



StockQuotes: Animal Health Newsletter

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

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CALENDAR OF EVENTS:

MSGA & MCW Annual Convention, December 12-14, Billings

Young Ag Leadership Conference, October 11-13, Fairmont Hot Springs

Northern International Livestock Exposition, October 15-19, Billings

Montana Wool Growers Convention, December 6-7, Billings

State Veterinarian Notes West Nile Virus

With the doldrums of summer over, fall kicked off with a bang with numerous West Nile Virus cases and investigations for brucellosis.

WEST NILE VIRUS: Montana has the unfortunate distinction of having the most confirmed West Nile virus cases of any other state in the union. Coincidentally, the date of our first confirmed case in 2013 occurred during the same week as in 2012. However, while last year the cases peaked at six, we're up to 31 as of September 23. Please see the next column for additional info on WNV.

BRUCELLOSIS: In early September, the diagnostic lab received serum samples from two ranches that were classified as reactors for brucellosis. One of the ranches already submitted the reactor animal for tissue collection and culture while the other one is pending. The culture results determine whether the herds are classified as affected or not. Montana's last cattle herd affected with brucellosis was found in 2011 in Park County.

On a related topic, Dr. Liska and I just returned from Texas where we urged the Texas Animal Health Commission to not adopt a proposed rule requiring long-term quarantine and brucellosis testing of Montana's breeding cattle. More information on the reactors and the Texas trip in the brucellosis column.

SHIPPING OF BIOLOGICALS: On occasion, we still receive laboratory submissions at the Helena office. While we do our best to forward those to the diagnostic laboratory in Bozeman, the Helena pit-stop delays your diagnostic results, and at worst makes your submissions unsuitable for analysis. Please note, diagnostic samples go to the Bozeman Veterinary Diagnostic Laboratory.

On a related matter, DOL has also had some issues with shipment of biologicals this summer. On several occasions, tuberculin requested by practitioners arrived to the clinic late and warm. Our apologies. Based on these experiences, we've modified our shipping policies which are similar to the ones outlined in the USDA-APHIS column. ✂ mz

As of September 23, DOL has received confirmed reports of 31 West Nile Virus (WNV) positive horses in 20 Montana counties and another half-dozen reports of suspected cases. All of the cases have been on the east side of the continental divide. Public health has confirmed 15 human cases of West Nile virus infection; two of them fatal.

None of Montana's 31 positive WNV cases were current vaccinates and only two had any history of past vaccination. Eleven animals (39%) died or were euthanized because of their illness. The average age of animals affected was 4.7 years old which means most of the animals affected were born after 2006; the last time we saw comparable numbers in our equine population.

According to the latest (Sep 10) national WNV report, there have been 99 confirmed cases of WNV in horses. There is a lag in reporting cases, but as it currently stands, Montana accounts for nearly 1/3 of the national total. WNV is a reportable disease per ARM 32.3.104. With each new confirmed positive, a veterinarian from our office calls the practitioner to ask about signalment, clinical presentation, vaccination history, outcome, and recent travel history. We also try to provide veterinarians with a current summary of other cases seen in Montana.

As case information is compiled, the number of cases that have no history of vaccination, or that are past due is hard to ignore. But are the cases non vaccinates because vaccinated animals are protected or just because a high percentage of our equine population are non vaccinates?

A quick search of PubMed brings up ample number of challenge studies that show compelling evidence of the efficacy of commercially available vaccines.

Unfortunately, vaccine rates in Montana are more difficult to determine. I put in calls to the four companies that market WNV vaccines (Boehringer-Ingelheim, Merck, Merial, and Zoetis) to ask for their records of vac-

(Continued on page 6)

Brucellosis Update

BRUCELLOSIS REACTORS: In early September, the Montana Veterinary Diagnostic Laboratory received samples from Madison and Park County cattle that were classified as reactors for brucellosis. Both herds are located in the Designated Surveillance Area (DSA), and are in the process of submitting tissues for culture. Culture remains the gold standard which determines whether a herd is classified as affected. The most recent brucellosis affected cattle herd was found in 2011 in Park County's DSA. As we get more updated information, we'll share it through the DOL Update emails.

