



Stock Quotes: Animal Health Newsletter

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March 2020

Quarterly Newsletter from the Animal Health Bureau of the Montana Department of Livestock (MDOL)

Volume 13, Issue 1

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WHAT'S NEW

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State Veterinarian Notes

CORONAVIRUS (COVID-19): As an optimist at heart, I'm struggling to find any silver lining in a disease event that has disrupted routines, cost thousands of lives, and created economic and food insecurity for millions. And indeed, when we as a nation struggle to contain a communicable disease with seemingly infinite resources available to public health, I'm concerned about incursions of foreign animal diseases that may be more contagious, travel easier through commerce, and affect the fundamental need of subsistence. However, two main themes come to mind relating to the critical role of veterinarians and animal husbandry:

1. Healthy animals and healthy people go hand-in-hand: With 70% of all emerging diseases being of animal origin, we have correctly placed a priority to eradicate brucellosis, tuberculosis, and other zoonotic diseases from animal populations that serve as food. To illustrate the point, reductions in brucellosis in this nation's livestock populations have closely correlated with reduction of cases in people. Therefore, veterinarians in their efforts to improve animal health have simultaneously improved the welfare and health of the human population. Conversely, our inability to make the same strides in animal health of wildlife in the face of continued close contact through deforestation, bush meat consumption and "wet markets" has allowed the COVID-19 pandemic to arise.

2. Veterinarians provide critically needed capacity to public health: The public health response is stretched thin and is lacking in critical equipment and supplies such as ventilators, facemasks, and other medical supplies. Numerous states have requested veterinary clinics to report inventories of equipment that could be made available for critical life-saving measures. Likewise, testing for coronavirus has been a limiting factor preventing us from understanding the epidemiology of the disease, identifying individuals that may serve as a source of infection to others, and better access the extent of the infection in the population. In this

arena, Veterinary resources also provide critical resources. The Montana Veterinary Diagnostic Laboratory has loaned a PCR extraction machine to provide the Montana public health laboratory additional capacity to run more COVID-19 tests.

I want to acknowledge your efforts in maintaining veterinary services to help people and animals during the time of crisis, but even more importantly, recognize your critical role in public health and society as a whole. Thank you for all you do.

BRUCELLOSIS This year's brucellosis elk capture and testing project provided good and bad news. While the elk tested in the Bangtails northwest of Livingston were all negative, two elk out of 100 tested in the Ruby Mountains were seropositive. Previous detections of positive elk outside the Designated Surveillance Area (DSA) have typically resulted in an expansion of the DSA boundary to ensure that all at-risk cattle are being sufficiently tested.

One of my greatest singular frustrations is the limitation on brucellosis research because of the designation of *Brucella abortus* as a select agent. We will not be able to solve the wildlife reservoir brucellosis problem unless we can develop vaccine candidates and delivery mechanisms in the Greater Yellowstone Area, but current regulations prohibit this critical work. Subsequently, laws designed to protect the American public (by limiting access to dangerous agents and toxins) are actually making the nation less safe by allowing the range of infected wildlife to continually expand and actually make *B. abortus* more abundant. But we have another opportunity to provide comments to the federal government and request the removal of *brucella* from the select agent list. Please see the column on page 4 for additional information on the issue and how to comment. I strongly encourage veterinarians, ranchers, and members of the public to submit comments. ✕

By Marty Zaluski, DVM

Use and Management of RFID Tags

As the United States Department of Agriculture (USDA) is now providing no-cost RFID tags for veterinarians to use in replacement females, we thought this would be a good opportunity to review tag management, administration, record-keeping, and reporting requirements.

Tag Management

Tags can be obtained from the USDA directly. Please contact the USDA Veterinary Services (VS) Montana office at (406) 449-2220 to order. Veterinarians can order orange 840 RFID or orange metal tags for brucellosis vaccination; or white/yellow RFID or silver metal NUES tags for other tagging purposes. The number of available RFID tags is limited based upon a veterinarian's historical use and again, no-cost RFID tags are only to be used in replacement females.



