. This box must provide a basic history or reason for test. THANKS!

☺ mz

REASON FOR TEST - MANDATORY INFORMATION (See Key)

Diagnostic ←

Please fully complete this box on your SV-2A laboratory submission form. "Diagnostic" provides no useful information.

Traceability (ADT)

The federal rule on animal disease traceability (ADT) became effective March 11. It outlines: a) the type of animals required to be officially identified, b) approved forms of official identification, c) required documentation, and d) specific exemptions. Traceability standards now exist for all livestock species: cattle, bison, horses, sheep, goats, pigs, and poultry. A summary of the new rule as it applies to cattle is included below.

OFFICIAL IDENTIFICATION REQUIREMENTS FOR INTERSTATE MOVEMENT OF CATTLE:

Cattle and/or bison moving interstate are required to be officially identified prior to interstate movement if they are:

- Sexually intact animals 18 months of age and over.
- Used for rodeo, recreational events, shows or exhibitions (any age).
- Female dairy cattle (any age).
- Dairy males born after March 11, 2013.
- Sexually intact animals of any age from Montana's DSA (Montana ARM).

DOCUMENTATION REQUIREMENTS FOR INTERSTATE MOVEMENT OF CATTLE:

Cattle and bison moved interstate must be accompanied by an interstate certificate of veterinary inspection (ICVI). ICVIs must include the following information:

- Species covered
- Number of animals in shipment
- Purpose for movement
- Physical address of animal origin
- Physical address of animal destination
- Name and address of consignor and consignee (if different)
- Official identification must be recorded for animals required to be officially identified

ACCEPTABLE FORMS OF OFFICIAL IDENTIFICATION:

- An official eartag (840 RFID tag, metal bangs tag, silver metal USDA tag).
- Brands registered with a recognized brand inspection authority when approved by both the shipping and receiving states. Animals must be accompanied by an official brand inspection certificate.

- Registered breed tattoos when approved by the animal health officials of both the shipping and receiving states. Animals must be accompanied by a breed registration certificate.

EXEMPTIONS TO THE ICVI REQUIREMENTS: Cattle shipments are exempted from the ICVI requirement if they are moved:

- Directly to a recognized slaughtering establishment, or to an approved livestock facility and then directly to a recognized slaughtering establishment, and they are accompanied by an owner-shipper statement.
- Directly to an approved livestock facility with an owner-shipper statement and do not move interstate from the facility unless accompanied by an ICVI.
- From farm of origin for veterinary medical examination and return.
- As a commuter herd with a copy of the commuter herd agreement.
- Between shipping and receiving states with documentation other than an ICVI, e.g., a brand inspection certificate, if agreed upon by animal health officials in both states.
- For animals that are required to be officially identified, the official identification number must be recorded on the ICVI unless animals are moved from an approved livestock facility directly to slaughter.

EXEMPTIONS TO OFFICIAL IDENTIFICATION REQUIREMENTS INCLUDE ANIMALS MOVED:

- As a commuter herd with a copy of the commuter herd agreement.
- Directly to an approved tagging site and are officially identified before commingling with other cattle.
- With another form of identification, as agreed by animal health officials in the shipping and receiving states.
- Directly to slaughter or directly to no more than one approved livestock facility and then directly to slaughter, where they are harvested within 3 days of arrival AND they are moved with a USDA approved backtag.



MDOL personnel checking IDs on cattle being tested for brucellosis.



Federal animal identification (traceability) regulations became effective March 11, 2013.

(Continued on page 5)

ADT Example Scenarios

(Continued from page 4)

The following examples illustrate how the federal rule applies to movement of various classes of cattle interstate. Brands information provides additional options to movement in some situations. Please remember that individual states may have import requirements that are more restrictive. Always check with the state of destination when shipping animals to ensure that you are meeting all of their requirements.

SCENARIO #1: Female cattle 24 mos. of age sold at a MT livestock market direct to an out of state slaughter plant.

MINIMUM REQUIREMENT: Backtag

EXPLANATION: Animals moved direct to a recognized slaughter establishment where they will be harvested within 3 days of arrival are exempt from individual identification requirements if they are moved with a USDA approved backtag. These animals are also exempt from the ICVI requirement.