DSA COMPLIANCE: We recently conducted an analysis of producer compliance with DSA regulations. I am happy to see that

84% of DSA herds (resident and seasonal) have tested some cattle in the last fiscal year. Interestingly, the 44 (16%) herds that didn't have a test only represented 7% of the cattle. This is expected since smaller herds are less likely to conduct activities that trigger a test such as sale, slaughter, or movement outside of DSA boundaries.

Our compliance assessment also found 22 herds out

of compliance; meaning they sold test eligible cattle through the market or by private sale, but did not obtain a test. These non-compliant herds are also smaller, and represent just 3,673 animals (5%). We're following up with the owners/managers of these operations.

TEXAS ANIMAL HEALTH COMMISSION (TAHC): On September 10, Dr. Liska and I traveled to Austin to present in front of the TAHC to discourage Texas from implementing additional regulations on DSA origin breeding cattle. An initial proposal included testing of all breeding cattle from Montana, Idaho, and Wyoming, but was subsequently

scaled down to focus on just DSA sourced animals. Even with its narrower scope, it's still a bad idea because the rule:

1. Is not commensurate with risk: Since 1985, Montana has found only three cattle herds affected with brucellosis. These three herds had a total of 15 reactors.
2. Requires long term quarantine of breeding cattle, as explained in the March StockQuotes newsletter issue.
3. Far exceeds any federal brucellosis requirements in history except perhaps for cattle from affected herds.
4. Is so severe, that it will essentially cut off breeding cattle exports from the DSA into Texas.

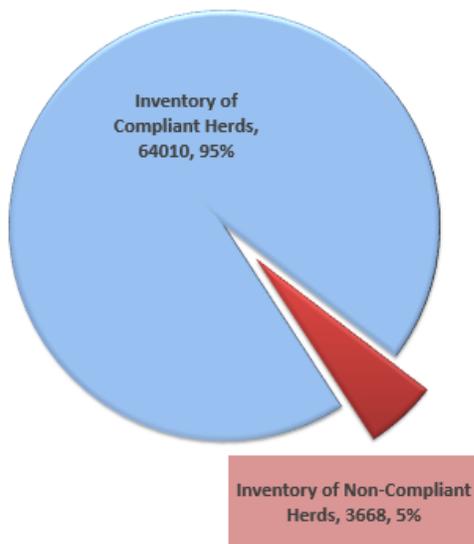
Unfortunately, the TAHC voted to adopt the rule while committing to review it again in the future. While the impact on Montana ranchers will be minimal because few breeding cattle are sold into Texas from the DSA, it sets a poor precedent.

The Montana Board of Livestock will review this decision and decide on whether to apply the Texas surveillance standard to Texas cattle coming into Montana. The Lone Star State has a porous southern border that piroplasmosis positive horses have been caught crossing on several occasions. Based on Texas' 12 cases of cattle tuberculosis in the last year alone, and a TB positive Texas origin cow being found in North Dakota, some review of the risks to Montana's cattle and equine herd may be warranted.

A web link to the TAHC meeting is here: <http://www.tahc.texas.gov/agency/meetings.html>

PERSONNEL: After five years with the program, Amy Patterson, the brucellosis program compliance specialist, left DOL in August to rejoin her family in Michigan. Amy performed administrative duties related to reimbursement for testing to producers and veterinarians, tracking those brucellosis tests, as well as monitoring compliance with DSA regulations. Although Amy will be missed, we've been lucky enough to fill that position with Leslie Doely who joined animal health a couple years ago (see the staff corner of September 2011 issue of StockQuotes). ☘ mz

DSA COMPLIANCE OF HERDS BY CATTLE INVENTORY



Cattle inventory in DSA herds (resident and seasonal) based on compliance with testing requirements.