Figure 1. Official Identification
Source: Staff

For veterinarians who wish to use RFID tags beyond their allocated numbers or for purposes other than tagging replacement heifers, tags can be obtained from approved manufacturers and most veterinary supply distributors.

Veterinarians are required to provide a Premises ID Number (PIN) at the time tags are ordered. If you don't have a premises ID number, you can obtain one online here: <https://app.mt.gov/accessgov/liv/Forms/Page/d3ce0c15-4640-4b01-8edd-27f0f9b95d63/0/1>. If you need a previously obtained PIN looked up, please call the Helena office at (406) 444-2043.

Tag Administration

Official ID should be applied to animals for official disease testing (brucellosis and tuberculosis), official brucellosis vaccination, to meet interstate movement requirements, and to sexually intact cattle and domestic bison moving out of the Designated Surveillance Area (DSA).

Official ID includes metal brucellosis vaccina-

tion tags, silver NUES or brite tags, orange 840 RFID tags for brucellosis vaccination, and white or yellow 840 tags for general use. You may encounter 900 series RFID tags in animals from Process Verified Programs (PVP) such as Non-Hormone Treated Cattle (NHTC) or Age and Source Verified. Unless 900 series RFID tags were applied prior to March 11, 2015, they cannot be considered official ID for regulatory purposes.

Producers should have a PIN before 840 RFID tags are applied to livestock.

Record Keeping

Tag application needs to be documented and records of tag application should be maintained for five years. Options for record keeping include:

- Paper based system, such as a notebook or daily calendar that records range of tags applied, date, and contact information for owner of animals tags were applied to.
- Electronic forms (Excel based) that can be retained or submitted to the MDOL. If you are interested in an electronic template for recording tag application/distribution, please call MDOL at (406) 444-2043.
- Online through the Animal Identification Number Management System (AINMS) – Veterinarians who wish to report tag application/distribution and not retain in-house records will need to go through the USDA EAuthentication process to be granted access to the AINMS. Once this is complete, veterinarians will be able to log on and document tag distribution/application to producers based upon PIN information.

Please note, recording tag applications on a Certificate of Veterinary Inspection does not meet basic record keeping requirements unless tag information is searchable through an electronic CVI platform.

Reporting Requirements

Veterinarians are not obligated to report tag distributions/applications unless they are associated with an official vaccination record, official test chart, or certificate of veterinary inspection. Any official forms should be submitted to the department within seven days of completion. ✉ By Tahnee Szymanski, DVM

Live Elk Surveillance

Fish Wildlife and Parks (FWP) has recently completed their annual live elk surveillance capture. This year's work was conducted in the Ruby Mountains south of Twin Bridges and the Bangtail mountains northwest of Livingston. The purpose of the capture is to obtain current information about the incidence and distribution of brucellosis in wildlife. Surveillance is done on the perimeter of the Designated Surveillance Area to inform decisions about the boundary.

Bangtail Mountains

Fifty-one elk were surveyed in the Bangtails during the 2020 capture. In 2019, 49 elk were sampled during the capture and an additional seven hunter harvest blood samples were also collected. All 107 samples tested negative. Additionally, a total of 32 elk were fitted with GPS collars during the capture efforts to help us understand the movement patterns of elk in the area.

Ruby Mountains

Also during the 2020 capture season, 98 elk were captured and tested in the Ruby Mountains with 43 animals randomly receiving GPS collars to monitor movement. Two additional shoulder season hunter harvest samples were also tested. Of the 100 samples, two were found to be serologically positive and subsequently confirmed at the National Veterinary Services Laboratories in Ames, Iowa.

The discovery of brucellosis exposed elk outside of the Designated Surveillance Area (DSA) has historically resulted in the Board of Livestock adjusting the boundary to ensure cattle and domestic bison at risk of exposure are included in brucellosis surveillance.