SCENARIO #2: Female cattle 36 mos. sold at a MT livestock market to an out of state livestock market.

MINIMUM REQUIREMENT: ICVI

EXPLANATION: Animals are exempt from the identification requirement when they are moved directly to an approved tagging site. Although these animals sold at a Montana livestock market first, they did not enter interstate commerce until under new ownership. These animals are not originating from the farm of origin so they are not exempt from the ICVI requirement.

SCENARIO #3: Female cattle 24 mos. sold at a MT livestock market to an out of state feedlot (approved tagging site).

MINIMUM REQUIREMENT: ICVI

EXPLANATION: See explanation in Scenario #2.

SCENARIO #4: Wyoming origin cattle are moved direct from farm of origin to a MT livestock market where they are sold to an out of state livestock market.

MINIMUM REQUIREMENT: Individual identification and an ICVI.

EXPLANATION: The movement of the animals from the farm of origin to the MT livestock market was a movement direct to a tagging site, therefore the animals could be moved

with no identification and no ICVI, provided they are identified at the market prior to comingling (backtag). Once at the market, there are no further exemptions unless the animals are going direct to slaughter. If going to slaughter, the animals could move on a backtag and owner/shipper statement. For all other movements the animals must be identified and an ICVI issued before moving across state lines.

SCENARIO #5: Female cattle 19 mos. sold at a MT livestock market to an out of state ranch (non-market, non-tagging site) in a brand state. The animals are individually identified and the state of destination will accept a brand inspection as an approved form of identification.

MINIMUM REQUIREMENT: Brand inspection and an ICVI with brand inspection information documented.

EXPLANATION: Although the animals are officially identified, a brand inspection accepted by the state of destination is the form of identification used for this movement and is what should be documented on the ICVI.

SCENARIO #6: Female cattle 19 mos. are shipped from ranch of origin to a ranch (non-market, non-tagging site) in a state that does not recognize brand inspections as an approved form of official identification.

MINIMUM REQUIREMENT: Individual identification listed on an ICVI.

EXPLANATION: There are no exemptions for the movement of this class of cattle.

SCENARIO #7: Sexually intact male cattle 7 months of age from Montana's DSA are shipped from ranch of origin direct to an out of state feedlot.

MINIMUM REQUIREMENT: Individual identification listed and an ICVI.

EXPLANATION: Although this class of cattle is not required to be identified under federal traceability standards, Montana requires that all sexually intact animals leaving the DSA must be officially identified. It will be up to the state of destination as to whether identification must be listed on the ICVI. ☒

By Tahnee Szymanski, DVM



Federal traceability regulations apply to cattle moving interstate.

Photo credit: Ernie McCaffree

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

State Vet Update (Continued)

(Continued from page 1)

The annual report also includes a summary of the administrative rules that were promulgated by the animal health division which address tuberculosis testing on imported animals, official ID for sheep and goats, rabies and trichomoniasis.

Dr. Szymanski also provided a nice summary of the Fergus County trichomoniasis outbreak investigation, and the collaborative effort with public health to monitor the Q fever affected goat herd that was linked to a number of human cases. Please see the full report on the Animal Health page of the website for more details.

VETERINARY LOAN REPAYMENT: I recently submitted another round of Montana shortage area nominations for the Veterinary Medicine Loan Repayment Program (VMLRP). This program matches shortage areas designated by the state animal health official with applications submitted by veterinarians willing to meet that need by working in those areas. Tax free loan repayment of \$25,000 is provided to the successful appli-

cant for up to three years. My deadline to submit the shortage areas was March 1, and the applicants will be applying in the next couple of months. If you're able to provide additional information to document a shortage in your practice area, please contact me – it may help define a shortage area in the future. More information is available on the NIFA web site here: <http://goo.gl/bOFwU> (case sensitive).

ALTERNATIVE LIVESTOCK: Janet Sharp, who took over the program last September, left her position to take care of her ailing parents. Fortunately, Janet did extensive work with the program which leaves it in good shape for Evaleen Starkel to take over. Those of you that have been involved with alternative livestock know that Evaleen administered the program in the past, so the transition should be smooth. ✕ mz

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