On a herd basis, 9% of herds were out of compliance, but represented just 5% of the cattle inventory.

Laboratory Corner: *Brucella Canis*

A two-year old, castrated male Labrador retriever dog was diagnosed with diskospondylitis by a private practitioner. The dog was adopted from a southwestern Montana rescue facility as a castrated puppy. Clinical signs one year prior to and at the time of the presenting diagnosis were hunched back posture, “walking on egg shells”, a slight fever and diarrhea. The original radiographic diagnosis was sacral-lumbar instability that temporarily improved with pain management. Clinical signs persisted one year later and a subsequent radiographic diagnosis of diskospondylitis was made (see radiograph). *Brucella canis* is known to be a cause of this condition and blood culture confirmed the diagnosis of *B. canis* associated diskospondylitis.

There are multiple species within the bacterial genus of *Brucella* including; *B. abortus* (cattle), *B. suis* (swine), *B. ovis* (sheep), *B. melitensis* (sheep and goats), *B. canis* (dog), *B. neotomae* (rodents), and novel species that infect pinnipeds and cetaceans. Although each *Brucella* species shows an animal host preference, infection due to these bacteria can cross species barriers; especially infections with *B. abortus*, *B. suis* and *B. melitensis*. Besides *B. canis*, other reported *Brucella* infections in dogs have been due to *B. suis* and wild and vaccine strains of *B. abortus* and *B. melitensis*. The prevalence of *B. canis* infection in dogs is greatest in the southern United States, in stray dog populations and in kennels and breeding operations.

As in other species, brucellosis in dogs is mostly a reproductive disease causing epididymitis, testicular atrophy, infertility and prostatitis in males. In females, it may cause abortions, infertility and weak puppies. Estrus cycles are usually not affected. *B. canis* infections in the dog can also result in diskospondylitis, ocular infections and kidney disease. *B. canis* typically infects susceptible hosts by penetration of mucous membranes most commonly after exposure to infectious vaginal discharges, aborted fetuses, placentas, semen, or urine. Shedding of the organism by infected dogs can last up to three years.

B. canis can also infect man, however, the incidence is low due to the organism’s low virulence. Those who become infected are

frequently asymptomatic. Individuals who have a higher potential for infection would include dog breeders, veterinarians, laboratory workers, and those with compromised immune systems.

Treatment of *B. canis* in animals may be unsuccessful but if selected, would consist of long-term antibiotic therapy, spaying or neutering, and long term monitoring to assess treatment success. A decision to treat infected dogs should take into consideration the potential of infecting other dogs especially in kennel and breeding operations as well as factoring in the zoonotic potential.

Bacterial culture, PCR, and serologic tests are available for the screening and the diagnosis of canine brucellosis. Serologic antibody tests are used for breeding screens, to obtain a presumptive diagnosis of infection and for the monitoring of therapeutic success.

Products of parturition or abortion, semen and genital specimens can be submitted. Blood or other cultures and PCR are typically confirmatory diagnostic tests. Each procedure has its own testing idiosyncrasies and consultation with laboratory staff is encouraged when requesting these procedures.

All animal cases of brucellosis are required to be reported to DOL Animal Health Division.

Thank you Drs. Olivia Seddon, Amy Lamm and Nancy Walters for their contribution to this report. ☺

By Bill Layton, DVM

BRUCELLOSIS SAMPLE SUBMISSIONS:

With fall approaching, the Veterinary Diagnostic Laboratory may receive several thousand brucellosis samples on a given day. While the staff strive to provide one-day results for brucellosis samples, they encourage veterinarians to give advanced notice if you anticipate large submissions. That ensures that the lab will have sufficient staffing and reagents on hand to continue to provide rapid results that you’ve come to expect.



Diskospondylitis in a 2 year old dog. AP view.
Photo credit: Seddon–Lamm



Diskospondylitis in a 2 year old dog. Lateral view.
Photo credit: Seddon–Lamm

Traceability Basics

I am writing from the animal identification coordinators workshop in St. Louis, Missouri. There's been some really great discussion on what animal health officials do with traceability data, so I thought it may be worthwhile to summarize some core traceability points with a focus on your efforts in the field.