The finding of positive elk in the Ruby Mountains will likely not be an exception. The Department of Livestock (DOL) has developed a decision matrix that allows us to define when an boundary adjustment is necessary. Elk movement data from the GPS collars and Fish, Wildlife and Parks (FWP) biologists, as well as information about land ownership and livestock use in the area will be gathered and presented to the Board of Livestock as a proposed boundary change during their April meeting.

DOL has completed an initial assessment of the DSA to include the Ruby Mountains.

This DSA expansion would include FWP Hunt District 322, which would extend the current DSA boundary from Alder, to Twin Bridges, and southwest to Dillon. We estimate that this additional area includes a total of 69 herds with a total of 25,000 cattle. The majority (16,000) of these animals in 27 of the 69 herds already utilize portions of the DSA and therefore would not be new to the regulations.

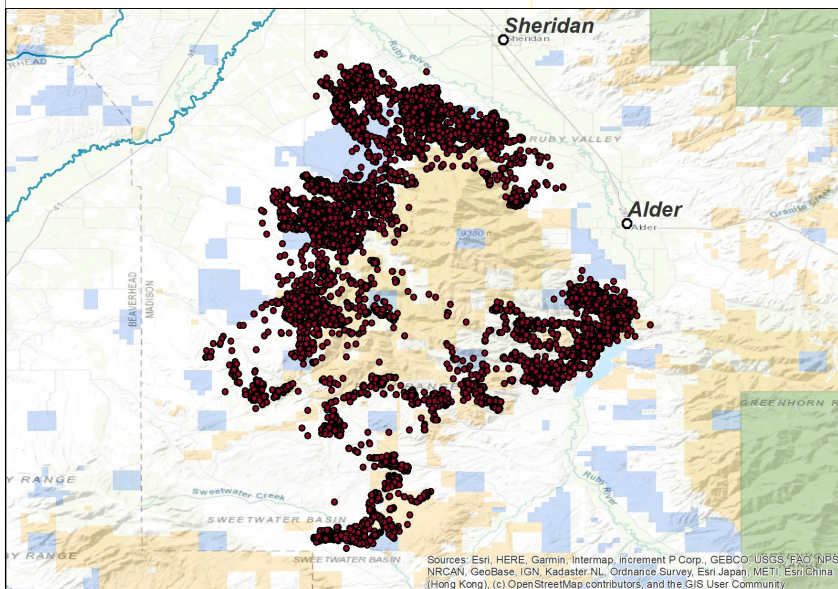


Figure 2. Elk Surveillance
Source: Noted on graphic

The DSA has protected the State of Montana from loss of class status since 2009 and has protected the state and the country from spread of the disease. Additionally, it has protected producers in the state from much more onerous and variable testing requirements implemented by other states.

Devil's Kitchen

FWP also performs opportunistic elk brucellosis surveillance. Whenever FWP is handling elk for other reasons, they sample the elk for brucellosis testing. This year, FWP captured 50 elk in the Devil's Kitchen area, northeast of Craig, to deploy radio collars to help delineate seasonal ranges through movement data. All 50 elk were sampled and all tested negative for exposure to brucellosis. FWP has performed similar opportunistic testing in locations around the state, including the Bitterroot Valley and the Missouri Breaks. ✂ By Eric Liska, DVM

Select Agent List Comments Requested

On March 17, 2020, United States Department of Agriculture (USDA) published an Advanced Notice of Public Rulemaking (ANPR) in the Federal Register requesting public comment on the removal of *Brucella abortus*, *Brucella melitensis*, and *Brucella suis* from the select agents list. The Department of Livestock is encouraging cattle producers, wildlife enthusiasts, and veterinarians, to submit comments to both the Centers for Disease Control and Prevention (CDC) and to the Animal Plant Health Inspection Service (APHIS) in support of their removal. The comment period for this notice closes on May 18, 2020 at 11:59 PM ET.

Comment links are as follows:

CDC: https://www.regulations.gov/document?D=CDC_FRDOC_0001-0117

APHIS: <https://www.regulations.gov/document?D=APHIS-2019-0018-0001>

Because *Brucella* spp. are on the select agents list, research must be completed indoors in an environmentally controlled and secure facility. Currently, the only facility in the U.S. where animal research on brucellosis can be performed is the United States Agricultural Research Service (ARS) in Ames, Iowa. Studies conducted on elk, bison, or swine in an enclosed laboratory like the one at ARS are expensive, and even with a dramatic increase in funding, the capacity limitations of an enclosed facility prevent many studies from being conducted.

Further, studies in contained settings cannot replicate ecological factors that impact disease transmission, and therefore, make it very difficult to fully evaluate new technologies. For tangible progress to be made on *Brucella* research, it is imperative that outdoor research be permitted.

Examples of studies that cannot be completed in the current regulatory climate include the development of:

- Alternative methods of surveillance to understand the increasing range of infected wildlife in the Greater Yellowstone Area (GYA). An example would be evaluation of temporary bait stations with absorptive devices on which elk chew (essentially a 'rope test') and the use of PCR and antibody tests on oral fluids.
- Effective delivery mechanisms for vaccination of wildlife. A previous study evaluating the use of a mucosally delivered *B. abortus* vaccine that was delivered in a powdered form on hay, showed promise. To establish confidence in this method, a much larger vaccination trial is needed.
- Techniques to limit disease spread such as

the use of contraception in infected bison to reduce shedding of the organism. Again, preliminary research indicates this is an effective mechanism to reduce transmission of brucellosis but larger, long term test trials must be made possible.

- Combination protocols such as sustained-release antibiotics in conjunction with immune-contraception, is another topic that will require long-term maintenance of large numbers of infected animals in a secure facility.

Without action, *B. abortus* will continue to increase in prevalence, and geographical extent to ultimately affect all states with contiguous elk populations in the western United States.

When submitting comments to the CDC and APHIS it may be helpful to touch on the reasons that the removal of *Brucella* spp. from the select agent list is necessary.

- Outdoor research is necessary to perform research on statistically significant numbers of animals.
- *B. abortus* is already endemic in wildlife in the Greater Yellowstone Area of the U.S. and *B. suis* is endemic in swine in many parts of the U.S. Without a commitment to research, these bacteria will continue to move across the country creating a financial burden to the federal government and U.S. agriculture.
- As provided in the white paper "Biosafety Concerns Related to *Brucella* and Its Potential Use as a Bioweapon" (Olsen, Boggiatto, White, and McNunn, 2018), delisting of *Brucella* spp. would pose minimum threat.
- Field strain infection in humans is detectable with serologic tests and is treatable with common antibiotics.
- The continued listing of these bacteria increases the risk to human and animal health by limiting necessary research that could eradicate them.

CDC and USDA jointly evaluate the select agent list every two years. During the last review, an ANPR was announced that would have removed *Brucella* spp. from the select agent list. Unfortunately, only 40 comments, most in support of removal, were received. We are hopeful that with a stronger show of support, *Brucella* spp. can be successfully removed from the select agent list.

Both agencies (CDC and APHIS) must receive a separate comment. You can send the same comment to each if you wish. Please go to our website to find the link or call DOL. ✉ By Eric Liska, DVM

Reportable Disease Spotlight: Strangles

Last year, the DOL made revisions to the state's reportable animal disease list. The primary criteria used to guide the updates included: (1) whether the disease is reportable to the World Organization for Animal Health (OIE), and (2) whether the disease is reportable to the USDA, National Animal Health Reporting System (NAHRS). Strangles was added to the reportable disease list because it is reportable to NAHRS.

Strangles is a category 2 reportable disease which means veterinarians are to immediately notify state officials of positive cases. While some category 2 diseases such as anthrax, trichomoniasis and contagious foot, result in a direct quarantine order from the Department, strangles does not. Instead, management of strangles cases will be fully directed by the submitting veterinarian.