1. TAG APPLICATION: A tag is applied to an animal. A producer can apply official ID during the course of normal operations. DOL can provide producers with silver metal BRITE tags at no cost. Producers can also order RFID tags with the 840 country code by providing a premises identification number to a commercial tag company.

And of course, veterinarians apply tags for testing, vaccination, and movement purposes.

2. RECORDING OF TAG APPLICATION: The application of that tag needs to be recorded. When tags are distributed directly to producers, a record of those numbers is logged in state and/or federal databases.

Tags applied by a veterinarian as part of official disease work are also entered into various state and federal databases., but only if those test charts or vaccination records make their way to the state office. So, proper submission of forms and maintenance of tag distribution records are as critical as tag application.

At this time, official ID includes 840 RFID tags, metal BRITE tags, brucellosis vaccination tags, and RFID tags with a 900 series vendor code (900 tags are official if manufactured prior to March 11, 2014 and applied prior to March 11, 2015).

3. ANIMAL OBSERVATIONS: The animal with the tag enters interstate commerce. For animals NOT required to be officially identified, few instances currently exist where additional data on the animal/tag will be recorded. The presence of the tag in that animal's ear, however, provides a link to the premises of origin if ever needed.

For animals required to be officially identified (sexually intact beef cattle 18 months of age and older, dairy cattle, and animals for exhibition), individual identification must be listed on the CVI (Certificate of Veterinary Inspection). This is arguably one of the most labor

intensive aspects required of you under the new federal guidelines. This requires running all animals through at least an alley to capture RFID tag number or catching each animal individually to capture metal tag numbers. This is an area most in need of improvement to improve accuracy, speed and eliminate the practice of applying duplicate official IDs which is now illegal per the new federal rule.

Application of ID for the purpose of interstate movement provides the "easiest" means of capturing and recording ID on a CVI to meet traceability requirements. Historically ID listed on a CVI has not been entered into state or federal databases however, the new federal traceability rule contains standards that now requires Montana to be able to identify from where and when an animal enters interstate commerce. DOL has begun entering this information. Additionally, if you wish to provide our office with tag distribution records for silver metal BRITE tags, we welcome that information.

4. USING ID DATA FOR DISEASE INVESTIGATIONS: The animal with the tag is involved in a disease trace; fortunately, this is a rare occurrence but when it does, our success is dependent upon the foundation that we have laid in points 1, 2, and 3. For example, the only information that we receive may be a tag number collected at slaughter. It is then our responsibility to recreate that animal's history using all available traceability data. This will most certainly include CVI data, tag distribution records, test/vaccination records, and any other information such as brand records, breed and age.

While we primarily operate under the realm of 4 as state animal health officials, the new federal rule on traceability has given us standards on what data is recorded that apply to 1,2, and 3. With this new requirement, DOL is looking at how we can improve the completion of these core steps and how we can increase your access to electronic formats for capturing and reporting information in order to share the responsibility with you. ☘

By Tahnee Szymanski, DVM



USDA: Tuberculin & Accreditation

BOVINE TUBERCULIN AVAILABILITY: USDA APHIS has been notified that current national tuberculin inventory levels have reached critical levels and there is a possibility of shortages in the near future. In addition, changes at the U.S. Postal Service have impacted shipping times for parcels, both around the country and here in Montana. These two factors have made it necessary to make minor but critical changes in the way that requests for bovine PPD tuberculin are handled.

In 2012 there were two companies licensed to produce *M. bovis* PPD tuberculin for the U.S. market and an ample supply of product was anticipated to be available for 2013. However, both companies have changed ownership and production/distribution practices. Therefore, there is no commercial source for PPD tuberculin in the United States, and no available commercial product on the market. At the same time these events were happening, usage of PPD tuberculin surged well in excess of 2011 or 2012 levels. This has created a critically low PPD inventory and the possibility of a shortage. Commercial production of PPD is projected to return in late 2013 or early 2014. The APHIS National Veterinary Services Laboratory (NVSL) has begun production of PPD tuberculin in order to bridge shortage situations. However, any failure of testing or a delay in availability of the commercial product could result in severe shortages.