Recently, our office has taken calls from veterinarians who are looking for guidance on how to respond to positive cases. We have compiled recommendations from the American Association of Equine Practitioners (AAEP), American College Veterinary Internal Medicine (ACVIM), as well as the Florida and Georgia State Veterinarian's offices/Depts. of Agriculture which include the following:

- **Diagnosis**– Sampling may include a pharyngeal swab, nasopharyngeal wash, an aspirate from an abscess or a sample of nasal discharge. The above sample types may be tested with PCR or culture. Due to the low numbers of the organism being shed initially, a PCR test will be more reliable in a febrile horse who is in the early stage of the disease.
- **Quarantine**– Following diagnosis of an initial case, veterinarians may consider management actions such as quarantine for the positive animal and any contact horses. Quarantine can still be an appropriate action in the absence of confirmatory testing. It is recommended that all horses exhibiting clinical signs, testing positive and/or making direct or indirect contact with positive animals be quarantined for 21-30 days. This quarantine period would “restart” with any new case diagnosis or in the event that a horse not previously exhibiting clinical signs, began showing them. Veterinarians may also consider the number of owners represented at a property and the frequency of travel off the property to decide if a quarantine is warranted. For example, a single-owner case with infrequent travel off the property is much lower risk than a boarding facility.

- **Release of quarantine**– Following the recommended 21-30 day quarantine period, animals may be released from quarantine after a physical examination has been performed on all test-positive animals and a visual inspection has been performed on all other animals under quarantine.
- **Testing out**- If an owner would like to remove their horse from a property under quarantine before the 21-30 day mark, a veterinarian may consider performing an endoscopy of the guttural pouches. If the guttural pouches are grossly normal, they should both be flushed and the sample should be tested by PCR. While testing is pending, these animals need to be isolated from any direct or indirect contact with other horses on the property. Any animal exhibiting grossly abnormal guttural pouches should not be released from quarantine.

Veterinarians should also educate clients about the importance of biosecurity. In particular, discussions should include:

- Physical separation of any animals showing clinical signs, with or without a positive diagnostic test. Clinical signs include fever, swollen retropharyngeal or submandibular lymph nodes, and/or nasal discharge, among others.
- Separation between horses will not be effective if the roles of fomites are not also addressed. Indirect routes of transmission such as shared water troughs, water hoses, twitches, tack, handlers/owners, and other animals such as dogs and cats are critical to managing spread.
- Restrict the introduction of new horses onto the property after a case has been diagnosed.
- If equipment must be shared, assure proper disinfection is conducted between animals.

Please note that the above management practices are recommendations and not required. We recognize that there are many considerations involved in strangles cases and ask that you continue to reach out to our office with questions.

✂ By Anna Forseth, DVM

EIA Update

In October 2019, USDA released Veterinary Services Memo 15201.1 outlining new guidelines for laboratories approved to perform EIA testing. Changes that may affect the submitting veterinarian are as follows:

- Beginning April 15, 2020, veterinarians may only utilize current USDA approved submission forms. Currently approved forms include VS Form 10-11 dated February 2018, VSPS e10-11, and the GlobalVetLink form. Contact the Helena office at (406) 444-2043 to obtain forms.
- All fields are required to be filled in or indicated as N/A.
- Amended forms can be processed as long as they are received within 30 days of blood draw date, all previous distributed copies are returned to the laboratory, the changes do not affect the identification of the animal, and change of ownership is not one of the items being amended.
- Laboratories can only accept samples from Category II accredited veterinarians, who are authorized to perform accredited duties in the state in which samples were obtained.

- Labs must refer all non-negative test samples to the National Veterinary Service Laboratory for confirmatory testing.

If you have any concerns or questions about filling out the new form, please contact the Montana Veterinary Diagnostic Laboratory (MVDL) as we are more than willing to be of assistance. If we receive forms after April 15, 2020 that are incomplete or do not meet the regulatory requirements, we will be contacting the submitting veterinarian to correct issues so that results can be released as soon as possible. We recognize that these changes may create an inconvenience to most of our customers but want to make sure you are aware that these regulations are USDA mandated.

We appreciate your patience in adopting these new procedures and look forward to assisting you as needed. ✂ *By Gregory Juda, Ph.D*

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www.liv.mt.gov



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