DOL and APHIS are asking for your cooperation in implementing PPD conservation measures to ensure that PPD tuberculin remains available both short and long term. We are implementing these measures to ensure timely delivery and protect the product from temperature abuse. Shipments of PPD will only be sent from MT DOL on Monday, Tuesday or Wednesday of the week.

Shipments will be sent via UPS Ground Services; therefore, a street address will be required for all shipments. While not guaranteed, shipments should arrive within 3-4 days. Overnight shipping is available at the requester's expense.

Requests for large amounts of PPD tuberculin for a single testing event (ie. 500 or more head) will need to be made well in advance – preferably 30 or more days in advance of performing the testing.

Fortunately, Montana has not had TB-infected cattle for many years. However, TB-infected herds continue to appear in previously TB Accredited-free states. We appreciate your vigilance and continued work to protect Montana's livestock herds and producers and your cooperation as you begin the busy fall season.

VETERINARY ACCREDITATION RENEWALS AND APHIS-APPROVED MODULES: Congratulations to all the Montana veterinarians that have successfully renewed their veterinary accreditation by completing the necessary number of APHIS-Approved Modules and submitting their VS Form 1-36A! As a reminder, all Accredited Veterinarians (AV) were assigned a National Accreditation Number (NAN) and an Accreditation Renewal Date (ARD), with some renewals beginning in January 2013. AVs will be sent a reminder via email six, three and one month prior to your ARD. If you did not provide an e-mail address, the NVAP will mail you a reminder three months prior to your ARD. Accreditation can be renewed at any time within six months prior to your ARD.

There are currently 21 APHIS-Approved Modules, available on the NVAP website at: <http://goo.gl/9TcstX>.

The most recent APHIS-Approved Module released was Module 11: Sheep and Goats: Disease Awareness and Health Certificates. This module provides an overview of the sheep and goat industries and a review of eight diseases that impact the industry. Veterinarians should be aware of these important conditions, especially when inspecting animals prior to interstate or international movement. The module highlights the National Scrapie Eradication Program, as well as Scrapie Flock Certification Program, including new information on recent changes to the SFCP. Finally, examples of properly completed health certificates for sheep and goats are provided to help veterinarians avoid common errors that can lead to delays or refusal of entry for their client's animals. ☘

By Tom Linfield, DVM, and Kammy Johnson, DVM



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West Nile Virus (Cont'd)

(WNV continued from page 1)

cine sales in Montana, and so far, three have responded. It may be a little premature to draw any significant conclusions, but the total number of doses for the two reporting companies is about 1,400 doses in 2013. We know that Montana's equine population is at least 73,000 because that's the number on which per-capita fees were paid for last year; therefore, vaccinated horses make up a tiny proportion of all horses in the state.

We're waiting for additional vaccine sales information, but it's likely to confirm that few owners are continuing to vaccinate for WNV as case numbers have decreased in recent years. This is confirmed by anecdotal reports from veterinarians; an exception is one veterinarian in central MT reporting 1100 doses between two local clinics.

So what conditions contributed to this year's near record number of cases? Climate and summer temperatures certainly play a role; this year,

state entomologists have confirmed positive mosquito pools in 11 counties. Additionally, the microclimate of river bottoms / valleys can have a dramatic impact on mosquito abundance which can vary dramatically within a short distance.

We will continue to tally information on vaccine distribution and sales. If you can easily look up the number of doses your practice ordered or administered, I would love to hear from you.

Finally, a current summary of WNV in MT is available on our web site at <http://goo.gl/pqKZVj>.

A national summary is also available at <http://goo.gl/6nu7bD>. ☒

By Tahnee Szymanski, DVM with mz.

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